

TECHNICAL REVIEW

النشرة التقنية - الشرق الأوسط

MIDDLE EAST

USA: \$16.50, United Kingdom: £10

Annual Power Review 2017

ANNUAL POWER REVIEW 2017



Electrifying emirate

DEWA on its efforts to make Dubai a sustainable powerhouse

SWITCHING TO THE BEST

INTEGRATING THE RIGHT TECHNOLOGY TO CHARGE UP MENA'S POWER MARKET

INSIDE

UPS
Gensets
HVACR
Saudi Elenex

INCLUDES ELECTRICAL EQUIPMENT
AND MATERIALS BUYERS' GUIDE 2017

www.technicalreview.me

33 Years

1984 - 2017
Serving Middle East
Business

ONE SOLUTION for Various Demands



MULTI V™ S

- Energy Efficiency up to 14.7
- Ocean Black fin for advanced Anti Corrosion
- Up to 300m piping length
- Operation range up to 54°C



Regional Office: LG Electronics Gulf FZE, P.O. Box 61445, Dubai, Tel: +9714 3573466, **UAE:** Mr. Dharmesh Sawant, Tel: +971 505599361, email: dharmesh.sawant@lge.com; **Fortune International Trading LLC,** Mr. Wail Halbouni, Tel: +971 504813570, email: fortintl@emirates.net.ae; **United Entraco Trading Company,** Mr. Ahsan Farooq Khan, Tel: +971 507308123, email: ahsan@uct.ae; **District Cooling Company,** Mr. Ahmed Henedi, Tel: +971 506584832, email: ahmed@districtcoolingcompa ny.com; **Al Yousuf Electronics,** Mr. Moitra, Tel: +971504576170, email: pmoitra@alyousuf.com; **Bahrain:** **AJM Kooheji and Sons,** Mr. Sanjeev Awasthi, Tel: +973 39944644, email: sanjeevawasthi@ajmkooheji.com; **Kuwait:** **Al Babbain Air Conditioning & Refrigeration Co.,** Mr. Imad Rhayel, Tel: +965 96006773, email: imad.rhayel@albabtaingroup.com.kw; **Oman:** **Oman Gulf Enterprise,** Mr. Narender Kumar, Tel: +968 97474505, email: narenderk@otegroup.com; **ASPIRE Projects and Service,** Mr. Vivek Wagh, Tel: +968 99357694, email: vivek.wagh@aspireoman.com; **Qatar:** **Video Home Electronics Centre,** Mr. Adharsh N Kumar, Tel: +974 50190206, email: adharsh@jumboqatar.com; **Azerbaijan:** **NBC LLC,** Mr. Elkhon Sadikhov, Tel: +994 502163363, email: elkhon.sadikhov@nbc.com; **Al-Cond Maxwell Group,** Mr. Vagif Alexperov, Tel: +994 502162092, email: maxwellbaku@inbox.ru; **Armenia/Georgia:** **ARAY Gulf,** Mr. Vilson Melikjanyan, Tel: +374 93077755, email: vilson@aray.am; **Yemen:** **Modern House Exhibition,** Mr. Khaled Jabr, Tel: +967 711720202, email: mail@mhe-yemen.com; **Pakistan:** **Iceberg Industries (Lucky Goldstar),** Mr. Imran Jamil Khan, Tel: +923 212 776100, email: ceo@icebergindustries.net



POWER YOUR FUTURE

"AKSA began its journey as a manufacturer in Turkey in 1984, with the development of its first generating set. To satisfy the needs of today's customers worldwide, AKSA continues to manufacture a comprehensive range of generating sets from 1 kVA to 3.000 kVA at facilities in Turkey, China and the USA."



aksa@aksa.com.tr
www.aksa.com.tr

Follow us on:    



KAZANCI HOLDING

EDITOR'S NOTE

AS GOVERNMENTS IN the Middle East and North Africa continue to prioritise electricity projects with investments close to US\$302bn within the next five years, the region is seeing a rise in technology – both for renewable energy as well as conventional power plants. The efforts are demonstrated in our Annual Power Review (p14). Also, an exclusive interview (p22) with DEWA MD & CEO gives all the right reasons to believe that Dubai is leading the world-class power movement in the region. Apart from the power-packed content, we also look at the latest developments in the HVACR industry (p36 and p42) and innovations (p44) making the news recently. Meanwhile, our annual Electrical and Equipment Buyers' Guide (p60) offers a comprehensive guide to the region's power industry manufacturers and suppliers.

At Technical Review we always welcome readers comments to trme@alaincharles.com

CONTENTS

BUSINESS & MANAGEMENT

- Market News** 6
Oman plans RfP for first large-scale solar IPP; Lowest bid received for 200MW CSP plant at Dubai's MBR Solar Park; SEC finalises US\$1.46bn power project deals; Tunisia launches tender for renewable projects

EXECUTIVE STRATEGY

- Powering On or Powering Out?** 10
FG Wilson on the importance of considering lifetime ownership while buying a generator set

ANNUAL POWER REVIEW

- Light Years Ahead** 14
With right technology in place, MENA has the capability to lead the global power sector

POWER INTERVIEWS

- Dubai Dazzle** 22
DEWA MD & CEO talks about various initiatives and world-class projects that make the emirate a leader
- Renewed Resilience** 28
Anita Mathews of Informa Energy Group explains why Middle East is the next energy hub

UPS

- Abundant Availability** 34
Technology driving innovation in the GCC's uninterruptible power supply market

HVACR

- IoT Intelligence** 36
LG Electronics' smart solutions can provide energy efficiency as well as increase user comfort

EVENTS

- Saudi Elenex** 40

INNOVATIONS

- Products and Progress** 44
Featuring Cummins, RANCO, Teksan Generator, Megger, Haulotte, Kohler-SDMO, JCB, Hino, UD Trucks, Volvo Penta, MAN Diesel & Turbo and OMICRON

ANNUAL BUYERS' GUIDE

- Electrical Equipment and Materials** 60
The region's leading guide to manufacturers and suppliers from across the power sector

ARABIC

- News** 4
- Analysis** 7



20



38



54

TECHNICAL REVIEW

الخدمة شركات المنطقة منذ 1984

النشرة التقنية - الشرق الأوسط

MIDDLE EAST

Editor: Rhonita Patnaik - Email: trme@alaincharles.com

Editorial and Design team: Prashanth AP, Hiriya Bairu, Miriam Brtkova, Kestell Duxbury, Ranganath GS, Samantha Payne, Rahul Puthenveedu, Deblina Roy Nicky Valsamakis, Vani Venugopal and Louise Waters

Managing Editor: Georgia Lewis

Publisher: Nick Fordham

Sales Director: Michael Ferridge

Magazine Sales Manager: Graham Brown - Email: graham.brown@alaincharles.com
Tel: +971 4 448 9260, Fax: +971 4 448 9261

Special Projects Manager: Jane Wellman - Email: jane.wellman@alaincharles.com

Production: Kavya J, Nelly Mendes and Sophia Pinto
Email: production@alaincharles.com

Subscriptions: circulation@alaincharles.com

Chairman: Derek Fordham

Country	Representative	Telephone	Fax	Email
India	Tanmay Mishra	+91 80 65684483		tanmay.mishra@alaincharles.com
Nigeria	Bola Olowo	+234 8034349299		bola.olowo@alaincharles.com
UK	Michael Ferridge	+44 20 7834 7676	+44 20 79730076	michael.ferridge@alaincharles.com
USA	Michael Tomashefsky	+1 203 226 2882	+1 203 226 7447	michael.tomashefsky@alaincharles.com

US MAILING AGENT: Technical Review Middle East ISSN 0267 5307 is published eight times a year for US\$99 per year by Alain Charles Publishing, University House, 11-13 Lower Grosvenor Place, London, SW1W 0EX, UK. Periodicals postage paid at Rahway, NJ.

POSTMASTER: Send corrections to Alain Charles Publishing Ltd, c/o Mercury Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001. US Agent: Pronto Mailers International, 200 Wood Avenue, Middlesex, NJ 08846.

Printed by: Emirates Printing Press

Printed in: July 2017

Arabic Translation: Ezzeddin M. Ali - Email: ezzeddin@movistar.es

Arabic Typesetting: Lunad Publicity, Dubai

© Technical Review Middle East ISSN: 0267-5307

Head Office: Alain Charles Publishing Ltd
University House, 11-13 Lower Grosvenor Place, London, SW1W 0EX, UK
Tel: +44 20 7834 7676, Fax: +44 20 7973 0076

Middle East Regional Office: Alain Charles Middle East FZ-LLC
Office L2- 112, Loft Office 2, Entrance B, Dubai Media City, Dubai, UAE
Tel: +971 4 448 9260, Fax: +971 4 448 9261

Alain Charles
Publishing
Serving the world of business

abc Audit Bureau of
Circulations -
Business Magazines



A POWERFUL PARTNERSHIP



105-565 KW

Sheer power. That's Volvo Penta. Robust, fuel efficient industrial diesel engines that keep running even in the toughest conditions. Easy to install, operate and maintain. A powerful partnership you can trust all the way from the drawing board throughout the operational life of your application. Quick access to off-the-shelf parts wherever you are. Easy contacts for service and support across the world – powering your business. www.volvopenta.com/industrial

**VOLVO
PENTA**

Briefly

Bahrain's non-oil sector grew by 3.7 per cent in 2016: EDB report

THE BAHRAIN ECONOMIC Development Board (EDB) has predicted that the non-oil sector will maintain its strong economic performance in supporting the domestic product in 2017. The board expects the non-oil sector to grow by three per cent this year.

The sector has maintained an unprecedented growth that reached 3.7 per cent in 2016 and 3.6 per cent in 2015, according to the EDB's latest report.

The non-oil growth (up from 3.6 per cent in 2015) was driven by a number of sectors, with particularly strong performances in finance (+ 5.2 per cent), construction (+ 5.7 per cent) and social and personal services (+ 9.1 per cent). This momentum was supported by the implementation of unprecedented levels of infrastructure investment. Bahrain has a priority programme of US\$32bn of infrastructure projects, which are expected to continue in stimulating the economic growth. These projects include the US\$2.5bn ALBA Pot Line 6, an associated US\$800mn power station deal, the US\$1.1bn airport expansion project and a new US\$355mn Banagas gas plant.

Ras Al Khaimah Economic Zone launched to further services in UAE emirate

IN APRIL 2017, the government of Ras Al Khaimah launched the Ras Al Khaimah Economic Zone (RAKEZ) to oversee, regulate and consolidate the services, facilities and zones of Ras Al Khaimah Free Trade Zone (RAK FTZ) and RAK Investment Authority (RAKIA).

RAKEZ is now one of the largest economic zones in the region, covering about 33mn sq m of land and housing over 13,000 companies, currently served by RAK FTZ and RAKIA. As a comprehensive investment destination, the new entity presents a wide range of premium customisable facilities, enhanced levels of service and five diversified and strategically located zones for all types of business setups, including startups, entrepreneurs, SMEs and manufacturers, all within the cost-effective environment of Ras Al Khaimah.

Oman plans RfP for first large-scale solar IPP

OMAN POWER AND Water Procurement Company (OPWP) is planning to issue a number of tenders for power generation and water desalination projects in 2017.

According to its recently released seven-year statement (2017-2023), OPWP will request for proposals (RfP) and request for qualifications (RfQ) tenders for independent power projects (IPPs) and independent water projects (IWPs) to be set up in different parts of the sultanate, *Muscat Daily* reported.

In the power generation sector, OPWP plans to procure Oman's first large-scale solar IPP in 2017. "Technical advisors have been engaged to develop tender documents and an appropriate evaluation methodology that assures a cost-effective project without subsidy," the company said in the statement.

OPWP also expects to issue an RfP tender for the solar IPP in Q4 2017 with a capacity of at least 200MW, to be operational by 2020. The company will also issue a RfP tender for Misfah IPP in Q2 2017 while an RfQ tender for the asset sale of Manah IPP will be issued in Q4 2017. OPWP is also planning a tender for at least 1,600MW of contract extensions and new capacity for operation in 2022. The pre-qualification process for this tender is expected to begin in Q3 2017.

In Q4 2017, OPWP will issue an RfQ tender for IT systems for the planned electricity spot market in Oman. "Beyond 2017, future procurement initiatives may include additional solar or wind



Oman's first large-scale solar plant will have a capacity of at least 200MW. (Photo: Skeeze/Pixabay)

IPPs, a gas-fired IPP for service in 2024, and a coal-fired IPP for operation somewhat later than 2024, pending government approvals," OPWP stated.

OPWP's major procurement activities for water in 2017 include contract award for Aseelah IWP (Q2), contract award for Salalah III IWP (Q2), RfP tender for Khasab IWP (Q2), RfQ tender for Ghubrah III IWP (Q4), RfQ tender for North Batinah IWP (Q4), and potential RfQ tender for mobile and temporary water capacity, subject to necessary approvals. OPWP also revealed that it has initiated site investigations for another Dhofar IWP which, if approved, may start procurement in 2018.

The company noted that it is developing plans in 2017 for a more rapid transition to power supply from solar plants, wind farms and coal-fired generation to support government decision-making for the next generation of power capacity development.

Lowest international bid received for 200MW CSP plant at Dubai's MBR Solar Park

DUBAI ELECTRICITY AND Water Authority (DEWA) has received the lowest international bid of US\$9.45 cents per kilowatt hour (kW/h) for the 200MW concentrated solar power (CSP) plant, which is the fourth phase of the Mohammed bin Rashid Al Maktoum Solar Park.

The bids from four international consortiums were opened on 4 June at DEWA head office. DEWA is working to build the biggest CSP project in the world based on the independent power producer (IPP) model. The 200MW CSP plant will be operational by April 2021, with other CSP projects eventually generating a total of 1,000MW by 2030. In October 2016, DEWA had invited energy companies to send expressions of interest (EOI) for the 200MW Solar CSP plant. By end of October, 30 international solar IPP players had sent EOIs. DEWA received seven requests for quotations from international IPP bidders and consortium partners on 5 December 2016. The

request for proposal was sent to qualified bidders on 15 January 2017.

"Our achievements support the Dubai Clean Energy Strategy 2050 launched by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, to provide seven per cent of Dubai's total power output from clean energy by 2020, 25 per cent by 2030, and 75 per cent by 2050. The Mohammed bin Rashid Al Maktoum Solar Park is the biggest single-site solar park in the world that is based on the IPP model. It will generate 1,000MW by 2020 and 5,000MW by 2030. The 13MW photovoltaic first phase became operational in 2013. The 200MW photovoltaic second phase of the solar park was launched in March 2017. The 800MW photovoltaic third phase will be operational by 2020, and the 200MW CSP fourth phase will be operational by 2021," said HE Saeed Mohammed Al Tayer, MD & CEO of DEWA.

BECAUSE THE CITY NEVER SLEEPS...

DEMAND CAT® ELECTRIC POWER



Caterpillar Electric Power products are trusted throughout the world, delivering backup power when the mains supply fails or constant electricity where the grid cannot. Our products protect business against surges, sags and power interruptions that can disrupt daily operations or cause loss of valuable data or system capacity.

Cat power solutions go beyond the generator set, incorporating systems designed to deliver reliable, quality power even in the most demanding applications. Our expert engineers, sales and project managers work with you to design power solutions and systems to meet even the most complex power needs.

Supported locally by a skilled network of authorised dealers and backed by full Cat warranty, our product and system solutions give you peace of mind.

To find out more about Cat Electric Power solutions visit:

www.cat.com/custompowersolutions

BUILT FOR IT.™



© 2017 Caterpillar. All Rights Reserved.

CAT, CATERPILLAR, their respective logos, ADEM, "Caterpillar Yellow" and the "Power Edge" trade dress, as well as corporate and product identity used herein, are trademarks of Caterpillar and may not be used without permission.



Briefly

Bee'ah-Masdar JV to build first waste-to-energy plant in Middle East

BEE'AH, ENVIRONMENTAL MANAGEMENT company, and Masdar, Abu Dhabi's renewable energy company, have formally established the joint venture Emirates Waste to Energy Company (EWEC) to develop waste-to-energy plants in the Middle East.

Starting with Sharjah multi-fuel waste-to-energy facility, the plant will be the first in the region and will treat, within its first phase, more than 300,000 tonnes of municipal solid waste each year and have a power capacity of around 30MW.

Bee'ah set the ambitious target for Sharjah to achieve zero waste when the company was created in 2007. At present, the emirate diverts 70 per cent of its waste away from landfill. With the completion of this new facility, Sharjah will soon become the first city in the Middle East to achieve the target of 100 per cent diversion of waste from landfill. The new waste-to-energy plant has been designed to meet the strictest environmental standards, complying with the European Union's best available techniques.

Abu Dhabi to host Middle East's largest solar power plant

MARUBENI, JINKOSOLAR AND Abu Dhabi Water and Electricity Authority (ADWEA) have signed a limited-recourse financing loan agreement for the Sweihan photovoltaic independent power project (IPP), situated in the UAE capital. The US\$850mn financing includes the construction of a 1,177MW power plant under a 25-year power purchase agreement with ADWEA. The project is due to reach commercial operation in April 2019.

This project, which is one of the largest PV power projects in the world and the first renewable project for ADWEA and ADWEC, will be the fifth in the UAE for Marubeni.

"The financial closing is the culmination of 18 months of hard work, determination and commitment from multiple Abu Dhabi government stakeholders, the global PV investor market, the international and local lending community and related advisors," said Abdullah Ali Musleh Al Ahbab, chairman of ADWEA.

SEC finalises US\$1.46bn power project deals

SAUDI ELECTRICITY COMPANY (SEC) has finalised the implementation and operation of a number of electric transmission and interconnection projects in the northern regions of the kingdom at a total cost of US\$1.47bn.

The projects include six plants, five aerial lines for electric interconnection between northern cities and regions, including operation of the aerial interconnection (380kV) between Tabarjal plant and Tabuk plant. It is the longest aerial line of 790 circular km long.

Al-Rashid pointed out that the projects, awarded in 2014, included construction of six main plants namely Waad Al Shamal, Al Qurayyat, Tabarjal, Al-Jouf 2, Arar and Tabuk, as well as constructing five aerial line projects, with a total length of 2,214 circular km for linking these plants with the main grid. They include a line linking Al Qurayyat with Waad Al Shamal, linking Tabarjal with Waad Al Shamal, linking Al-Jouf 2 with Arar and linking Tabarjal with Tabuk, in addition to establishment of dynamic compensators at Al-Jouf 2 and Hail 2 plants.

He said, "The projects will set a base for future electric link with Green Duba generation plant, in addition to the link with Al-Madinah region through east of Al-Madinah plant, as well as interconnection with the national grid of Egypt. The King Abdullah Project for development of Waad Al-Shamal city is considered as one of the most important development projects in the



The projects will ensure stable supply of electricity to the kingdom's northern cities and regions. (Photo: Oran Viriyincy/Flickr)

region, which is being supplied with electric power from these projects".

Khalid Al-Rashid, CEO of Saudi Electricity Company For Projects Development (SECPD), a subsidiary of SEC, said that the recently operated electricity projects are one of the largest projects in the northern regions of the kingdom, which will contribute to linking the regions with the main grid (380kV) and support industrial and urban development in Jouf, Tabuk and the northern border.

The projects will also ensure stable supply of electricity to these cities and regions and reduce the production costs, either by high efficient generation plants or by reducing fuel consumption, particularly since the projects will save about 11.5mn barrel of diesel annually, as part of the kingdom's Vision 2030 to minimise dependence on oil in future projects.

Tunisia launches tender for 210MW of renewable projects

TUNISIA'S MINISTRY OF Energy, Mines and Renewable Energies has launched a tender for the deployment of 210MW of renewable energy power in the North African country.

The Ministry aims to allocate 70MW of solar capacity and 140MW of wind capacity. Selected projects will sell power to the country's state-owned utility Société Tunisienne de l'électricité et du gaz (STEG) under a long-term PPA.

As for the solar quota, the Ministry clarified that 10MW will be assigned to PV projects up to 1MW, while another 60MW will be allocated for solar power plants not exceeding 10MW. Bids for solar projects must be submitted by 15 November 2017.

According to local media, the Tunisian government has estimated that projects selected in the tender will require an aggregate investment of around US\$166.7mn.



The tender is the first in a series planned by the Tunisian government to install around 1 GW of renewable energy capacity in the period 2017-2020.

Tunisia currently has only 15MW of installed PV capacity, and a 10MW PV project under construction by Italian developer Ternienergia.

Under its renewable energy strategy, Tunisia aims at achieving 4.7 GW of renewable energy capacity by 2030.

What Turns The World On?

Transforming off-grid areas into megacities.

1904

MAN built the first engine driven power plant. We have been successfully in business ever since

90%

total efficiency in heat utilization with MAN gas engines

34,000+

megawatts of power and heat are generated at MAN Diesel & Turbo plants

Power Technology IPP Utility Industry Mining Oil & Gas After Sales

With decades of proven success in even the harshest environments, MAN Diesel & Turbo engines and turbines for decentralized power plants have become a synonym for reliability, efficiency and cost-effective operation. We offer a comprehensive range of solutions for applications up to 400 MW, using liquid fuel, gaseous fuel or a dual-fuel combination. From the remotest off-grid sites to the largest industrial complexes, our longstanding international customers trust our engines and our expertise in the power industry to keep the wheels of global business turning. Find out more at www.mandieselturbo.com

Engineering the Future – since 1758.

MAN Diesel & Turbo



Powering on or powering out?

Steve Lorimer, aftermarket manager at FG Wilson, speaks to *Technical Review Middle East* about why it is important to think about lifetime ownership when buying a generator set.

GENERATOR SETS ARE a common sight across the Middle East and likely to remain that way for some time to come. Of course, buying a generator set is one thing. Making sure it has a long and productive life with decent running costs is another.

Steve Lorimer, aftermarket manager at FG Wilson, says consideration of lifetime costs is often swept away in the buying process. "When you are buying, it is usually because you have lost power. You are fed up, annoyed. It is a problem you do not want. It is like buying insurance. The big temptation is to go for the cheapest."

Sometimes that makes sense, if power outages are rare and the generator set is going to be used infrequently. However, when it is going to be relied upon or used more regularly, lifetime cost and efficiency really need to be weighed up. That is not always easy to do and Steve helps put it into perspective.

"Local, effective support is very important. Over a 10-year product lifetime, resolving an issue with one less visit to site can save you an average of US\$6,000 for every generator set. That means local dealers carrying parts and trained to diagnose issues right the first time. We put a big priority on this and support our dealers with a parts facility carrying 11,500 parts lines, taking 500 orders a day and shipping three million parts a year to dealers who know our products just as well as we do. We also test and validate all our parts and offer a warranty. That is important: it is tempting to buy cheaper 'will-fit' parts and while they may solve an immediate problem, you will not get the same level of performance or lifetime and longer term, they will cost you more money."

There are many reasons why generator sets fail and Steve picks up on this point. "It is easy to focus on the engine, but our experience and research indicate that only one in four problems occur in the engine.



Investing in well-tested and validated parts can ensure better performance in a generator set. (Photo: FG Wilson)

Problems are often electrical and we see many people attempting DIY work on control panels which leads to further problems and can be dangerous. When you are buying a generator set, it is really important to know if your supplier can support every aspect of it through its lifetime. If they cannot, you will waste time hunting down people who can, and if you find them, how do you know they can fix the problem properly?"

That is not to downplay the importance of the engine: engine life and performance are very important. Steve calculates that an engine life of 20,000 hours versus one of 4,000 hours is worth US\$6,000. So yes, it really is worth buying a generator set with the best and most modern engine within your budget. That can also translate into big fuel savings if you are running your generator set regularly. Steve says, "FG Wilson generator sets have the most modern and fuel-efficient engines available.

We calculate that running at 75 per cent load for 2,000 hours per year, lower fuel consumption can save you up to US\$21,000 per unit over 10 years versus a typical 'low cost' engine based on an old design. So while a generator set with a more modern engine has a higher upfront price, over time, it will pay for itself, not only in terms of durability but also in terms of fuel usage if you are going to use it regularly."

Steve gives one final piece of advice which is interesting but maybe not surprising. "About a quarter of all reasons why generator sets fail is simply because the battery has run flat, the unit has run out of fuel, or had poor quality fuel pumped into the tank. A low cost battery charger and keeping an eye on the fuel or oil situation makes these problems go away." ■

To find out more about FG Wilson service and support, visit www.fgwilson.com/support

Longlife Product

Lifelong Support



Since 1990, over 600,000 FG Wilson generator sets have been installed all around the world and most are still working hard for their owners today.

There are two good reasons for this.

1. We test and validate our generator sets so that wherever you take them, they've already been through it before. We invested \$26 million in our UK-based Engineering Centre of Excellence just to make sure.
2. We support our products with a global dealer network and parts operation which stocks over 11,500 parts and delivers three million parts a year.

It doesn't matter how long you've owned an FG Wilson generator set. We'll make sure it always runs like new for you.

To find out more, visit www.fgwilson.com



EXECUTIVES' CALENDAR 2017

SEPTEMBER 2017

25-27	Gulf Glass	DUBAI	www.gulf.glass
26-27	Intersolar Middle East	DUBAI	www.intersolar.ae

OCTOBER 2017

2-3	The Mining Show	DUBAI	www.terrapinn.com
8-9	3rd Annual Health, Safety & Security Forum	DUBAI	www.hse-forum.com
23-26	Project Iraq	IRAQ	www.project-iraq.com
23-25	WETEX	DUBAI	www.wetex.ae
23-26	Saudi Build	SAUDI ARABIA	www.saudibuild-expo.com

NOVEMBER 2017

26-29	The Big 5	DUBAI	www.thebig5.ae
-------	------------------	-------	--

DECEMBER 2017

3-5	Electricx/Solar-Tec	CAIRO	www.electricxegypt.com
4-6	Gulf Traffic	DUBAI	www.gulftraffic.com

Readers should verify dates and location with sponsoring organisations, as this information may be subject to change.

ON THE WEB

A round-up of the leading developments and innovations recently featured on *Technical Review Middle East's* online portal. To read more or to stay up to date with the latest industry news, visit www.technicalreview.me

Iran builds Middle East's first mobile power station

IRAN'S MAPNA GROUP has constructed the Middle East's first mobile power station with a capacity of 25MW, *Iran's Mehr News Agency (MNA)* has reported. MAPNA, the country's largest power plant engineering, procurement and construction (EPC) contractor, built and implemented the 25MW mobile power plants in two northern Iranian cities.

The newly-implemented power plants have been successfully synchronised in Noshahr and Behshahr, and can be installed and launched in less than three months. According to MAPNA, the station can enter the electricity grid in less than 25 minutes and can function under both gas and diesel fuel.

The mobile power station units are portable generators, which are ready to start once they arrive at a site. It is a fast power solution or for generating backup power during natural disaster relief, plant shutdowns or grid instability.

These stations offer fast solutions in areas where immediate supply of electrical energy is needed. Another advantage of the portable units is that they require limited space for operation, which offers greater flexibility for construction of power plants.

www.technicalreview.me/power-a-water

SDLG launches new variable horsepower graders in MEA

GLOBAL CONSTRUCTION EQUIPMENT brand Shandong Lingong Construction Machinery Co. Ltd. (SDLG) has launched variable horsepower versions of two of its biggest selling motor graders for the Middle East and African markets.

The new G9190 and G9220 VHP (automatic variable horsepower) motor graders provide an automatic mode for transmission, allowing operators to shift seamlessly between manual to automatic transmission. This gives them greater control over the grading process while optimising fuel efficiency.

Just last year, SDLG sold 28 G9220s as well as 30 LG958L wheel loaders to a Saudi Arabian customer to facilitate a large-scale road maintenance initiative. www.technicalreview.me/construction



The standard versions of the G9190 and G9220 motor graders were launched in 2015. (Photo: SDLG)

IT'S ALL ABOUT LOCAL MANUFACTURING



Mohammad Ajaz, Sales Director – Kempston Controls LLC
talks about the key success factors that can lead local manufacturing to pave the way for economic growth.

Manufacturing provides a ride to improve living standards for global communities and individual families. From increased GDP, to lower unemployment, to a better quality of life, manufacturing can be the answer for various economic issues.

The manufacturing sector accounts for 15 per cent of the UAE's GDP as well as 53 per cent of the country's total non-oil exports. As per UAE Vision 2021, the figures will rise to 20 per cent by 2021 and 25 per cent by 2025. This has encouraged many global companies to set up local facilities in the UAE, in the form of either full-fledged production or as a filling or a packaging unit.

Automation is Key to Manufacturing:

Apart from making manufacturing more productive, automation helps in achieving sustainability and energy efficiency. Automation also empowers manufacturing companies to identify, control and optimise energy resources and help make informed decisions. Meanwhile, companies must also hire and train personnel with the right skillsets to handle such production facilities.

New Trends:

Apart from Automation, manufacturers must embrace new technologies such as Internet of Things (IoT), Robotics, Augmented Reality and 3D Printing for increased productivity and profitability.



Mohammad Ajaz – Sales Director
Middle East & Africa

How Kempston Controls can help 'Made in UAE' initiative?

Kempston Controls is a preferred technical supplier in the region, authorised for selling industrial electrical components. The company also has a huge stock facility in Dubai. This helps local companies to utilise opportunities like quick service and delivery. Our technically skilled sales and support team are always ready to extend quality consultative service in a prompt manner. With the latest IT infrastructure, we can proudly say that we provide the best working conditions and periodic staff training programmes make our skilled employees efficient enough to handle day-to-day-business challenges. We are also an active partner in supporting the initiative 'Made in UAE' and intend to make it a great success.

Authorized Distributor & Stockist in UAE



**KEMPSTON
CONTROLS**

KEMPSTON CONTROLS LLC.

PO Box 60998
St. 13, Umm Ramool
Dubai, UAE

Tel: +971 4 2987 111
Fax: +971 4 2987 113
sales@kempstoncontrols.ae

www.kempstoncontrols.ae

Light years ahead

Economist Moin Siddiqi explains how the power sector can benefit from both conventional and smart grids if right technology is put in place.

*The MENA power sector is one of the most active industries in the region currently.
(Photo: Factory_Easy/Shutterstock)*

A **BUNDANT LOW-COST HYDROCARBONS** resources in most parts of the Middle East and North Africa (MENA) region have facilitated the systematic expansion of electrification and rising living standards, particularly in the Gulf Co-operation Council (GCC) bloc. The near-universal access to electricity has fuelled rapid urbanisation and economic growth. In 2014, MENA accounted for 5.1, 5.6, and 7.8 per cent, respectively, of the world's total primary energy supply, gross domestic product (GDP) and carbon dioxide emissions. The region, led by GCC, holds two-fifths and one-quarter of global oil and natural gas reserves. Therefore, fossil fuels, especially gas, will long dominate MENA's energy generation mix.

The share of MENA population with access to power rose from 76 per cent in 1990 to 90.4 per cent in 2014, above global electrification rate of 85.3 per cent.

Like elsewhere, electricity access expanded faster in urban than rural areas. In absolute terms, 7.8mn people annually (equal to Jordan's population) were connected to the national grid in 2012-14. MENA ranked third in electrification, after Western Europe, North America and South America, Caribbean regions in 2014, slightly ahead of Asia Pacific. The six GCC countries enjoy virtually universal access on par with the Organisation for Economic Co-operation and Development (OECD) economies.

While annual access to electricity is

outpacing MENA's population growth but service disruption and power outages continue to affect conflict-ridden Iraq, Libya, Syria and Yemen. Unreliable power supply in other places (including Egypt and Jordan) also stem from decades of low infrastructure spending plus lack of legal frameworks or fiscal incentives to attract private investment structured on build-own-operate or build-own-operate and transfer models, with utilities buying power through power purchase agreements (PPAs).

Fuel conservation

The MENA ranked low in energy efficiency in 2014 with an energy intensity of 4.9 megajoules (MJ) per 2011 purchasing power parity (PPP\$) as total energy supply grew faster than regional GDP. Globally, energy intensity among countries differs due to diverse economic activity, per capita income and government priorities. Also, it hinges on whether a country is a net energy exporter or importer. Saudi Arabia, other GCC-members, Iran, Iraq and Algeria, have based their industrial strategy on cheap fossil fuels and energy-intensive heavy industries like petrochemicals, steel making, aluminium.

By contrast, oil-importers led by Morocco, Tunisia, Egypt and Jordan, have focused on agriculture, services (mainly tourism), and light manufacturing (textile/apparels, agro-processing), which use less energy. Concurrently, GCC sub-region reported higher energy intensity of

5.8 MJ/2011 PPP\$ – well above North Africa's average 3.88 MJ/2011 PPP\$ in 2014. Bahrain had the highest energy intensity across MENA due to heavy reliance on oil refining and aluminium, while Morocco and Egypt had the lowest energy intensity.

Energy efficiency measures and innovative technologies are lacking, though some recent advances were reported in a few countries. Heavily subsidised fossil fuels act as a deterrent to energy savings in the MENA region. In 2016, GCC countries, Egypt, Iran, Jordan, Morocco and Tunisia reduced generous energy subsidies, which induced energy savings through price hikes for end-users. Nonetheless, fuel in MENA remains cheap compared to elsewhere.

On the supply-side of electricity efficiency, the region revealed some improvement. The thermal efficiency of fossil fuel-based power generation increased from 32.9 per cent in 1990 to 35.4 per cent in 2014, reflecting a gradual shift from 'oil-fired' to more efficient 'gas-fired' generation plants. But transmission and distribution (T&D) losses of grid power rose from 11 per cent in 1990 to 16.6 per cent in 2014, the second-highest losses after South America and Caribbean. On plus-point, natural gas T&D losses in MENA fell from 0.6 per cent in 1990 to 0.1 per cent in 2014, the lowest rate globally according to World Bank data.



The **engine of choice** for the
power generation
market

Our engines make a difference.

 **Perkins®**

www.perkins.com

THE HEART OF EVERY GREAT MACHINE

Alternative energy

Technological innovations provide new sources of power from offshore wind, solar photovoltaic (PV), geothermal, hydroelectric and biomass. MENA has ample potential to develop renewable energy, but its share of renewables in total final energy consumption (TFEC) was the lowest of any region in 2014 at 3.6 per cent (see chart below). Fuel subsidies over decades have deterred both energy savings and installing alternative energy projects in MENA region.

However, the UAE is leading the way in integrating renewables into the energy-supply mix, which could induce others to follow suit. Dubai has committed to producing one quarter of all its electricity by 2030 from renewables. Key to meeting this goal is the five gigawatts (GW) Al-Maktoum Solar Park, which, upon completion in 2030, will be world's largest PV facility; and 200 MW of photovoltaic installation came online last March. In Abu Dhabi, a 1.2GW solar project is due online by early 2019, while the Federal Electricity and Water Authority (FEWA) anticipates an additional 200MW of solar projects in the northern emirates.

Saudi Arabia boasts the largest market for renewable energy in MENA. Currently, it burns approximately one billion barrels of oil per year to cope with the rising power demand projected to reach 120GW by 2030. The kingdom plans to generate 40 GW and 9 GW, respectively, of generating capacity from solar and wind power by 2032, coupled with two to three GW from waste-to-energy projects.

A joint venture between Qatar Electricity and Water Company (Kahramaa) and Qatar

MENA Countries' Access to Electricity (% of population)

	2010	2012	2014	2014 Urban	2014 Rural
Algeria	100	100	100	100	100
Bahrain	100	100	100	100	100
Egypt	100	100	100	100	100
Iran	99	99	99	100	95
Iraq	98	98	99	100	96
Jordan	100	100	100	100	100
Kuwait	100	100	100	100	100
Lebanon	100	100	100	100	100
Morocco	86	90	92	95	85
Oman	100	100	100	100	100
Qatar	100	100	100	100	100
Saudi Arabia	100	100	100	100	100
Tunisia	100	100	100	100	100
UAE	100	100	100	100	100
Yemen	66	69	72	97	59
Arab region	88	89	90	97	81
GCC Countries	100	100	100	100	100
World (average)	84	85	85	96	73

Source: World Bank

MENA Countries' Key Energy Statistics (2014)

	Total primary energy production*	World Rank	Total primary energy consumption*	World Rank
Algeria	6.559	16	N/A	
Bahrain	0.748	49	0.737	65
Egypt	3.266	26	3.584	28
Iran	13.76	9	10.587	10
Iraq	7.207	14	1.86	40
Jordan	N/A		0.319	77
Kuwait	6.498	17	1.752	41
Lebanon	N/A		0.303	81
Morocco	N/A		0.819	62
Oman	3.14	27	1.141	53
Qatar	10.012	10	2.105	37
Saudi Arabia	27.588	4	10.208	11
Tunisia	0.172	72	N/A	
UAE	9.18	11	4.26	23

*Quadrillion British thermal unit (Btu)

Source: U.S. Energy Information Administration.

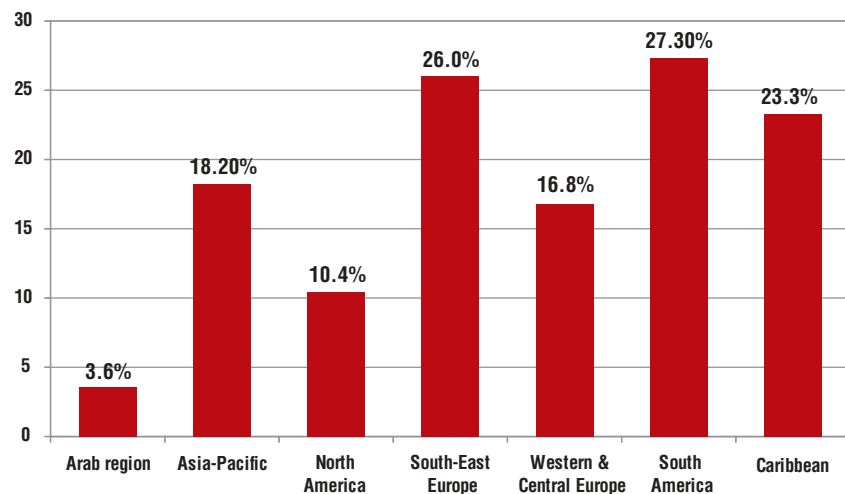
Petroleum will see the construction of a 200MW solar plant, with plans already agreed to expand the project's capacity to

500MW in the near future. Research by the Arab Petroleum Investments Corporation indicates that Qatar needs US\$9bn between 2016 and 2020 to keep pace with electricity demand. Doha is also keen on PV in the urban environment. Five of the FIFA 2022 World Cup stadiums are slated to use solar-powered cooling technology.

Gulf's solar energy developers enjoy access to cheap funding and equity is also available as the utilities take majority stakes in upcoming projects.

Falling renewable energy costs should encourage a gradual diversification from fossil fuels in power generation. In 2016, the price of onshore wind was below US\$50/MW-hour compared to US\$75-100/MW-h. The costs of solar could drop below US\$10/MW-h within a decade, making PV the cheapest source of electricity. Thus far, solar and wind energy provides only four per cent of global power generating capacity, according to the World Energy Council.

The Use of Renewables in Total Final Energy Consumption (2014)



Source: World Bank database.

In sum, robust energy usage and prospects of the Gulf becoming a global business hub by 2030 alongside the Asia-Pacific region, underscores 'the need to diversify energy sources and to move to a more sustainable energy sector', advised the World Bank. Rapid output and

demographic growth have pushed the GCC's generating capacity to limits, requiring more independent power projects (IPPs), coupled with investment in renewable energy technologies. But dedicated government programmes and financing support, such as bank guarantees and soft loans for business

and industrial investment in energy efficient equipment are lacking in most non-GCC countries according to the UN Economic and Social Commission for Western Asia (ESCWA) report. ■

— By Moin Siddiqi

How MENA Countries Rank on Energy Efficiency

	Primary energy intensity (megajoules per 2011 PPP \$)			Change in energy intensity (%) Final energy (2012-14)				Avoided energy consumption (petajoules)
	2010	2012	2014	Agricultural	Industrial	Services	Residential	2013-14
Algeria	3.61	3.89	4.10	5.48	7.16		4.15	37.00
Bahrain	10.45	9.79	10.03	-2.84	6.24	6.65	3.87	6.69
Egypt	3.66	3.80	3.48	-8.88	-1.24	-0.53	-2.45	-56.41
Iran	6.58	7.20	7.69	-1.48	3.54	2.36	3.71	46.22
Iraq	4.01	4.01	4.41		0.93	9.97	-9.92	-154.63
Jordan	4.37	4.59	4.51	6.12	-2.62	-3.35	-4.74	4.28
Kuwait	5.96	5.91	5.41		2.71	0.37	-1.64	62.85
Lebanon	3.78	4.08	4.15		-1.20	7.54	1.01	21.43
Morocco	3.37	3.40	3.23	-4.29	-5.33	4.08	0.76	-6.53
Oman	5.68	6.79	6.52	4.70	3.58	-0.37	0.56	21.85
Qatar	5.13	5.95	6.32		0.12	6.29	15.40	44.36
Saudi Arabia	6.25	5.82	5.83	2.61	2.9	0.22	2.26	122.96
Tunisia	3.86	3.80	3.72	5.48	3.06	-1.60	1.20	3.64
UAE	5.40	5.32	5.03		-5.51	-3.59	3.99	-146.17
Arab region	4.91	4.91	4.90	-4.04	0.54	4.33	0.04	34.97
GCC Countries	6.00	5.88	5.80	2.70	0.83	-0.52	2.64	123.69
World (average)	5.95	5.73	5.49	-2.07	-2.18	-1.30	0.16	-7,460.32

Source: World Bank



Take the trouble out of your troubleshooting.

MPQ1000

The Megger MPQ1000 Power Quality Analyzer is Class A compliant and rated CATIV at 600V. It can be used for a wide variety of applications including substation monitoring, equipment and breaker tripping, load studies and balancing as well as for switchgear and component failure. Please visit en.megger.com/power-quality or email mesales@megger.com

Power on with Megger.

Megger Ltd, Archcliffe Road, Dover, CT17 9EN, T. +44 (0) 1304 502101

Megger[®]
Power on

Energy efficiency is directly proportional to savings

THE GLOBAL ECONOMY over the past three decades has steadily reduced 'energy intensity' as industrial and transport sectors derive more economic value out of every unit of energy consumed – leading to increased energy savings and efficiency gains. Hence, less fossil fuel is extracted, processed, transmitted and distributed for each unit of economic output. As energy intensity declines, GDP grows much faster than energy consumption. This effect is already evident in lower per capita use of oil, chiefly in advanced OECD economies.

Global investment in energy efficiency totalled US\$221bn in 2015 – the bulk of which was spent on existing and new buildings. Efficiency measures provide multiple benefits such as increasing energy security plus the affordability to households, economic prosperity and industrial competitiveness. Furthermore, improving the efficiency of energy conversion, transmission and distribution channels lowers the need to build additional supply-side infrastructure, enhance access and reduce environmental impacts.

Global primary energy intensity fell by a compound annual growth rate (CAGR) of 2.1 per cent over 2012-14, reaching 5.49 MJ/2011 PPP\$, compared to 7.83 MJ in 1990. According to World Bank's Global Tracking Framework 2017 Report, energy intensity measures avoided (saved) about 12 exajoules (EJ) of global TFEC in 2012-14, equivalent to total electricity usage of Brazil and Pakistan during 2014.

Mandatory energy savings directives for buildings, industry and transport led to lower energy intensity. Consumers in advanced economies saved US\$540bn in energy expenditure in 2015, according to the International Energy Agency (IEA). Energy efficiency also helps lower fuel imports. The European Union, the world's number one energy importer, avoided 4,200 petajoules (PJ) of oil, gas, and coal imports in 2015, reducing the import bill by US\$27bn. Japan and South Korea, too, cut their import bills by US\$19bn and US\$7bn, respectively, in 2015.

The efficiency of thermal generation is a key determinant of energy intensity. Average global efficiency of power generation –



Global investment in energy efficiency totalled US\$221bn in 2015.
(Photo: Vacancylizm/Shutterstock)

mostly reliant on heavy oil and coal – rose by only 3.6 percentage points since 1990, reaching 39 per cent in 2014.

Natural gas fired plants were more efficient thanks to growing adoption of combined-cycle turbines. Global electricity T&D network losses averaged 8.9 per cent in 2014, equivalent to 1,970 terawatt-hours (TWh), but with wide variation between higher-and-lower income countries reported.

Worldwide, two major sectors (industry and transport) contributed most to declining energy intensity. The former accounted for over half of the energy savings, with an annual reduction of 2.2 per cent in 2012-14. Whilst transport comprised some two-fifths of savings, measured by energy usage per passenger-km or tonne-km, with passenger travel accounting for 80 per cent of transport-sector savings. Estimates suggest that investment into efficient road vehicles could save one billion barrels of fuel consumption over their lifetimes.

Critical factors attracting IPP investments

Country stability: Macro prudential policies; legal system allows contracts to be enforced and respected; arbitration; good repayment record; investment-grade rating; capital repatriation; past experience with private participation in infrastructure; investment protection.

Legal framework: Framework that specifies market structure, roles and terms for private and public sector investments (based on a single-buyer model).

Regulatory oversight: Transparent/predictable licensing and tariff framework; cost-reflective tariffs; competitive procurement of new generation capacity required by regulator.

Coherent planning: Power planning and timely initiation of transparent tenders for new capacity; fair allocation of new build opportunities between state-owned utilities and IPPs; built-in contingencies to avoid any blackouts.

Competitive bidding: Competitive procurement process adequately resourced, fair and transparent; tax incentives.

Equity finance: Local capital contribution where possible; risk appetite for project; reasonable return on equity (ROE); involvement of a development finance institution partner and/or host country government.

Debt arrangements: Competitive financing; local capital markets to mitigate foreign exchange risk; some flexibility in terms and

conditions (possible refinancing); risk premium demanded by financiers, matches country/project risk.

Reputable off-taker: Proven technical-managerial capacity; efficient operational practices; low technical losses; commercially sound metering, billing and collections; efficient and reliable customer services.

Enhanced security: Robust power purchase agreement (PPA) that stipulates capacity and payment as well as dispatch; fuel metering; interconnection; insurance products (the most popular instruments are multilateral development bank guarantees, notably from World Bank); transfer; termination; dispute resolution; change-of-law provisions; refinancing options.

Revenue guaranteed: Security arrangements to mitigate various risks facing private investors and commercial lenders with respect to payment default on government obligations. In such cases, escrow accounts; letters of credit; standby debt facilities; hedging and other derivative instruments such as hard-currency contracts, indexation in contracts are most commonly used instrument to mitigate risks.

Other risk mitigation: Where off-takers are not perceived creditworthy, sovereign guarantees; political and regulatory risk insurance – to cope with possible adverse actions by host government or negative effects on projects from changes in law or regulation; international arbitration.



Turn-key Power in Record Time

Operating from over 200 locations world wide including 12 locations in the Middle East, Aggreko is the world leader in providing temporary power. We offer complete turn-key project management including equipment, installation, maintenance and operation by highly experienced engineers to ensure reliable and flexible power.

Whether you need a few megawatts of power for construction site or manufacturing plant or a few hundred megawatts of baseload power to support the national grid, Aggreko delivers the power solution right for you, wherever and whenever you need it.

Aggreko, Power Specialists in Middle East

Aggreko Middle East Ltd

PO Box 16875, Dubai, UAE

T: +971 (0)4 8086100 E: customer.service@aggreko.ae

Dubai
+971 (0)4 8086100

Abu Dhabi
+971 (0)2 5548464

Sharjah
+971 (0)6 5345999

Oman
+968 (0)24 501872

Qatar
+974 44606178

Kuwait
+965 23963646

Bahrain
+973 17723381

Dammam
+966 (0)13 8580301

Jeddah
+966 (0)12 2727640

Riyadh
+966 (0)8 111006060

Yanbu
+966 (0)14 3963993

Turkey
+90 530 3850056

Aggreko operates from over 200 locations throughout the world.
For the location nearest you, please go to: www.aggreko.com/contact

me.aggreko.com

GCC Power — What next?

Located on the border between Dubai and Abu Dhabi, the Hassyan plant is the GCC's first coal-based power plant.
(Photo: chuyuss/Shutterstock)

A recently released report by Arab Petroleum Investments Corporation (Apicorp) is optimistic that due to multiple megaprojects coming up in the region, GCC nations will see a rise in the opportunities for power plant construction going forward.

THE GCC WILL require as much as US\$316bn by 2020 to meet its growing power needs (Apicorp estimates). According to industry experts, realising the financial burden the GCC countries are currently and potentially experiencing to meet power demands, the GCC countries (with the exception of Kuwait) have embarked on unbundling their power sectors into separate generation, transmission and distribution segments – thus providing opportunity for these business segments to focus on their core business, and also encouraging capital investments from the private sector. Reform efforts in most of the GCC countries are limited to opening up the power sector for private investment in generation, transmission and distribution, however, much consideration is being given by the GCC governments, with Oman leading the way, by implementing laws to facilitate reform. The introduction of IPPs in the GCC has been instrumental in meeting rapidly rising electricity demand. Oman was the first country to open up its power-generating sector. Currently, IPPs represent the majority of new capacity and continue

to replace government power plants. Therefore, IPPs will continue to be at the forefront of GCC governments' strategies to add generating capacities.

With an increasingly demanding population and spiraling rates of power consumption, the need for sustainable and renewable sources of energy is expected to garner more importance in the coming years. Solar technology is approaching grid parity. With further advancement in technology, reduction of prices, clean technology, solar power is going to experience phenomenal growth and could be most likely preferred source of energy in the future.

Smart Cities

A latest trend catching up in the GCC countries is the 'Smart Cities' plan that are being considered in each country's vision for sustainable electricity use. Also, smart grids will be key to boosting power efficiency in the GCC as peak demand increases in the coming years. New construction projects are likely to incorporate new 'smart' dimensions.

In the GCC, the UAE, Saudi Arabia and

Qatar are at the forefront in of development of smart cities projects, which is also likely to continue in the coming years.

According to Apicorp, the GCC governments will continue to cope well with rising demand and energy-price reform will help temper demand rises. Although GCC governments have announced budget deficits and indicated that government expenditures will be tightened in response to lower oil prices, investments in the power sector should not be affected and will be given priority.

This year will also see the rise of coal-fired power plants, but technologies are being developed in order to mitigate the negative environmental impact from power generated by coal. This has seen Saudi Arabia's ACWA Power commit to exploring the power generating market by building a coal-fired power plant in Dubai to supply to the Expo 2020 sites.

Therefore, the GCC power construction industry is expected to register robust growth over the coming years with UAE, Saudi Arabia and Kuwait being attractive markets for opportunities for power plants in the future. ■

MAJOR GCC ON-GOING AND PLANNED POWER PROJECTS

Project Name	Country	Client	Estimated Value (US\$mn)
Nuclear Power Plant in Abu Dhabi	UAE	Emirates Nuclear Energy Corporation (ENEC)	20,000
Al Zour North IWPP	Kuwait	Kuwait Authority for Partnership Projects (KAPP), Shamal Az Zour Al Oula KSC, Ministry of Electricity & Water (MEW), Kuwait	8,387
Shagaya Renewable Energy - Phase 1	Kuwait	Ministry of Electricity & Water (MEW), Kuwait, Kuwait Institute for Scientific Research (KISR)	5,610
Mohammed Bin Rashid Al Maktoum Solar Park	UAE	Dubai Electricity and Water Authority (DEWA)	5,000
Fadhili Power Plant	Saudi Arabia	Saudi Aramco	4,700
Taibah Integrated Solar Combined Cycle (ISCC) Power Plant	Saudi Arabia	Saudi Electricity Company (SEC)	3,500
Yanbu Power and Desalination Plant - Phase 3	Saudi Arabia	The Power & Water Utilities Company for Jubail & Yanbu (Marafiq), Saline Water Conversion Corporation (SWCC)	3,000
Thermal Power Plant in Jeddah South	Saudi Arabia	Saudi Electricity Company (SEC)	3,000
Sohar 3 - Ibri Independent Power Plant (IPP)	Oman	Oman Power and Water Procurement Company	2,300
Shuqaiq IPP	Saudi Arabia	Saudi Electricity Company (SEC)	2,000
Independent Power Project (IPP) at Addur - Phase 2	Bahrain	Bahrain Ministry of Finance	2,000
Coal Fired Power Plant at Hassyan - Phase 1	UAE	Dubai Electricity and Water Authority (DEWA)	1,800

Source: www.venturesonsite.com



GOODSENSE Electric Forklift Line-up

3 WHEELER FORKLIFT



ELECTRIC STACKER



REACH STACKER



4 WHEELER FORKLIFT



الربيعية والنصار للتجارة
RABIAH & NASSAR COMMERCIAL

Khobar • Riyadh • Jeddah

Contact

Khobar: +966 13 899 1566 | E: laith@rancogroup.com

Riyadh: +966 11 491 0590 | E: trading@rancogroup.com

For Inquiries Contact

GOODSENSE Product Manager: +966 56 777 7383



@ranco_group



@rancogroup



www.rancogroup.com



HE Saeed Mohammed Al Tayar, MD & CEO, highlights Dubai's unique experience in the development of the renewable and alternative energy sector, as well as the rationalisation of natural resources and finding alternative solutions to traditional energy for sustainable development in Dubai, to a delegation from Germany recently. (Photo: DEWA)

Dubai: A sustainable powerhouse in the making

Dubai Electricity and Water Authority (DEWA) MD & CEO Saeed Mohammed Al Tayar in an exclusive interview with *Technical Review Middle East* talks about the various initiatives and world-class projects that reflect the emirate's leadership skills.

Technical Review Middle East (TRME): How do you view DEWA's recent efforts to make Dubai more sustainable?

HE Saeed Mohammed Al Tayar: DEWA continues to make remarkable achievements that support the excellence of Dubai and the UAE, and contribute to achieving the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, who once observed that, "We have no alternative to first position. The word 'impossible' is nowhere to be found in the vocabulary of the UAE."

DEWA is working to achieve its vision to become a sustainable innovative world-class utility and promote its competitiveness and excellence, by enhancing and developing its electricity and water services. DEWA is identifying and shaping the future, by launching pioneering projects and initiatives according to a clear and integrated approach

that is based on innovation and the early recognition of future opportunities and challenges. DEWA focuses its ambitious projects, initiatives, programmes, and efforts in clean energy to achieve the Dubai Clean Energy Strategy 2050, and works to diversify the energy mix, so that clean energy will generate seven per cent of Dubai's total power output by 2020, 25 per cent by 2030, and 75 per cent by 2050.

DEWA recorded 3.28 customer minutes lost per year compared to 15 minutes recorded by leading utilities in Europe and the USA. Losses in power transmission and distribution networks reduced to 3.3 per cent, compared to six to seven per cent in Europe and the USA. Losses in water transmission and distribution networks decreased to eight per cent, which is one of the lowest recorded rates in the world. The efficiency of fuel consumption in generation has reached a world record level of 90 per cent.

The expansion of M-Station in Jebel Ali has added to DEWA's achievements as the largest power production and desalination plant in the region. Can you provide an update on that?

HH Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of Finance, and President of DEWA, opened the M-Station for electricity generation and water desalination in Jebel Ali in April 2013. The Jebel Ali Power Station (JAPS)'s M-Station is one of the main pillars that enable DEWA to provide Dubai with a very reliable, efficient and high-quality electricity and water supply.

DEWA works tirelessly to enhance its total production capacity, which is currently 10,000MW of electricity and 470mn imperial gallons (MIGD) of desalinated water per day. DEWA recognises that securing the supply of electricity and water, and ensuring their long-term sustainability is critical to achieving the vision of the wise leadership. DEWA works to

BACK-UP POWER

WHEN POWER IS OUT, HIMOINSA COMES ON



18881-88888888

2016 Growth Excellence Leadership Award

HIMOINSA MIDDLE EAST, FZE
Jafza 16, office N° 505 | P.O. Box 18515
Jebel Ali Free Zone, Dubai (UNITED ARAB EMIRATES)
Tel.: +971 4 8873315 | Fax: +971 4 8873318
himoinsa@himoinsa.ae



HIMOINSA
THE ENERGY

anticipate the future, to meet all future requirements and needs. The M-Station is a new national landmark, and adds to DEWA's growing list of achievements over the last five decades. It is the largest power production and desalination plant in the UAE, with a current total capacity of 2,185MW of electricity and 140 MIGD. The station adopts the highest levels of availability, reliability, and efficiency, using the most advanced technologies in the world. It is equipped with the latest smart devices and sophisticated heavy-duty technological systems.

Since 2015, DEWA has worked with Siemens on the construction of the Jebel Ali M-Station expansion, as the total cost of M-Station construction along with the expansion project reaches US\$3.13bnn.

The station total capacity will reach 2,885MW when the project is completed in 2018. The expansion project includes the provision of new power generating units adding a further 700MW to the installed generating capacity of M-Station. The expansion project includes the addition of two dual-fuel gas turbine generators, two heat recovery steam boilers, and one steam turbine with 90 per cent of fuel efficiency. This will increase the plant's thermal efficiency from 82.4 per cent to 85.8 per cent, which is one of the highest thermal-efficiency rates in the world.

Led by its long-term strategic planning, investments in its staff, and the deployment of the latest technologies, DEWA has achieved impressive results in the standards of services provided to its partners and customers. The project included adding three isolation switches while connecting to the

400/132kV main substation, at a total cost of US\$16.33mn.

Shams Dubai is a unique initiative by Dubai government to adopt renewable energy and bringing it to our homes. What has been the success rate on the project?

Shams Dubai is DEWA's first smart initiative to connect solar energy to buildings, a part of the Distributed Renewable Resources Generation programme. This initiative supports diversifying the energy mix by promoting the use of clean and renewable energy sources to build a sustainable future for Dubai.

DEWA launched Shams Dubai in adherence to the Smart Dubai initiative, also launched by HH Sheikh Mohammed bin Rashid Al Maktoum to make Dubai the happiest and smartest city in the world.

Shams Dubai initiative encourages household and building owners to install

photovoltaic panels to generate electricity, and connect them to DEWA's grid. As of June 2017, 422 buildings were connected. This includes residential and commercial buildings in Dubai with a capacity of over 12MW. DEWA has enrolled 63 contracting and consultancy companies. A total of 247 engineers have been certified as enrolled electrical and solar PV consultants and contractors. Seventy manufacturers of solar power equipment registered 578 products as eligible for Shams Dubai. DEWA is cooperating with 18 government organisations to install PV panels on 35 government buildings. The construction of the largest distributed solar rooftop project in the Middle East is underway after DP World commissioned the installation of 88,000 rooftop solar panels on its Dubai facilities in Jebel Ali Free Zone and Mina Rashid. Phase one will be completed in 2017.

The jewel in DEWA's crown – the Mohammed bin Rashid Al Maktoum Solar Park – supports Dubai's goal to have the lowest carbon footprint in the world by 2050. Coming closer, what are the goals related to Expo 2020 from the park?

The Mohammed bin Rashid Solar Park, the largest single-site solar project in the world, was announced in January 2012, in line with the vision and directives of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, to enhance the sustainable development of Dubai. It will support the Dubai Clean Energy Strategy 2050 to make Dubai a global centre of clean energy and green economy.

The solar power projects will generate up to 5,000MW by 2030. It starts with the first phase of 13MW PV launched in October 2013. This phase will generate 24mn kWh of electricity per year, and reduce greenhouse gas emissions by 15,000 metric tonnes of CO₂ per year. The second phase is of 200MW PV and is operational since March 2017. It can generate clean energy for 50,000 residences in Dubai, and will reduce 214,000 tonnes of carbon emissions annually. The third phase is 800MW PV and is to be launched in stages; 200MW by April 2018, followed by 300MW in April 2019, and another 300MW by April 2020. As for the fourth phase, of 200MW CSP, it will be operational in April 2021. The Mohammed bin Rashid Al Maktoum Solar Park capacity will reach 5,000MW by 2030.

The ideal location of the UAE and Dubai for solar energy within the sunbelt highlights solar energy's major role as a renewable source of energy. In Dubai, available global

DEWA focuses its ambitious projects, initiatives, programmes, and efforts to achieve the Dubai Clean Energy Strategy 2050.



HE Al Tayer with His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai during the inauguration of the 200MW concentrated solar power (CSP) plant, which is the fourth phase of Mohammed bin Rashid Al Maktoum Solar Park in Dubai. (Photo: DEWA)



مجموعة محمد العجمي
MOHAMMED AL-OJAIMI GROUP



41
Years of trust
in the Kingdom

Mohammed Al-Ojaimi Cont. Est.
Electrical Works
Mechanical Works
Civil and Site Development Works
Telecommunication Works

Al-Ojaimi Energy Services
Testing and Commissioning Services
Automation and Control Services
Engineering Services
Trading Services

Al-Ojaimi Industrial Group
Distribution Transformers
Transformer Substations
Distribution Panel Boards
Package and Unit Sub-Stations
LV Current Transformers
Cable Lugs & Connectors | Link Boxes
Insulated Wires | Copper Conductor



MATCO



Tel.: +966 13 8221800/8325064 - info@alojaimi.com - www.alojaimi.com

irradiation usable by PV technology averages 2,150kWh per square metre per year, and the direct part of the irradiation (DNI), which is used by concentrated solar power (CSP), is about 1,850kWh per square metres per year. These figures mean that solar energy is an optimal energy source in Dubai.

In support of Dubai Clean Energy Strategy 2050, what are DEWA's projects for the future?

Dubai Clean Energy Strategy 2050 was launched by HH Sheikh Mohammed bin Rashid Al Maktoum to make Dubai a global centre of clean energy and green economy.

DEWA is operating and managing Mohammed bin Rashid Al Maktoum Solar Park, the largest single-site solar project in the world, which will have a capacity of 5,000 MW by 2030, with a total investment of US\$13.61bn. It also includes a comprehensive innovation centre and research and development centres specialised in the next generation of clean energy technologies, such as solar energy technology test centre, drones research centre, 3D printing technology, and a solar energy based desalination test centre.

Another US\$13.61mn will be invested in research and development in the integration of smart grids, energy efficiency, and electricity generation from solar energy. It will also include the establishment of a new freezone, the Dubai Green Zone, dedicated to attracting research and development centres and emerging companies in clean energy.

DEWA is moving forward with its three smart initiatives: Smart Applications via Smart Grid and Meters, Shams Dubai, and Green Charger.

Smart Applications via Smart Grid and Meters:

Smart Applications through Smart Meters and Grids will provide various benefits and new applications to its customers, including automatic and detailed reading (both current and historical). The data obtained through these readings will be available to customers to monitor actual consumption for a specific period of time, to better rationalise consumption. Smart meters will contribute towards finding solutions to rationalise the consumption of electricity and water resources, and will be able to send accumulated data via sophisticated means of communication, while at the same time providing a full history of consumption and consumption processes. Smart meters in residential, commercial, and industrial sectors, allow us



to compare the production rate against the consumption of resources. DEWA expects to install over one million smart meters by 2020, covering the whole emirate, and replacing all mechanical and electromechanical meters.

Shams Dubai: This leading initiative supports the vision of HH Sheikh Mohammed bin Rashid Al Maktoum to make Dubai the smartest city in the world. It also supports diversifying the energy mix by promoting the use of clean and renewable energy sources to build a sustainable future for the emirate. Launching the initiative implements Council Resolution Number 46 of 2014, issued by HH Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai and Chairman of the Dubai Executive Council, to regulate the connection of solar energy to Dubai's power grid.

The initiative encourages household and building owners to install PV panels to generate electricity, and connect them to DEWA's grid. The electricity is used on site and the surplus is exported to DEWA's network.

Green Charger: DEWA will double its electric vehicles charging stations to 200 across Dubai to complete the second phase of the Green Charger initiative.

DEWA successfully installed 100 electric charging stations in Q4 2015, in different areas in Dubai such as shopping malls, airports, commercial offices, residential complexes, gas stations, government offices, and residential establishments, as part of the Green Charger initiative. DEWA aims to install 100 more charging stations according to the number of vehicles, usage of already existing stations in Dubai, and as per number of applications submitted to

install electric vehicle charging stations in residential areas in Dubai. Through this initiative, DEWA aims to encourage people to use sustainable transportation of hybrid and electric vehicles, to help reduce carbon emissions in the transport sector, which is the second highest contributor of greenhouse gas emissions in Dubai. This initiative will contribute effectively to the achievement of the UAE Vision 2021 and Dubai Plan 2021, to make Dubai a smart, integrated and connected city that is fully sustainable with its resources, and where environmental components are clean, healthy and sustainable.

The Green Charger initiative also contributes to the objectives of the Dubai Clean Energy Strategy 2050, to transform Dubai into an international hub for clean energy and green economy and to enhance Dubai's position as the city with the lowest carbon footprint worldwide. It also supports the Dubai Carbon Abatement Strategy to reduce carbon emissions by 16 per cent by 2021.

DEWA supports the Comprehensive Hatta Development Plan, which was launched by HH Sheikh Mohammed bin Rashid Al Maktoum. DEWA's projects include the first hydroelectric power station in the GCC. The 250MW pumped-storage hydroelectric power station will be completed within five years. Other projects include installing photovoltaic panels on rooftops to produce electricity from solar power and installing smart meters in buildings. These other projects will be completed by the end of 2018. DEWA will also install electric vehicle charging stations in Hatta. These projects will provide around 2,500 jobs during and after the implementation phases. ■

Meet the Next Generation of ring main units

Our experts in secondary distribution networks present our brand new Aegis 36, perfect for the renewable energy sector and 36 kV networks.





The 2017 edition of Electricx is projected to be one of the largest in the 27-year history. (Photo: Informa Energy Group)

'The power sector is very resilient'

Anita Mathews, group director at Informa Energy Group, explains the dynamic climate of the GCC and MENA electricity market.

The introduction of independent power producers (IPPs) in the GCC has been instrumental in meeting rapidly rising electricity demand.

Technical Review Middle East (TRME): With the oil price steady at just above US\$50, what is the growth like in the Middle East and North Africa (MENA) power generation market today?

Anita Mathews (AM): Falling oil and gas prices have been an area for concern in the industry sector since mid-2014. It has impacted the spending power and construction projects in the region with many of the regional governments scaling back or cancelling non-essential projects.

Having said this, the power sector was one of the more resilient sectors during these turbulent times due to an increased demand in power supply to support fast-growing population growth and further industrialisation. With the more recent stabilisation of oil prices, I am hopeful that there will be a renewed confidence within the industry.

There is an approximate US\$316bn investment needed by 2020, and reform efforts in most of the GCC countries are limited to opening the power sector for

private investment in generation, transmission and distribution.

However, much consideration is being given by the GCC governments, with Oman leading the way, by implementing laws to facilitate reform. The introduction of independent power producers (IPPs) in the GCC has been instrumental in meeting rapidly rising electricity demand and Oman was the first country to open its power-generation sector.

Currently, IPPs represent most of the new capacity and continue to replace government power plants. Therefore, IPPs will continue to be at the forefront of GCC governments' strategies to add generating capacities and with an increasingly demanding population and spiralling rates of power consumption, the need for sustainable and renewable sources of energy is expected to garner more importance in the coming years.

With further advancement in technology, reduction of prices and clean technology, solar power is going to experience a

ADAPTED TO ALL CONDITIONS



**HEAVY
RANGE**

The INMESOL Heavy
RANGE delivers a wide
choice of powers from
750 to 2500 kVA



www.inmesol.com

INMESOL, S.L. / HEAD OFFICE

Carretera de Fuente Álamo, 2 / 30153 CORVERA · Murcia / SPAIN

Phone: +34 968 380 300 | +34 968 380 879 | Fax: +34 968 380 400

inmesol@inmesol.com

Follow us on



phenomenal growth and could most likely be the preferred source of energy in the future for the Middle East region. The year 2016 saw the rise of coal-fired power plants, but technologies are being developed to mitigate the negative environmental impact from power generated by coal. This has seen ACWA Power in Saudi Arabia commit to exploring the power generation market by building a coal-fired power plant in Dubai to supply to the Expo 2020.

Therefore, the GCC power construction industry is expected to register robust growth over the coming years with the UAE, Saudi Arabia and Kuwait being attractive markets for opportunities for power plants in the future.

TRME: Are there any countries within the MENA region that are underserved and need attention at the moment?

AM: Industry reports estimate that the power generation capacity in the MENA countries must reach a target of 440 GW by 2020 to meet with the growing demand – this is almost a 50 per cent on the current available capacity.

Financial problems and regional unrest plague a few countries in the MENA region with Iraq facing the toughest challenge in meeting demand. Capacity building is also a



Anita Mathews is the group director at Informa Energy Group. (Photo: Informa Energy Group)

top priority for regional utilities to ensure they can meet the rising demand.

A recent report by MEED has projected Egypt to have the largest requirement with close to 28,000MW of new capacity required to meet with their increase in population and economic expansion.

TRME: What are the challenges that the power sector is facing today? What are the subsectors in the utilities segment that need special attention?

AM: APICORP Energy Research have reported that while countries in the region are pushing for investments in the power sector, there are still a number of challenges that will be key to overcome in the medium term. Energy-exporting countries, mainly in the GCC, are reducing expenditure and cancelling projects that aren't critical. This is especially prevalent within the power sector.

Financing power projects has become more challenging. Although recent efforts to attract foreign investment have seen some success, political and economic concerns mean investors will be cautious. There is a silver lining to this however, as an economic

Smart grids present a greater opportunity for the developing countries, especially those whose focus has been on increasing their renewable energy power generation capabilities.



The Ultimate Source for Pressure and Vacuum for your industry



Gardner Denver provides reliable, low-pressure products that serve a wide range of manufacturing and process industries.



enquiries.fze@gardnerdenver.com
Tel: +971(0) 4881 1744
www.gardnerdenver.com

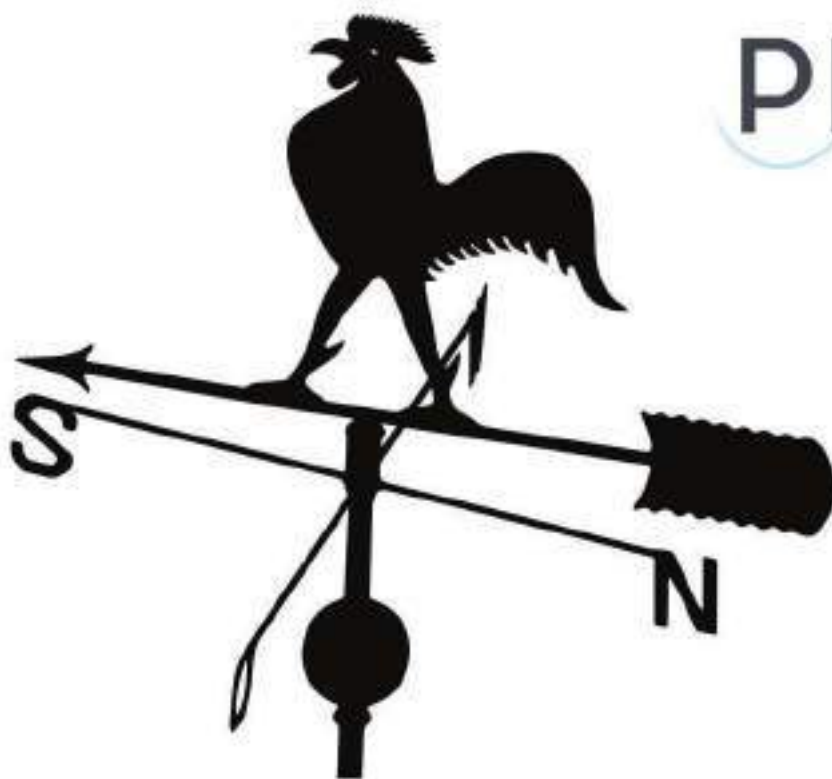
For more information, contact us today

It is about knowing which way the wind blows.

Direction is the most important asset you can possess. Direction in making optimal decisions of what to invest, when and where, through to the integration of that asset is key.

PLEXOS is the world's leading energy simulation software delivering stand-alone or co-optimised commodity solutions for renewable integration studies. It is fully customisable and configurable for your needs.

Find the right direction.
You'll never look back.



In 2017, there are over 1000 recorded users of PLEXOS in 46 countries.

energyexemplar.com

climate such as this breeds opportunities, with parts of the industry needing to seek external finance.

Another ongoing challenge to the industry is the regional unrest. Conflicts and instability in countries such as Syria, Yemen and Iraq means that some of the existing generation capacity in those countries have been destroyed, and with the added struggle of not being able to find the necessary investments to rebuild some of these plants, power shortages will remain a problem for the immediate future.

TRME: Surely, smart grid is the way forward. But what about the conventional grid system market? Is the shift economical?

AM: I would say that smart grids present a greater opportunity for developing countries, especially those whose focus has been on increasing their renewable energy power generation capabilities. Key challenge faced by the utilities sector is financial viability.

The benefits of smart grids flow across various stakeholders, including the consumers, and this may not make it easier for the utilities to measure the economic benefits. The savings, however, are expected in the long term, so it requires governments and utilities with long-term strategies to see the return on investment.

TRME: The next big events by Informa are Electricx, MEFSEC and SolarTec in Cairo, Egypt, in December 2017. Could you provide insight about the preparations and the outlook for the Egyptian market?

AM: According to a recent report by APICORP Energy Research, Egypt's electricity consumption has been rising at an annual rate of 5.6 per cent over the past decade. One of the key drivers of this growth is a rising population, improving income levels, and subsidised electricity prices. They reported that Egypt's estimated capacity of 34 GW is not sufficient to meet this rising demand.

The country has ambitious plans to invest and increase its capacity in the medium term. APICORP estimates that Egypt will need to invest US\$28bn in power generation and a further US\$15bn in transmission and distribution (T&D). They believe that this level of investment would increase capacity by approximately 20GW to reach 54GW in 2020.

As I have mentioned before, the Egyptian government has recognised the attraction of IPPs who, at the moment, have only a limited presence in the country. Three IPPs

were introduced in the early 2000s with a combined capacity of near two gigawatts (GW). Although there were plans to introduce 12 additional IPPs, the currency devaluation in 2002 and 2003 meant these never went ahead.

IPPs are especially important for Egypt as falling government revenues need to be allocated towards other sectors such as education, health and infrastructure, and IPP projects are usually more cost effective than government power plants. They also provide governments with the flexibility to identify projects and capacity needs while leaving developers to execute. This is especially important in Egypt where project delays due to financial and technical issues are frequent.

But, according to APICORP research, despite the recent increases in electricity prices, the government will be reluctant to pass all costs to consumers quickly. They believe that the good news comes from the restructuring of the power sector and the electricity pricing reform.

All things considered, our portfolio of power exhibitions in the country is showing strong signs of growth. I am happy to say that the 2017 edition of Electricx will be one of the largest in the 27-year history. The event will be truly international, with the capability to cover more than 15,000 sq m, it boasts a gathering of more than 10,000 power distributors, retailers, consultants, government representatives, electrical engineers and purchasers from all over Egypt and North Africa.

TRME: After the huge success of Middle East Electricity in February 2017, what feedback have you received and have you taken any recommendations on board for the next edition?

AM: I believe that the overall feedback from the most recent edition was good. It is no secret that times are tough, but I think if we expand on what we have achieved this year we will be in a good place for delivering a stronger platform for 2018.

As you know, we created a theme for this year's event which was 'Smart Cities', an

The renewables industry is enjoying a period of significant growth in the Middle East, a trend that is accelerating as governments across the region announce ambitious generation targets for the coming decades.

idea that has become a huge focus within the industry and will be one of the goals driving future growth. This was the first time we had ever attempted synergising our offering and carrying a theme across all of products at the show.

The feedback to this was overwhelmingly positive. From our conference programme on 'Energising the Smart City' which covered challenges and opportunities around providing innovative urban energy solutions, through to the 'Smart Cities Innovation Zone,' everyone involved, especially the government bodies who support us, saw value in putting a topic as important as smart solutions on a pedestal and promoting it the way that we did.

Naturally, we are striving to make next year's show as accessible as possible for our customers. We will be keeping the segmented floorplan that we launched this year, and will be adding a new sector – Energy Storage and Management Solutions (ESMS).

The renewables industry is enjoying a period of significant growth in the Middle East, a trend that is accelerating as governments across the region announce ambitious generation targets for the coming decades. To sustain this growth and increase the viability of solar, wind and other alternative power generation projects, efficient energy storage solutions must be adopted by project owners.

The introduction of ESMS to our show will give international manufacturers and distributors the chance to meet buyers for renewable projects across the MEA region. Being based in the re-export hub of Dubai means Middle East Electricity is uniquely placed to offer manufacturers and distributors access to markets across the region.

When we looked into introducing ESMS as a standalone product sector to our show floor, we were met with some significant indicators that this is what the industry wants. More than 36 per cent of MEE 2017 visitors expressed an interest in ESMS. There is a projected revenue of US\$3bn in the MENA energy storage market by 2025, and 1.4 GW projected capacity of deployed energy storage in the MENA region by 2025. ■

KNOWLEDGE IS POWER



Puts the power in your hands.

JCB LiveLink gives you complete control of your generators to keep the power on! Livelink improves productivity, maximises uptime and make it easy to manage the health of your generators by providing essential operational data. The most up-to-date information about how your generators are performing or where they are located becomes even more critical when it comes to making the right decisions. The more knowledge you have to generate uptime, the better value for money your generators deliver.

To find out more visit our website.

www.jcb.co.uk/livelinkgenerators



When it comes to UPS, factors like reliability, availability and efficiency are essential, as well as state-of-the-art technology.
(Photo: Kjetil Kolbjørnsrud/Shutterstock)

An 'always on' world

Technology is driving innovation in the GCC's uninterruptible power supply (UPS) market. Martin Clarke reports.

IT'S HARD TO overstate the role played by uninterruptible power supply (UPS) systems in keeping businesses ticking over. And in a world that's now deemed 'always on', operating round-the-clock, that's a major challenge.

The cancellation of British Airways flights at the end of May 2017 was, it is thought, triggered by a power surge from a UPS system that cut off a vital data centre, albeit briefly. The ensuing damage to flight schedules worldwide was immense.

UPS systems for critical data centres and all kinds of other facilities – from hospitals and life-saving medical equipment to factory floors and remote telecommunications towers – are widely used across the globe. They have an obvious significance in sensitive industries such as aviation or healthcare or where national electricity systems may be unreliable, or in areas where power is non-existent. But, in the digital age, they are now routinely deployed for underpinning the integrity of vital computer equipment.

And there is a ready market for such systems in the energy hungry GCC.

A report last year predicted that the UPS systems market for the whole of the Middle East and Africa combined will register sales of 4.2mn units by 2021.

Significantly, it cited the growth in technology and rising internet penetration as fuelling demand for UPS units, a trend

that is expected to augment the need for storing and protecting huge amounts of data in the digital era.

This has been borne out by local providers raising their game, in a bid to offer new high-tech solutions to customers. Underscoring its belief in the market, Saudi-based Industrial Systems Group (ISG) recently teamed up with China's Huawei to apply its technical knowledge in the local manufacture of UPS units.

Another local producer, Arabian Power Electronics Company (APEC), owned by Saudi Arabia-based Eram Group, also underscored its commitment to the growing GCC market, opening a new trading unit in Dubai. The company has a manufacturing site in Al Khobar, and also maintains a research and development base in India.

Leading international providers serving the GCC UPS market include Emerson Network Power, APC by Schneider Electric and Eaton Corporation, among others.

All are seeing the same market shifts, as intelligent factories, smart energy solutions and the digital explosion challenge companies to offer seamless, integrated UPS across multiple different technologies and disciplines.

With businesses evolving rapidly alongside the technology they use, it represents a clear opening for all UPS providers. Computer systems, servers, telecommunication networks, production

lines and many other electronic devices must be supplied continuously with power, without any interruption. That means when it comes to UPS, factors like reliability, availability and efficiency are essential, as well as state-of-the-art technology.

Also, in many industrial products and applications, simplicity and ruggedness play a crucial role. And it's not just large corporations like airlines that depend on this smart technology.

In the UAE, the number of small businesses is rising fast, fuelling demand especially for smaller UPS systems with a KVA rating of less than 10, according to another report (*UAE UPS Market Outlook to 2021: Rising Number of SMBs and Enhancing Commercial Sector to Foster Growth* by Ken Research).

It says that the UAE market is currently dominated by UPS imports from China, the Philippines, Germany, Italy, USA, India, France and Slovakia.

While there are no major players manufacturing locally, the likes of APC, Eaton, Emerson Network Power/Vertiv and Tripp Lite all have strong distribution networks, with resellers and system integrators.

As the UAE and Gulf markets expand and evolve, all will have a role to play in delivering UPS solutions to maintain 24/7 performance of critical equipment and machinery. ■

Meet the PowerKit

30 - 2230 kVA

Power Generation Engines



Low kVA

30 - 125 kVA

3 - 4L

4 Year / 600 Hour Warranty



Mid Range

135 - 750 kVA

7 - 20L

4 Year / 600 Hour Warranty



Heavy Duty

825 - 1500 kVA

32 - 39L

4 Year / 600 Hour Warranty



Heavy Duty + Coming Soon

2000 kVA

35L

4 Year / 600 Hour
Warranty

The rise of green climate control solutions

Sustainable inverter technology and the emergence of IoT has changed the landscape of the HVAC industry today. Sookwang Lee, General Manager at SAC Sales Division, LG Electronics Gulf, tells us how.

FACING THE THREAT of climate change and rising electricity prices due to increased global energy consumption, countries all over the world are strengthening regulations in a bid to increase energy efficiency. In order to meet these guidelines, building owners are turning to highly efficient heating, ventilation and air conditioning (HVAC) technology such as inverter technology.

Inverter technology utilises inverter drives and compressors to appropriately control capacity for both heating and cooling loads. This has been reported to annually save up to 30 per cent in energy versus non-inverter compressors.

Even HVAC energy standards have changed from standard efficiency ratings to the inverter devices' favorable annual energy efficiency standards.

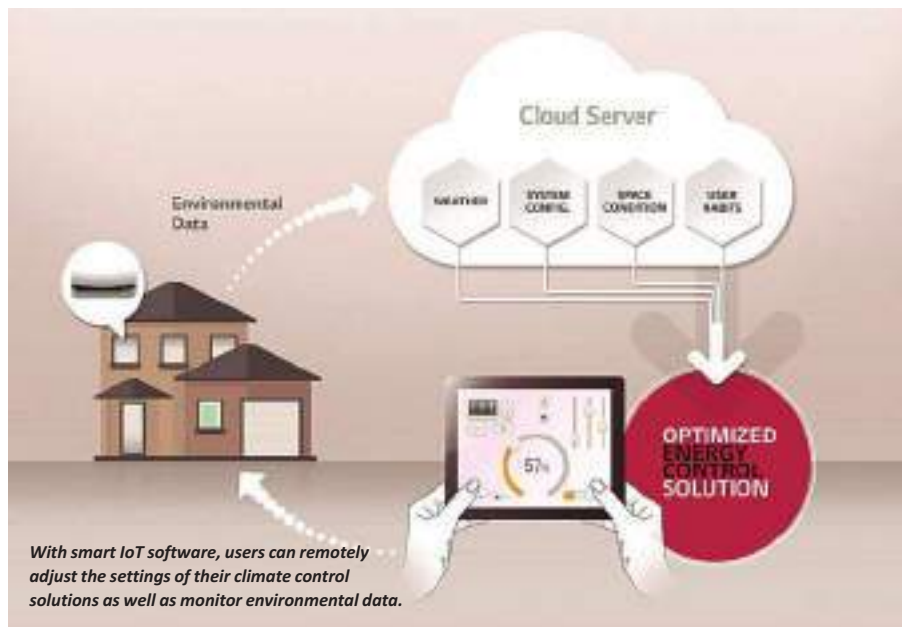
In the GCC, a variety of key approaches have been undertaken to ensure long term sustainable growth and these include energy-efficiency measures.

As global energy costs rise, inverter technology is becoming more prevalent, and the decreasing price difference between inverter and non-inverter devices is only accelerating the adoption of inverter drive units.

World at Your Fingertips: IoT meets HVAC

The emergence of viable Internet of Things (IoT) technology has touched all areas of our lives, and HVAC is not immune from these changes that have fundamentally reshaped how we interact with electronics.

Advanced sensors that were once only implemented in large air conditioning units (temperature sensors, humidity sensors, gas sensors and dust sensors) have become smaller and cheaper, allowing them to be integrated into smaller units. By linking these smart sensors through Wi-Fi connections, home owners can manage



their entire living space as a single, unified solution. In addition to making control more convenient, IoT technology increases user comfort and energy efficiency.

With smart IoT software, users can remotely adjust the settings of their climate

control solutions as well as monitor environmental data. User data is saved in the cloud where it can be analysed to develop optimised energy control solutions, which are tailored to the weather, the installation space or what the equipment is being used for, the condition of the equipment or user habits. By bringing multiple climate control solutions into a single IoT network, what was once a collection of efficient units is transformed into an incredibly efficient unified system. Equipped with advanced sensors and running on complex control algorithms, IoT brings out the best in HVAC and by optimising its energy-saving potential.

In the future, all air conditioning units will be connected to other appliances and sensor networks which will gather data that will help maximise installation efficiency. By utilising environmental data and information gathered through these smart connections, the use of IoT technology will continue to evolve. ■



Sookwang Lee is the General Manager at SAC Sales Division, LG Electronics Gulf. (Photo: LG Electronics)

اجريكو aggreko



Cooling solutions to grow your business

Cooling tower failure? Insufficient capacity? Waste water cooling? Aggreko Cooling Tower Services can provide you with supplementary cooling solution or cooling towers during repair and maintenance to your plant. With over 50 years' experience, 24/7 expert servicing and the largest fleet of modular cooling towers in the industry, we can help you maximise production when the heat is on.

Aggreko, Power Specialists across the Middle East

Aggreko Middle East Ltd

PO Box 16875, Dubai, UAE

T: +971 (0)4 8086100

E: customer.service@aggreko.ae

Abu Dhabi

+971 (0)2 5549494

Bahrain

+973 17723381

Dammam

+966 (0)13 8580301

Dubai

+971 (0)4 8086100

Jeddah

+966 (0)12 2727640

Kuwait

+965 23983648

Oman

+968 (0)24 501872

Qatar

+974 44606178

Riyadh

+966 (0)8 111005060

Sharjah

+971 (0)6 5345999

Turkey

+90 530 3850056

Yanbu

+966 (0)14 3963993

Aggreko operates from more than 200 locations throughout the world.
For the location nearest you, please go to: www.aggreko.com/contact

me.aggreko.com

Standby for power



HIMOinsa gensets at Dubai Festival City. (Photo: HIMOinsa)

IN APRIL 2017, HH Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, ordered the installation of back-up power generators at major projects in Dubai to ensure buildings will have necessary power during load shedding.

A committee, headed by Saeed Mohammed Al Tayer, MD & CEO of Dubai Electricity and Water Authority (DEWA), was formed to follow up on implementing the order in major buildings and landmarks such as tourist, commercial, and cultural buildings in the emirate.

The circular stated that the capacity of the back-up generators should be sufficient to cover lighting, elevators, escalators, automatic doors, surveillance cameras, alarm systems, and fire and safety equipment. The back-up generators must be properly maintained to ensure that they will work in an effective and timely manner, according to best safety practices.

In the light of this, HIMOinsa said that its standby generator sets can guarantee start-up with a 100 per cent load response within

as little as seven seconds of any power cut. The company also offers end-to-end engineering consultancy on projects and the support of the local service through Al-Futtaim FAMCO, its distributor in the UAE.

In view of the foreseeable increase in demand for generator sets as a result of these regulations in Dubai, Keith Webb, general manager at HIMOinsa Middle East, highlighted the importance not just of supplying generator sets, but also of offering specialist technical consultancy. "In buildings like these, public safety is the key. Having a qualified engineering department that offers end-to-end technical consultancy on projects is one of our greater strengths."

Cristian Cavazzuti, managing director at Pramac, is also optimistic about Dubai government's initiative. He said, "The decision for mandatory power back-up in buildings and major sites will require quick availability of a range of generators that can vary from few hundreds kVA to MW and that is exactly the range we produce. The units will need to be silent, equipped with remote monitoring systems and configured

with the typical stand-by options that we have been offering already.

"We have recently appointed an exclusive dealer United Al Saqer Heavy Equipment in Dubai to strengthen our local presence."

Altaaqa Global's chief commercial officer, Mahmoud El Zaafarany also stated, "We support the initiative of the government of Dubai to encourage major facilities to install back-up or standby power plants. A power outage, even for a short time, may result in financial and opportunity losses to businesses and industries. A multi-megawatt back-up power plant can ensure that electricity is continuously supplied to any large-scale facility."

He also mentioned that Altaaqa Global is ready to provide Dubai's facilities with its large-scale rental power solutions comprising power plants that can run on either diesel, gas or dual-fuel. Zaafarany added that, as part of its service, Altaaqa Global offers the expertise of its engineers and technicians who will design, install, commission, maintain, service and demobilise the power plants. ■



Dwyer

SMART AIR HOOD™
SERIES 5AH

Quad Flow Design | Predictive Balancing
Improved Accuracy | Lightweight/Easy to Maneuver

TO LEARN MORE:
+44 1553 841925 | salesna@dwyer-hi2.co.uk

A BETTER WAY TO BALANCE



HYDRONIC METER KIT
SERIES 490A

Digital Dampening & Improved Resolution | Controlled Purge
Rugged Valve Assembly | Pipe Strap Mounting | Magnetic Mounting

CRITICAL SITES, UNLIMITED POWER



NEW! FROM 800 TO 4200 kVA KD SERIES

KD SERIES is the newest line of generators powered with our advanced KOHLER diesel engines. The generator sets unprecedented power density makes this new line ideal for needs which are constantly more demanding. With a wide range of powers (800-4200 kVA / 800-4000 kW_e), they are ideal for every industrial power segment use and benefit from the KOHLER-SDMO worldwide quality of service.

KOHLER-SDMO passion is gaining power. Visit : www.kdseries.com

KOHLER®
SDMO®

Saudi Arabia still ahead in power

The 20th edition of Saudi Elenex (previously Saudi Power) made way for more investments in the electricity sector, especially renewable energy.

SAUDI ARABIA HAS the highest power consumption per capita in the Middle East, which has been growing at a fast pace over the past decade.

According to recent reports, the kingdom will need investments worth US\$133.3bn in electricity projects over the next 10 years to cope with the rising power demand, and the private sector is expected to also take part. Analysts say that the country expects peak electricity to hit 90,000MW in 2022.

Currently, the installed capacity is around 70,000MW and Saudi Electric Company (SEC) has agreed to invite private investors to participate in creating an additional 5,400MW of generating capacity.

In May 2017, SEC finalised the implementation and operation of a number of electric transmission and interconnection projects in the northern regions of the kingdom at a total cost of US\$1.46bn. These included six plants for transmitting electric energy, five overhead lines for electric interconnection between a number of northern cities and regions, including operation of the aerial interconnection (380kV) between Tabarjal and Tabuk plants. Reports have suggested that it is the longest overhead line at 790km.

Currently, the kingdom is the biggest power market of all the GCC countries and analysts forecast increased investment in utilities over the next 10 years, and beyond, to meet rising demand from a growing population. The demand for electricity alone is projected to double by 2030 in Saudi Arabia, according to *Business Monitor Intelligence (BMI)*.

With this in mind, the three-day Saudi Elenex ended on a high note on 16 May 2017 with the participation of more than 12 countries. According to *Saudi Gazette*, the event reflected the importance of the power sector in general and the major role the exhibition is playing by attracting leading companies, and highlighting the important challenges and achievements that encounters the electricity sector locally and internationally.

Khalid Alamdar, director of sales and marketing at Riyadh Exhibition Company Ltd. (REC), said, "This year we are celebrating the launch of the 20th edition of this exhibition, which has become a preferred platform for the most interested and experienced experts and the most specialised local and regional electricity exhibitions to explore the latest

technologies that drive the sector forward."

With the support of the SEC and participating sponsor Saudi Standards Metrology and Quality Organisation (SASO), the exhibition showcased the promising investment opportunities in the renewable energy and techniques field.

Saudi Aircon, that took place along with Saudi Elenex, underlined the importance of a sustainable HVAC system. Electricity demand in Saudi Arabia is increasing due to economic and demographic growth and around 70 per cent of electricity consumption in the kingdom is on account of air conditioners.

According to REC, to keep pace with population growth in Saudi Arabia, around 500,000 new homes are required. With rising number of residences, the demand for energy in residential segment is anticipated to double by 2030. However, only 27 per cent of buildings in Saudi Arabia are thermally insulated. In Jeddah, 85 per cent of the buildings lack insulation, and the ratio is 72.6 per cent in the Eastern Province and 50 per cent in Riyadh. Experts have maintained that lack of thermal insulation causes a lot of energy wastage in Saudi Arabia. ■

Sealing Valves Correct will boost Plant performance.

Valve Seat Rings/ Bonnet Seals/ Valve glands/ Stem Seals/ O Rings/ Elastomeric Seals.

✓ Our State 150 (N) special is tested to confirm the API 622 Standards for fugitive emission testing.

✓ Our Cardinal confirms for safety of up to 1500 & 6007 to fire safe.

Corrosion Seal



Graphite Die Moulded Rings



O Rings



Valve Stem Packing



Bonnet Seal Rings



Expandable Seal



Valve Gland



Seals



Valve Cardinal





INMARCO FZC, P.O. Box # 120284 SAIF Zone Sharjah, UAE. Tel: +971 6 5578378 Fax: +971 65578948
Web: www.inmarco.ae E-mail: info@inmarco.ae

Spearheading the solar power movement

The Intersolar Middle East will give an insight into the region's PV market, whilst focussing on best finance and business models as well as latest technologies.

IN THE SUN-BLESSED countries of the Middle East, today solar energy generation is at the top of the energy agenda. Come September, the Intersolar Middle East Conference 2017 in Dubai will pay tribute to this fact, according to the event organisers. The leading solar event in Dubai, that will take place on 26-27 September, will provide information on current market trends and framework conditions of the industry, as well as the opportunities and risks of market entry that await participants. In a comprehensive programme held for two days at the Conrad Dubai Hotel, the specialist conference is set to build on the success story of the Intersolar Middle East 2016.

Last year was the first year where the global photovoltaics (PV) market exceeded the size of the wind market and, according to experts, 2017 will be a continuation of this trend. Apricum Solar Intelligence Quarterly Q1/2017 expects the gap to continue widening in the long term between the two.

At around US\$3.41 per kilowatt hour, solar power is now the most cost-efficient form of power generation in the region. Intersolar and its Middle East and North Africa (MENA) events have a long way of providing a platform for market participants where solar energy generation is in the spotlight.

Attended by over 4,000 trade visitors and around 100 exhibitors, the first ever Intersolar Middle East exhibition and accompanying conference, held in 2016, was a resounding success. In previous years, Intersolar had organised one-day conferences in places including Riyadh and Dubai. This year, a side event at the Intersolar Europe held in Munich on 1 June, will mark the start of the MENA series, primarily addressing financing options and current market developments.

The Intersolar Middle East event in 2017 in Dubai will predominantly take the form of a conference. Following conversations with

The event's conference focusses on photovoltaics (PV), PV production technologies, and energy storage systems. (Photo: Intersolar Middle East)



disseminators and companies, the Intersolar organisers have decided to focus on providing a top-level conference programme and networking opportunities.

Sessions exploring the development of different markets and technologies, discussions between investors, project developers and key players in the region, information sharing, and a wide range of different networking opportunities, will give

each participant a wealth of opportunities to expand their knowledge and make new contacts.

Prospects for solar companies

"The solar market is booming in the Middle East and further afield. We wanted to provide the industry with a professional platform, and thus Intersolar Middle East was born," explained Marcus Elsässer, founder and CEO of Solar Promotion International GmbH. "In the medium term, the Middle East nations as well as North Africa will account for a considerable proportion of the solar energy generated. A top-level conference such as Intersolar Middle East provides entrepreneurs from the solar industry with the ideal opportunity to find out about the solar markets around the Middle East and to network."

The Intersolar organiser is working with its long-standing partners that include MESIA (MENA), Günder (Turkey), BSW-Solar and EUPD (both in Germany), giz (Pakistan/Afghanistan) and others to prepare an extensive two-day programme. ■

In order to help satisfy the thirst for energy, Middle East has been setting new benchmarks in terms of adopting large-scale solar power plants.

Quality at its best

Unigulf Industries, leading provider in HVAC and MEP solutions in the Gulf, recently conducted a technical event on coating/adhesives/sealants and fibreglass insulation with an emphasis on Underwriters Laboratories (UL) at Millennium Corniche Hotel, Abu Dhabi.

AS CONSTRUCTION CONTINUES undeterred by the economic conditions in the Middle East, the penetration of HVAC is even further with emerging trends that include the increasing use of green building-compliant HVAC products for better indoor air quality.

But increased demand also leads to the rise of more suppliers, which necessarily means more availability. But this comes at a cost. Many local companies, while adhering to safety standards, do not necessarily go through all the steps for achieving certification such as the Underwriters Laboratories (UL). In the Middle East, UL provides testing and certification to manufacturing companies and its products.

This is the reason why Bostik conducted a technical conference on UL at a conference on coatings/adhesives/sealants in 2017, where significant emphasis was put on UL accreditation. The two-hour session included talks from Bostik's Steve Leek and Arabian Fibreglass Insulation Company (AFICO) Kailash Chandra.

Leek delved into the subject of why UL certification is important, stating that Bostik is the only one of the very few known smart adhesive brands in the Middle East with genuine UL certification in the region.

Focusing specifically on Idenden range, Leek demonstrated its importance to the construction market in the UAE, especially in the HVAC sector. "This specific Idenden range has been available in the Middle East for a long time, so there is nothing new about that. However, without Idenden our competitor, a US company, would be taking over the market. Bostik's Idenden can end the monopoly of its competitor because of it being very competitively priced."

Leek stated that the agenda of the event was to make local partners more aware of Bostik and why it is the only alternative for smart adhesives in the region. "As much as our products are trustworthy, so are the accreditations. Like any British company, all our products were tested to British Standards for many years. Coming to the Gulf, we had to be accredited to local standards. About four years ago, we



Steve Leek on how the UL certification gives Bostik an edge over the other manufacturers. (Photo: Unigulf)

obtained UL accreditation and now we have Dubai Central Laboratory (DCL) certificate as well! This gives us an edge over the others."

He went on to say that the market has a number of small and local adhesive companies who claim to have UL, which according to him, doesn't fulfil all the criteria to compete with Bostik in the first place.

"I think they only have their products fire-tested by UL and then claim that they are UL-certified. How is it even the same? All our quality control systems are checked few times a year by the UL team, who come unannounced to collect samples for testing; all of our formulations are held by UL. We think it is very important that we make this point clear to our customers and help them understand the process."

In these cost-constrained times, suppliers and procurement companies may look at options that are economical from smaller companies. To this Leek says that it then becomes imperative for UL to check that.

Another important criterion in construction today is fire safety. With the revised UAE Life & Fire Safety Codes in 2017, AFICO's Chandra demonstrated how it is even more important to take into consideration thermal properties of insulation. Chandra also spoke about the

importance of fibreglass technology in building and how AFICO products stand apart from other competitors.

He said that AFICO's fibreglass technology plays a big role in thermal performance. All the AFICO products are made with fine fibres and have less thermal conductivity, hence better thermal performance.

AFICO offers a comprehensive insulation solution for building and industrial application. It is the only manufacturer of glass wool insulation products in Saudi Arabia with a recognised reputation in different worldwide markets such as the GCC, Middle East, Africa and Far East.

AFICO is a joint venture between Zamil Industrial Investment Company (ZI), along with Gulf Insulation Group (GIG), owns 51 per cent of the company shares and Owens Corning Corporation of USA own 49 per cent.

The company manufactures premium quality products, under license in utilising the know-how and technical specifications of Owens Corning. AFICO has started operations of their new plant in 2013 with total capacity of 24,000 tonnes, with plans to reach annual capacity of 37,000 tonnes, to become the biggest manufacturer of fibreglass insulation in Middle East. ■

PAI KANE DIESEL GENERATORS WE POWER YOUR NETWORK...

**PAI
KANE
GROUP**

more than just energy



Telecom Range:
10 - 60 KVA (50 Hz / 60Hz)

- Anti Theft - GPS Tracking
- Integrated Fuel Tank (upto 1000L)
- Remote Data Monitoring
- Noise Level - 55 dba @ 7 meters
- 1000 Hours Service Change



Power Engineering (India) Pvt. Ltd.
Registered Office & Factory - India
SRA, Taram Industrial Estate,
Tumkur, Karnataka, India - 562102 India.
Tel: +91 832 716 1030
Fax: +91 832 210 1688

Power Engineering (Sales) Ltd
Marketing Office - United Kingdom
Victory House
400 Pavilion Drive
Northampton Business Park
Northampton NN4 7PA
United Kingdom

Power Engineering (India) Pvt. Ltd.
Marketing Office - Sharjah
Q4 - 107, Sharjah Airport International
Free zone,
Sharjah, UAE
24x7 HELPLINE
+971 50 251 5644

E-mail: imports@paikane.com
Website: www.paikane.com
Facebook:
www.facebook.com/paikaneagroup
24x7 HELPLINE
+91 8326550746 / +91 8372261339
www.paikane.com

Powered by
YANMAR

Health, Safety & Security Review Middle East

Solutions for developing your
Health, Safety and Security Business in the Middle East



- The **largest circulation** of any HSE title in the MENA region
- Coverage of more industrial sectors than any other HSE title in the GCC, including **Oil and Gas, Power, Construction, Utilities and Industry & Manufacturing**
- The **only** title with editorial in both **English & Arabic**

**Alain
Charles**
Publishing
Serving the world of business

MENA Tel: +971 4 448 9260
ASIA Tel: +91 80 6533 3362
USA Tel: +1 203 226 2882
EUROPE Tel: +44 20 7834 7676

e-mail: post@alaincharles.com
web: www.alaincharles.com
www.hssreview.me

Meeting the growing connection demand

Lucy Electric has launched RMU Aegis36 as a leading option for industrial, renewable and utility solutions.

THE UNITED NATION Environment Programme (UNEP) 2016 report on global trends in renewable energy investment states that, in 2015, the global investment in renewable power capacity, excluding large hydro-electric dams, reached US\$265.8bn. Similarly, the year-on-year rise in solar and wind-related project investments, expected to reach over 10 per cent, added 118GW power generation capacity to the grid. This has been reflected across the Middle East in a growing number of solar, PV and wind generation projects. To meet this increase in renewable power connections and support demand for a high quality switchgear solution for 36kV networks, Lucy Electric has launched its first 36kV ring main unit (RMU). The Aegis36 is the latest extension to the successful Aegis range, which offers options across 12kV, 17.5kV and 24kV networks and up to 630A ratings.

The popular Aegis range uses Lucy Electric's proven technology to deliver the highest levels of reliability, safety and prolonged maintenance-free operation. Its combination of the highest power ratings, safety features, options and accessories offers customers a market-leading product for the global industrial, renewable and utility markets.

The unit features a uniquely compact design, which has one of the smallest footprints on the market, making it suitable for locations such as kiosks in high population areas and inside buildings and installations where space is at a premium. It is particularly well-suited to installation in solar and geothermal sites and the unit's small footprint means it can easily be



The unit is compact, making it suitable for locations such as kiosks in high population areas and inside buildings and installations where space is at a premium. (Photo: Lucy Electric)

installed inside wind turbine housing.

Another major benefit of the units is that they can be supplied automation-ready with an optional integrated remote terminal unit (RTU). For maximum flexibility, customers can choose from a wide range of options and accessories, load switch and circuit breaker combinations and a large selection of IDMT relays, VPIS/VDS, EFI and other accessories.

All live parts in the Aegis36 are enclosed in an SF6 gas insulated, hermetically-sealed stainless steel tank with flexible options for front cable termination and up to five switching functions enclosed within the tank. The units have an internal arc rated

cable box, internal cable compartment and key locks for safe operation. Its dedicated cable test facility, 220kVp lighting impulse voltage (BIL) and at 630A at 55°C ambient temperature makes Aegis36 a unique product in the market.

Easy to install, with simple and virtually maintenance-free operation, the Aegis36 means that, for the first time customers can select flexible, cost effective and high performance Lucy Electric switchgear across the whole medium voltage range.

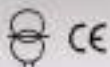
An expert in secondary distribution network and works in partnership with its customers at the forefront of network automation, Lucy Electric offers solutions from end-to-end automation systems to low-voltage monitoring and helps customers solve tomorrow's challenges, today, using forward-thinking solutions.

The complete range of medium voltage, switching and protection solutions, for both underground and overhead line networks, includes SF6 gas and oil insulated ring main units (transformer or ground mounted); pole or structure mounted air break disconnectors; and air or gas load break switches.

Lucy Electric products and services help manage and future-proof their network distribution, reliably, economically and sustainably. ■

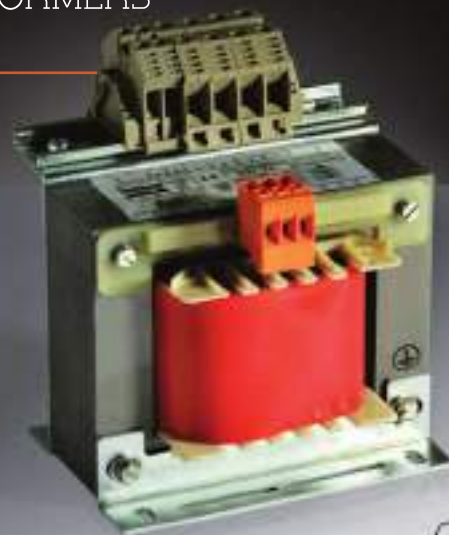
— By Sundeep Singh, global product marketing manager at Lucy Electric

THREE PHASE TRANSFORMERS

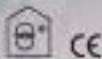


www.manumag.com

SAFETY TRANSFORMERS



ISOLATION TRANSFORMERS FOR MEDICAL LOCATIONS



SAFETY TRANSFORMERS FOR SWIMMING POOL LIGHTING



Expanding Saudi Arabia's equipment sector

Through its partnership with Zoomlion, Rabiah & Nassar Commercial (RANCO) caters to demand for rough terrain cranes (RTC) and crawler cranes in Saudi Arabia, a market that has more than 50 per cent share in the Middle East's construction equipment sector.

WHEN IT COMES to the construction machinery sector in Saudi Arabia, RANCO is a well-known name. Introduced in the Eastern Region in 2013, it is a rapidly growing division that specialises in the management of commercial trading, servicing and rental operations of construction equipment as well as material handling and mobility equipment.

RANCO is currently the sole dealer for Zoomlion's RTCs and crawler cranes in Saudi Arabia. The company has invested over US\$10mn in expansion, which includes opening of new facilities, and in expanding its work force, as well as implementing new sales strategies and methodologies. As exclusive dealers for Zoomlion RTCs, the company has not only established its operational base in Khobar but has also branched out in Riyadh and Jeddah to serve the entire Saudi market.

Collaboration with Zoomlion

The collaboration between Zoomlion and RANCO goes back a long way. The Chinese company entered the Saudi Arabian market in 2002 with its first crane, and has since exported more than 1,000 units of equipment, including more than 600 units of cranes, to the kingdom.

Speaking about its philosophy of serving its partners and customers in new markets, a Zoomlion spokesperson said, "It is the vision of Zoomlion that helps our cranes to get into local markets. In the future, we will continue the localisation and give best support to our partners as we always do. We strongly believe it is the best way to support our customers."

Realising the potential of the Saudi Arabian market early, Zoomlion has always placed great emphasis on the kingdom and on its partnerships here. "We are glad that we have had remarkable performance after the years of efforts in Saudi Arabia. Our products are widely used in the fields of oil exploration, refineries, highway, railway, housing construction, etc," said Faisal Al-Mobayedh, brand manager at Zoomlion.

"We are co-operating with key market players in the construction sector, such as the Saudi Bin Ladin Group, Nesma, Al-Mabani,

RANCO represents Zoomlion's entire RTC range Saudi Arabia. (Photo: RANCO)



Azmeel, Al-Muhaidib, Al Fouzan, Shibh Al Jazira, Saudi Lebanese Tarouk, Al-Ahmed Cranes, Zamil Offshore, Gulf Haulage Rig Move, China Harbour Engineering Arabia, Expertise Contracting Co, Azmeel Cont Co, Arabian Drilling Co, OFSAT Arabia Rig Move, ACDC Co, Bin Delama Co, PEWAT Co and others," he added.

Product support division

Zoomlion and RANCO have revealed plans to build a comprehensive 'product support division', which includes building a spare parts service eco-system and to promote comprehensive competitiveness with the help of IT systems.

"The equipment we sell is of particular importance to the oil and gas, construction and marine sectors," said Fahad Al Rabiah, marketing and deputy commercial manager at RANCO. "We represent Zoomlion's entire RTC range and we have also included their crawler cranes and knuckle telescopic cranes in our portfolio, which enables us to

offer complementary lifting solutions to our customers.

"Our 13,600 sq m Abqiq Service Centre facility in Khobar is equipped with all facilities, parts and tools needed to keep our customers' fleets running in top order, and it is manned by experts who know the machines inside out. In fact, qualified and experienced manpower is one of our key strengths, and our staff numbers of 300 in Riyadh, 100 in the Eastern Province and 10 in Jeddah make it easy to offer the prompt, on-time and appropriate attention to our customers as they have come to expect from us," he explained.

What this has allowed the company to do, according to Roy Evans, group operations manager at RANCO, is to become known for offering an unbeatable value proposition to customers. "Our dedicated service teams are focused on lowering the OPEX for our customers, which means that we consider ourselves as partners in their progress," he added.

With this philosophy, the company has also expanded its product offerings to be able to provide multiple solutions to its customers under one roof – all with the assurance that some of the top brand names in the world bring. ■



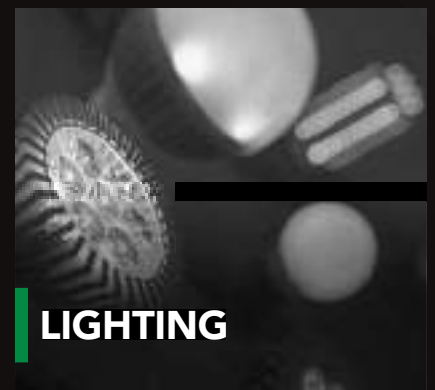
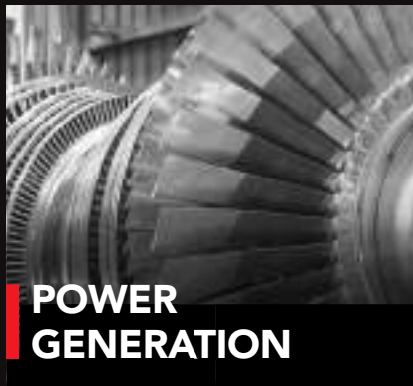
MIDDLE EAST ELECTRICITY

ENERGISING THE INDUSTRY

6 - 8 MARCH 2018 | WORLD TRADE CENTRE, DUBAI, UAE



The region's leading international trade event
for the power industry



ENQUIRE NOW FOR EXHIBITING OPTIONS

www.middleeastelectricity.com

sales@middleeastelectricity.com

Cummins packs more in less

The generator sets were introduced during Middle East Electricity (MEE) 2017 in February.

AT THE BEGINNING of 2017, Cummins unveiled its new line of 6L Series generator sets for the residential and light commercial market, providing more efficiency with less space.

Available from 250-350kVA and powered by Cummins 9.5 litre, six-cylinder dual speed diesel engine, the features include extended service intervals, dual frequency 50Hz/60Hz, lower fuel consumption and enhanced power density.

Surajit Choudhury, genset sales director at Cummins Middle East, says, "The 9.5-litre engine replaces our 14-litre engine line and it is more compact and more efficient with same power output. The main idea is to get more for less. Besides, residential and light commercial market, the range can also be used for rental – both prime and standby."

Equipped with a mechanical engine, Choudhury reiterates that the engine comes with easy maintenance services, which is extremely important in the Middle East due to its ambient conditions.

"As it is a mechanical engine, serviceability and maintenance are extremely easy for Middle East and Africa. This is actually a 'fit-for-market' product for this region. The robustness and the ability to be serviced easily, makes it much simpler."

Cummins also displayed its QSK95 Series high-horsepower generator set. Rated at up to 3,500 kW (3,750 kVA) and designed with a smaller footprint it delivers the highest kilowatt per square foot ratio in its class



The Cummins' 6L Series generator set. (Photo: Cummins)

providing more reliability with less fuel.

Besides this, the QSK60 Engine Series was also showcased. Choudhury reveals, "In the past, we were able to deliver about 2,500kVA standby out of it and now we can get 2,750kVA out of it. So here you are not talking about going down in engine size or displacement. It is about getting more power out of the existing product you have."

Talking about Cummins in the Middle East, Choudhury maintains that he sees a lot of opportunity despite uncertainties.

"In the Middle East we have seen the market shrink quite a bit. Many of the big

economies in the region have contracted. The UAE has been relatively resilient and that has been driven by the infrastructure work going on in Dubai. We are expecting Expo 2020 to drive a lot of growth, especially the hospitality sector. Abu Dhabi is not as strong for us. With regards to Oman, the country has always been a steady market for us. Even if it gives us two to three per cent growth every year and we are looking at 1.5 per cent this year, things look optimistic for Oman."

Kuwait is also grabbing Cummins attention in the right way, Choudhury reveals, "Kuwait is investing heavily in building up medical infrastructure. You see a lot of need there, especially between 600kVA and 3,500kVA."

Besides gensets, Cummins also launched Cummins PowerCommand™ Cloud 550 Remote Monitoring System, designed to give users a robust and reliable remote monitoring option. On stand, the Cummins 360° was also launched, allowing users to 'virtually' step inside a data centre plant room to learn more about Cummins product, design and installation expertise. ■



PowerCommand remote monitoring equipment provides a convenient means of remotely monitoring and controlling generator sets, transfer switches, sensors and output controls.

Adaptive N technology for enhanced compact wastewater pumping

XYLEM, A WATER technology company, has launched a newly enhanced compact pump range featuring patented 'Adaptive N technology' designed to pump wastewater efficiently and reliably in commercial buildings and municipal sewage applications.

Xylem has also announced the launch of Flygt 3069 – a new cutting-edge wastewater pump, which features the Adaptive N technology aimed at ensuring continuous clog-free pumping of the wastewater media.

Speaking about the new range, Ola Wagner, product manager for Flygt small range pumps, said, "Xylem's state-of-the-art Adaptive N technology hydraulic design has been developed and designed with years of experience in how to move wastewater. Now, through the launch of this enhanced compact pump range, our customers can benefit from clog-free reliable pumping in various wastewater applications. The new Flygt 3069 is a unique pump in its class, providing Xylem's renowned clog-free technology in a small pump option with a

capacity below 10kW."

When solid objects such as stringy fibrous material and modern waste enter the inlet of a conventional pump, they tend to get caught on the leading edges of the impeller vanes. This build-up reduces the impeller's efficiency, resulting in more unplanned callouts and increased energy consumption.

Flygt's Adaptive N technology overcomes this in two stages. Most solid objects entering the pump will pass through the impeller between the impeller vanes. If an object gets caught on the leading edge of one of the vanes, it will slide along the backswept shape towards the perimeter of the inlet. In the second stage, the solid object will slide along the tip of the impeller vane inside the relief groove. The guide pin in the insert ring will push all types of solids away from the center of the impeller, along the leading edge and out through the relief groove. If the debris is bulky, the Adaptive N impeller moves axially upward when required allowing it to pass through smoothly.



The hydraulic design of the new pump range is offered in three different materials – hard-iron, grey iron and stainless steel. (Photo: Xylem)

According to the company, in addition to its self-cleaning capability, Flygt's Adaptive N technology also lowers energy consumption up to 25 per cent compared with conventional pumps. The new Flygt 3069 is also available with vortex and grinder hydraulic options. The 3069 pump is flexible and can be configured to be installed in four different ways to suit the application needs. This modular, adaptable design also reduces warehouse costs.

Driving greater energy efficiency in power solutions

TEKSAN GENERATOR, WHICH specialises in diesel, natural gas, biogas generator sets, mobile lighting towers, cogeneration-trigeneration solutions and hybrid power systems, has developed a range of solutions that deliver energy efficiency and minimise energy losses due to the production of electricity and heat by cogeneration and trigeneration systems to realise an efficiency level up to 90 per cent.

Burak Basegmezler, member of the board – sales and marketing at Teksan, pointed out that we live in a digital world, whose population and need for energy is increasing day by day while resources are not. "It is not necessary but vital to innovate efficient power solutions. This is the main reason why we have innovated and served new solutions with higher efficiency such as cogeneration-trigeneration and hybrid power systems," he explained.

Teksan Hybrid Power System is a solution where diesel engines and battery banks can



Teksan's hybrid lighting towers consume lesser fuel than regular diesel lighting towers. (Photo: Teksan)

outdoors sites such as concrete and construction works. The

system reduces fuel consumption by up to 73 per cent and reduces engine operation time to one hour, when the average in regular diesel lighting towers is seven hours.

Teksan has revealed that it is expanding its geographical coverage and fortifying its market position through its strong sales and services network.

be used together. Being integrated with renewable energy resources such as solar and wind, the system helps reduce engine working hours up by 80 per cent and fuel consumption to 65 per cent. Thus, savings in OPEX can be realised with longer service intervals that can be handled with fewer technical personnel. Incorporating technical features that reduce heat, carbon and noise emission, systems like these can also pay off the amount invested in a short period of time – sometimes as quickly as 18 months.

The company also has Hybrid Lighting Towers that can be utilised on off-grid

Growing with the vision of becoming a global brand, the company currently focuses on Middle Eastern countries. Teksan has many important references in Middle East region. The power required for the pumping operation in Qarmat Ali Water Treatment Plant in Iraq, which supplies 55 per cent of the need for water in the Basra city of Iraq, is supplied through Teksan's diesel generator sets. The Doha Project, which is realised by Samko Engineering in Qatar, is also powered by Teksan's synchronised gensets as well as Jeddah Movenpick Hotel and Rejal Alma Treatment Plant in Saudi Arabia.

Megger's TRAX combines 13 different testing capabilities into one

MULTIFUNCTIONAL INSTRUMENTS, WHERE the testing capability of multiple instruments is incorporated in a single instrument, are increasing in popularity because of costs savings through easier usability, manageability and transportability, lower equivalent upfront costs, and the ongoing savings of an associated switchbox. This reduces the test time for transformer diagnostics. The technical features of a multifunctional instrument also determine the magnitude of savings provided and the degree to which the value of the results is enhanced. A potential misstep of a multifunctional instrument is losing its 'balance' – sacrificing transportability, unrealistically compromising testing capability, or becoming difficult and confusing due to the combined multifunctionality.

The Megger TRAX transformer and substation test system instrument provides thirteen different testing capabilities for transformer diagnostics

alone as well as extensive test capacities for other system assets, such as capabilities to time and record motion on circuit breakers, etc.

Balance is also very important. Desirable outputs/sources must be provided while avoiding excessive instrument weight and size. While the power sources should not be overbuilt, they must be adequate for the test at hand. Easy usability must be preserved while providing ample versatility.

TRAX's main section weighs just 26kg and excels in attaining this balance. The user interface utilises the latest touchscreen technology and presents functions in the form of apps. Guidance is provided in the form of connection diagrams and tables that provide the correct sequences of tests. The TRAX delivers a simple testing experience for the user.

A multifunctional instrument's switchbox provides time savings and



The Megger TRAX test system. (Photo: Megger)

reduces fall hazards by minimising the overall number of ladder climbs to complete testing. Switchbox cables are connected initially to each bushing terminal. It is desirable to maximise the number of tests a switchbox can facilitate and Megger's TRAX switchbox facilitates seven different transformer diagnostics.

Switchbox cables to each bushing terminal must be manageable, safe and affordable while the ratings of these leads remain practical for the intended tasks at hand, particularly for winding resistance measurements.

GE launches rugged power supply for industrial applications

GE'S INDUSTRIAL SOLUTIONS has introduced its new Resilient 3000 power supplies specifically designed for general purpose industrial applications. The 3,000W power supplies are engineered to provide the high reliability and ruggedness needed in today's demanding industrial segment in a simple, cost-effective solution.

The user-friendly design of the Resilient 3000 (officially known as GE's EP3000AC48IN) eases the implementation process for all users, regardless of experience level or design sophistication, enabling a broad range of users to deploy and operate the units in their unique applications. While the modules are designed with simplicity in mind, they also maintain the performance, efficiency and ability to offer robust communications that users require. The power supply's rugged design, which includes a conformal-coated interior circuit board to protect against dust and high humidity, and an oversized fan that enables the unit to operate in extreme temperatures, make it an ideal fit for demanding industrial applications. Additionally, the Resilient 3000's robust design can withstand poor grid conditions and line surges, allowing for global deployment in a wide range of industrial applications.

"When it comes to power, factors like reliability, availability and efficiency are essential. Also, in many industrial products and applications, simplicity and ruggedness play a crucial role," said Jim Montgomery, senior product manager, GE. "We took all of these factors into consideration when we went to the drawing board to develop the Resilient 3000, and with that knowledge in hand, we



GE's Resilient 3000 power supplies are available through Digi-Key. (Photo: GE)

were able to ensure that we created a power supply capable of meeting the unique needs of customers across various industrial segments."

The single-phase Resilient 3000 power supplies enable a constant 3,000W output power with an output voltage of 48V, which offers plug-and-play connectivity and operating efficiencies of up to 95 per cent. The units are scalable and can be paralleled for load sharing, providing added flexibility for industrial customers looking for a solution to their unique power challenges.

Additional key features of the Resilient 3000 rectifiers include

- Wide operating temperature range (-10 C to +70 C).
- Wide selectable output voltage range (48 to 58 volts DC).
- RS-485 communication.
- +5-volt auxiliary output.
- Compact size and light weight (approximately 7.5 pounds).
- High mean time between failures design.
- Simple connectivity—convenient two-piece connectors allow for rapid yet confident AC and DC connections and simple wire-and-go-connectivity assures rapid deployment and servicing.
- Over-voltage and high-temperature protection.
- Built-in surge protection.

"Our critical power line of rectifiers has earned a reputation within the telecom and datacom industries as highly reliable and efficient, and we aim to establish the same presence in the industrial segment with our rugged Resilient 3000 power supplies," Montgomery added.



ANNUAL REFRIGERATION CONFERENCE 2017

www.refrigeration-forum.com

27th September 2017

Dubai, United Arab Emirates



Join us in Dubai this September to hammer out top-notch solutions with industry leaders.

Cold storage and refrigeration play a critical role in catering to the country's ever – growing population while maintaining food safety and quality. Due to extreme climate conditions in the UAE, the right temperature control during food distribution goes a long way for end-user safety and satisfaction.

Technical Review Middle East magazine is hosting an **Annual Refrigeration Conference** on 27th September 2017 in Dubai, UAE. This conference will address challenges faced by the refrigeration industry and help existing processes to innovate and improve technology for commercial refrigerators. We aim to demonstrate how digitalisation and innovation can tackle the challenges of the sector like temperature abuse, retrofitting refrigerants, containing refrigerant leaks and how to avoid contaminated refrigerants as well as promote discussions on working with efficient digital commercial refrigeration units and smart appliances.

Reasons to attend

- To keep up with the latest industry trends across the GCC
- To meet and network with government bodies, regulators, facilitators and distributors across the region
- To understand the key underlying issues related to refrigerants
- To know more about government standards impacting environmental policies for all companies
- To review strategies and forecasting exercises
- To gain access to innovative technology through a wide selection of exhibitors showcasing solutions that target the current market challenges
- To participate in discussions on how the industry can adopt latest sustainability and eco-friendly initiatives

Book by the
10th of August
to benefit from our
Early Bird Offer

Group discounts available
for 3+ delegates

Official Media Partner

المجلة العربية للتقنية
TECHNICAL REVIEW
المنشور التقني - الشرق الأوسط
MIDDLE EAST

For more information about the conference:

✉ register@technicalreview.me

☎ +971 4 4489260



Supported by partners, Haulotte spreads across Egypt, Turkey

HAULOTTE'S VERTICAL MASTS with six to 10 metres working height are ideal for difficult-to-reach places and provide the best solutions for stores management operations. Meanwhile, the electric scissors range from Haulotte, which has a compact and durable frame design, are versatile platforms for the most precise applications such as aviation maintenance. They allow access through standard doorways and tight passages and can be used in logistics, industries, food factories and shopping centres.

International Group for Trading & Equipment Co. (IGTECO), dealer of Haulotte in Egypt, has been supplying the country with Haulotte Products since 2012.

According to the company, Haulotte articulated booms were used in Majid Al Futtaim's megaprojects – Mall of Egypt and Cairo Festival City Mall – for construction works. The Haulotte electric scissors were utilised for the finishing and maintenance operations.

The quick ups and electric scissors were chosen by IKEA Egypt for the warehouse management. Quick ups are easy-to-install,



Borusan Logistic, one of the top 10 companies in Turkey, uses Compact 14 units for its yearly inventory management in all its warehouses. (Photo: Haulotte)

set up and operate. They offer a seven to 14 metres working height. They can be operated on fragile ground and are maneuverable through standard doorways.

Carrefour in Egypt also purchased more than 15 units of Haulotte Star 10 and OPTIMUM 8 AC models for all its branches in Egypt that were supplied by IGTECO as well as 20 units of Haulotte Star Range for UAE branches supplied by United Gulf Equipment Rentals (UGER). The new updated Star 6P model is fitted with a high load capacity

picking tray of up to 80kg. It is most popular in filling and destocking shelves, order picking, retail applications, POS signage, information and advertising. It provides safe access to the platform, high-precision driving and smoothness with maximal driving visibility. Moreover, the new updated AC motors allow smooth and progressive driving movements for optimal agility. The operator feels safe and comfortable while manoeuvring. It also gives precise control over the machine to access restricted areas.

In Turkey, various models of Haulotte Electric Products have been deployed by Acarlar Makine, dealer of Haulotte Group, in more than 30 shopping centres including Carrefour – Sabanci Trading Centers and Forum for all its branches. Most of them were Compact 8 & Compact 10N models, which are adaptable platforms for indoor operations with their narrow width of 81cm and best suited for flat slab applications.

They are drivable at full height and can offer exceptional productivity with an extendable platform for extra workspace and an extensive range of smart in-built features.

Otis rises to the top with latest technologies and services

OTIS, MANUFACTURER OF elevators, escalators and moving walkways, has introduced its latest products and service initiatives in the Middle East, including the connected Gen2 Life elevator and the expanded Otis SkyRise product family. These new products mark the company's continued commitment to the region, ensuring a safe and high-quality experience for passengers in the buildings they live and work in.

The Gen2 elevator was the first product-of-its-kind to replace conventional ropes with flat belts, and is one of the company's best-selling elevators ever with more than a half-million units sold worldwide. The new Gen2 Life elevator cab serves as a fashionable and functional room in the core of the building, combining new interior designs with smart, connected functionality, including a customisable in-cab display and the ability for passengers to easily call the elevator from their phone.

Otis also recently expanded its SkyRise product family, designed for the world's tallest buildings. New to the SkyRise system is the SkyBuild™ construction elevator. At the initial stages of construction, the self-climbing SkyBuild elevator uses a hydraulic piston system to move one floor at a time as the building rises. Construction teams can use it to move through the building quickly and safely, and are not exposed to weather conditions and do not require an external lift.

Otis has been working closely with real estate developers to equip some of the Middle East's most iconic high-rise buildings notably Burj Khalifa, and Al Habtoor City in Dubai, Burj Mohammed Bin Rashid World Central Market in Abu Dhabi, Jamarat Bridge near Makkah and World Trade Center in Bahrain.

New Auto Gate system opens at Hutchison Ports SOHAR

AS THE CONTAINER terminal operator at SOHAR Port in Oman, Hutchison is taking its next step towards modernisation and full automation, with the launch of its new Auto Gate system at Terminal C. The terminal already features remote-controlled quayside cranes capable of handling next-gen 20,000 TEU vessels.

Dr Ahmed Mohammed Salem Al-Futaisi, minister of transport and communications in Oman, inaugurated the new, state-of-the-art facilities in mid-May 2017.

"Auto Gate promises to make container shipments at Hutchison Ports SOHAR even faster and more secure, strengthening the port's already excellent reputation as the new gateway to the Gulf," said Albert Pang, CEO of Hutchison Ports SOHAR.

The Auto Gate system utilises a combination of smart technologies, allowing truck drivers to pass through the container terminal gates with no paper documentation and no delays. Drivers can remain inside their vehicles at all times during security checks, inspections and container movements. The new system includes machine-readable cards to store driver information; character-recognition cameras to read truck plate numbers; self-service kiosks for inputting shipping codes; and RFID tags to further improve terminal security.

Mark Geilenkirchen, SOHAR Port CEO, stressed, "Investments in technology to optimise and modernise terminal operations, increase turnaround speed for our customers, and time is money in logistics. These are savings that can be passed down right along the supply chain to make Oman even more competitive as a significant regional hub. As we become more attractive to international logistics companies, investors and traders, the new Auto Gates will help to open up a new world of opportunities for Oman."

YOUR GATEWAY TO THE POWER MARKET IN EGYPT

Committed to making your exhibiting experience profitable and productive, ELECTRICX 2017 will gather the most important decision makers and key representatives from the power sector in Egypt.

For booking and more information
info@electricxegypt.com
www.electricxegypt.com

Discover more
www.energisingtheindustry.com

Brought to you by



ELECTRICX

ENERGISING THE INDUSTRY

3 – 5 DECEMBER 2017
CAIRO INTERNATIONAL
CONVENTION CENTRE, EGYPT

Briefly

JCB develops class leading single drum soil compactor

JCB HAS UNVEILED the 116D single drum soil compactor, a high-performance roller designed for infrastructure construction and maintenance and landscaping projects for Africa, Asia and Middle East. The 116D delivers low fuel consumption, high compaction performance and improved operator comfort.

Key features of the JCB 116D include operating weights from 11,350kg with canopy; proven low rpm, high torque JCB DieselMax Tier III engine; up to 15 per cent fuel saving in competitive trials; rear axle with limited slip differential for maximum tractive effort; and high compaction force with 30.7kg/cm static linear load.

The JCB 116D single drum soil compactor, which replaces the VM115D, delivers class-leading compaction force, with a static linear load of 30.7kN and a centrifugal force in the drum of up to 256kN. In trials with competitive machines the 116D required up to 17 per cent fewer passes to achieve the desired material density, saving time and money for customers.

JCB has optimised the balance between the machine's dynamic force and its frame, to maximise compaction without transferring vibrating forces into the chassis and the insulating rubber mountings further reduce vibration for the operator. The machine has a 2.1 metres drum width and a working speed of 0-5kph in both directions. Maximum travel speed is 10.5kph, making it easy for operators to relocate the machine on site.

The 116D is powered by a proven JCB DieselMax four-cylinder engine with mechanical fuel injection to allow the engine to run with lower quality fuels. The engine meets Tier III emissions standards.

JCB has designed a comfortable operator station, with simple, easy-to-use controls. The 116D delivers excellent visibility from the operator's seat, due to the low bonnet line and no exhaust obstruction. That single piece engine canopy can be opened by 70° to provide excellent access to the engine and driveline, for ground-level service access.

The machine comes as standard with JCB LiveLink.

KOHLER-SDMO reveals latest range of gensets for African market

POWER SPECIALIST KOHLER-SDMO unveiled its latest range of large diesel industrial generators at the Africa Energy Forum that took place from 7-9 June 2017.

The new KD line, which was launched globally at the end of last year, heralds a new dawn for the company with the generating sets equipped for the first time with KOHLER engines.

The KD 135 and KD 175 series is the largest power range on the market – from 800kVA/kWe to 4,200kVA/4,000kWe.

"It's a very important strategy step for the company because we manufacture our own engines now," said Patrick Le Guen, export sales vice-president of KOHLER-SDMO.

"It is the latest engine on the market, which has the most modern technology in terms of fuel consumption and fuel emission. We already have an excellent footprint compared to our main competitors."

All the new KOHLER engines are used in this range, have been co-developed by KOHLER and its strategic partner Liebherr. The generators are available under KOHLER and KOHLER-SDMO brands. The KOHLER brand is dedicated to providing power solutions to North America and Asia-Pacific while the KOHLER-SDMO brand offers applications to EMEA and Latin America.

The targeted industries are construction, mining and IT as well as water treatment, oil and gas and telecommunications.

"The big difference is that by having our own engine we can really drive our own sales and service policies," said Le Guen, adding, "We don't have to rely on any supplier; it is ours. During this year and next year, we are providing important service training for all of our African distributors."



The KD 175 Series.
(Photo: Kohler-SDMO)

David Raison, regional sales director, stated the company had already started to roll out training on the new engines and generators for distributors in Senegal, Côte d'Ivoire and South Africa.

He revealed, "One of the important differences between SDMO and our competitors is that we are connected directly to our end users through our distributors, which gives customers more confidence in our products."

The new engines are characterised by low fuel consumption, extended service intervals and compact design for a variety of stand by and prime applications. Other notable features include a KOHLER APM802 digital controller with a 12-inch touchscreen and a high-ambient cooling system.

"It is a very important investment for the company from a long-term perspective as we are able to compete with Caterpillar and Cummins, which we are very excited about," said Le Guen.

"One important thing, especially for Africa, these engines have been designed to run in harsh conditions. As Africa is mainly the prime power market, we have developed a very strong engine. For markets, such as mining, the engine fits perfectly to the customer needs as well as for big industrial applications to support dams or data centres."

New Hino 500 Series with enhanced safety features

AL-FUTTAIM MOTORS, EXCLUSIVE distributor of Hino in the UAE, has announced the launch of the redesigned medium duty Hino 500 Series truck, the company's second launch in recent months, following the introduction of the Hino 300 series hybrid.

The latest generation of the Hino 500 Series



The Hino 500 Series truck. (Photo: Al-Futtaim Motors)

truck comes with a 7.7 L Euro III compliant engine equipped with a high pressure common rail fuel injection system and turbocharger/intercooler technology to achieve lower emissions and uncompromised power and fuel efficiency. The electronic control common rail technology in the engine allows it to maintain power and higher fuel economy performance under any driving condition.

The medium duty Hino 500 Series offers a wide possibility of applications, such as tipper trucks, curtain siders, reefer trucks as well as general cargo, making it a real all-rounder. The truck also features a range of safety features including ABS, front underrun protection system, rear underrun protection system and much more.

Oil Review

Oil · Gas · Petrochemicals

Middle East

One success leads to another

Oil Review Middle East, the region's leading oil and gas publication, has been putting sellers in touch with buyers for almost two decades. The magazine makes sure that it strikes a balance between respected editorial and your advertising message, to maximise the return on investment for your business.

Oilreview.me

Website-Monthly Statistics
1,022,151 Page Impressions
52,662 Unique Visitors

E-newsletters

Circulation: 20,500+
The Oil Review Middle East fortnightly e-newsletters can deliver your marketing message directly to decision makers.



The magazine's circulation claims are independently verified by an ABC audit



Alain Charles
Publishing
Serving the world of business

MENA
ASIA
USA
EUROPE

Tel: +971 4 448 9260
Tel: +91 80 6533 3362
Tel: +1 203 226 2882
Tel: +44 20 7834 7676

E-mail: post@alaincharles.com
Web: www.alaincharles.com
www.oilreview.me

UD Trucks launches Croner for Middle East and North Africa

JAPANESE MANUFACTURER UD Trucks launched Croner, an all-new medium duty truck in the Middle East and North Africa, in May 2017.

Continuing its rich Japanese legacy of building the 'truck that the world needs today', UD Trucks has designed the Croner range specifically for growth markets across the Middle East, Asia, Africa and South America.

According to the company, the Croner is a reliable and versatile truck range built with robust and quality components to deliver extra productivity and superior uptime. Designed with customer demands and business needs in mind, Croner is engineered to help customers stay ahead of competition through the simple concept of saving time.

Mourad Hedna, UD Trucks Middle East president, said, "UD Trucks understands that more time spent on the road and less time in the workshop drives success for our customers' businesses. It is our aim for Croner to make every moment count, through maximising productivity and minimising downtime on every run our customers make."

Croner offers options for three gross vehicle weight (GVW) models – MKE, LKE and PKE – and their wheelbase variants, offering up to 21 different configurations to suit specific industry demands. Additionally, the air suspension on all variants is available as an option to protect customers' cargo, especially when travelling on rough road conditions. Croner's automatic transmission option will be crucial for markets facing serious driver shortage due to the strenuous demands on drivers. Croner aims to help customers attract drivers, as the automatic transmission provides ease of drive and reduces fatigue for both experienced and inexperienced drivers. Similarly, automatic transmission can help lower cost and downtime

Croner offers options for three GVW models: MKE, LKE and PKE; and their wheelbase variants, offering up to 21 different configurations to suit specific demands of various industries. (Photo: UD Trucks)



for Middle East business owners, as manual transmission is more susceptible to wear-and-tear, particularly in long-haul driving.

Croner is designed to excel in the medium duty segment with a variety of features to maximise drivability and uptime, such as the efficient engine, modern cabin environment and availability of air suspension option for all variants to protect customers' cargo.

Starting with the Croner launch in Dubai, UD Trucks aims to introduce Croner to GCC countries (UAE, Bahrain, Kuwait, Oman, Qatar, Saudi Arabia) as well as to East and North Africa regions. Particularly in the Middle East, Croner can play an active role with van bodies, flatbed for transport and logistics segments and light construction applications such as water tankers. Together with UD Trucks' heavy duty truck range Quester, Croner will further support the needs of customers in Middle East, East and North Africa regions, according to the company.

Volvo Penta ready for Volvo Ocean Race 2017-18

VOLVO PENTA HAS been named the official supplier to the Volvo Ocean Race, providing each of the Volvo Ocean 65 sailing boats with a D2-75 engine with Saildrive, hands-on engine maintenance and support, as well additional power during the race stopovers.

The Volvo Penta D2-75 engines have already done one lap around the world, covering approximately 39,000 nautical miles during the 2014-15 Volvo Ocean Race. The Volvo Ocean 65 boats and Volvo Penta engines from 2014-15 will now race around the world for a second lap of 46,000 nautical miles, thanks to the same boat design for the two race editions.

Each of the Volvo Ocean 65 boats will be equipped with one D2-75 engine for both auxiliary and propulsion needs. The engine is there when needed as a primary propulsion source, for safe navigation in and out of harbours, as well as a potential lifesaving instrument in case of an emergency.

During the race, the gearboxes are sealed, but the engine is used to power the boats' total demand for electricity for computers, navigation equipment, lights and communication units onboard. Additionally, the engine onboard provides power to the batteries to run the water maker, which converts salt water into drinking water. The engine delivers the onboard energy required through two, 24V alternators, which stores the energy in two Lithium Ion batteries.

Mark Turner, CEO of the Volvo Ocean Race, said, "These boats have been built for two editions of the race; we are confident they are up for a second trip around the world."

MAN Diesel & Turbo supplies six engines to Iraq

MAN DIESEL & TURBO has delivered six MAN 18V32/40 engines, including gensets and mechanical equipment, to its customer CGGC-UN Power Co Ltd. (China Gezhouba Group Cooperation) in Samawah, Iraq. CGGC is taking on the role of EPC contractor (engineering, procurement, construction) in the building of a 50 MW captive power plant for a cement factory, which will be operated by the Iraqi producer Kairat Al Abar Iraqi co. (KAAl). The engines will run on heavy fuel oil (HFO) in base load mode.

Overall EPC for the cement factory is the Chinese company Sinoma (Suzhou) Construction Co., Ltd. Both Sinoma and CGGC are state-owned Chinese corporations, which operate as EPC contractors on a global scale.

Samawah has a population of around 150,000 and is located on the River Euphrates halfway between Baghdad and the Gulf. A mere 100mm of rain falls over the course of a year and temperatures reach a peak of over 40°C from June to September. The high temperatures mean demanding fringe conditions for power supplies for industrial processes. "The MAN 32/40 engines are particularly robust. They are thus the ideal solution for reliable power supplies under extreme climatic conditions," explained Waldemar Wiesner, MAN Diesel & Turbo's head of the company's power plants business in the Middle East and Africa region.

As a country, Iraq has the fifth largest oil reserves and the second largest natural gas reserves in the world. Nevertheless, many places there experience regular power shortages. The unstable security situation and complex import requirements make it a great challenge to develop the infrastructure.

THE LEADING GATEWAY FOR BUSINESSES TO ACCESS THE PROSPEROUS NIGERIAN POWER MARKET

Whether you are looking to introduce or grow your business in Nigeria, the Power Nigeria exhibition offers a direct line to government purchasers, construction equipment procurers and specifiers, and regional distributors.

For booking and more information
info@power-nigeria.com
www.power-nigeria.com

Discover more
www.energisingtheindustry.com

Brought to you by



**MIDDLE EAST
ELECTRICITY**



POWER NIGERIA
ENERGISING THE INDUSTRY

5 - 7 SEPTEMBER 2017
LANDMARK CENTRE, LAGOS, NIGERIA

Keeping machines up and running

New MONGEMO PD monitoring system for motors and generators from OMICRON.



MONGEMO – One system for complete on-line PD monitoring:

- 1 Coupling capacitors
- 2 Protective enclosure
- 3 PD data acquisition unit
- 4 Fibre optic connectivity
- 5 Central computer with monitoring and analysis software

Automatic Cluster Separation – Single PD sources are shown in the corresponding PRPDs that enable even non PD experts to perform an initial assessment of PD activity and potential risk.

WITH THE INCREASING age of motors and generators, on-line partial discharge (PD) monitoring has become an essential asset management tool. Compared with routine off-line diagnostic tests, on-line PD monitoring provides a continuous insulation condition status while rotating machines are in operation. It indicates whenever operational stress and aging could be damaging electrical insulation and putting machines at risk.

MONGEMO for rotating machines

The new MONGEMO on-line PD monitoring system continuously assesses the dielectric condition of stator winding insulation in rotating machines under load, such as turbo generators, hydro generators and electrical motors. The permanently installed system collects and analyses PD data over time and identifies insulation defects that could lead to dielectric failure and machine outages.

“Based on continuous, on-line PD measurements, operators of motors and

generators can assess the risk of failure and take timely condition-based maintenance actions to minimise the risk of machine outages,” says Felix Nadolni, product manager at OMICRON. “The actionable data not only enables maintenance strategies to be optimised, it also helps to ensure reliable operation.”

MONGEMO can be customised to match the exact requirements of various rotating machines. It consists of coupling capacitors for PD detection, a four-channel PD acquisition unit, and a central computer with monitoring and PD analysis software. “With the convenient web interface, operators can configure the monitoring system remotely, view data, and analyse historical data that has been collected,” Nadolni adds.

Modular, expandable design

MONGEMO can be implemented at any point in time during the service life of rotating machines. Its modular design allows the system to be easily customised and expanded to match specific monitoring requirements for single or multiple machines.

Actionable data for assessing failure risk

The MONGEMO monitoring software automatically displays real-time data as well as historical trend diagrams of PD parameters for each monitored machine, such as PD magnitude and PD pulse frequency. The high measurement sensitivity of MONGEMO is based on OMICRON’s advanced PD measurement technology for noise suppression and source separation.

“The insulation materials typically used in

rotating machines are resistant to a certain level of PD,” Nadolni explains. “However, an increase in PD activity over time can indicate insulation defects that could lead to serious damage and failure in rotating machines,” he warns. To indicate increased PD activity, the monitoring software also provides operators with an event log that displays warnings and alarms when PD activity reaches or exceeds pre-defined threshold values.

Unique technology for convenient data evaluation

Advanced features in the MONGEMO monitoring software enable operators to record raw PD data for in-depth post analysis.

The software’s unique automated cluster separation allows effective noise elimination to help classify the source of PD more conveniently than ever before.

“Multiple PD sources are distinguished from external noise through synchronous multi-channel measurements combined with advanced methods like 3PARD (3-Phase Amplitude Relation Diagram) and automatic cluster separation for convenient visual evaluation,” Nadolni clarifies.

Seamless integration with third-party systems

MONGEMO supports multiple industrial communications standards. “This enables PD monitoring data from MONGEMO to be exported to SCADA systems easily,” says Felix. “The system also displays monitoring data from other third-party devices, such as temperature sensors.” ■

- Customised system approach for matching specific monitoring requirements
- Synchronous, four-channel PD data acquisition for complete assessment
- Advanced noise suppression and fully automated PD cluster separation for convenient evaluation
- Records raw PD data at selected intervals for in-depth post analysis
- Seamless integration with third-party monitoring devices and SCADA systems



ANNUAL REFRIGERATION CONFERENCE 2017

www.refrigeration-forum.com

27th September 2017

Dubai, United Arab Emirates



The refrigeration industry faces a range of challenges such as increasing regulatory pressure, growing energy costs, constant contractor training on new low-GWP systems and demand for sustainability. These challenges and regulations are the driving force for innovation within the industry.

The Annual Refrigeration Conference will focus on the UAE's surge in demand for refrigeration systems integrated with smart technology for supermarkets and retail businesses. The conference aims to address solutions that help achieve greater levels of energy efficiency and emission reduction while balancing the industry's need to keep costs to a minimum.

Why your brand needs to be visible at the event?

- Access a target platform of consultants, contractors and end-users
- Limited spaces per product category ensures minimal competition
- Maximise brand awareness and media exposure for your company
- Be a part of an exclusive group of solution providers for the refrigeration industry
- Be seen as a thought leader for the industry by appointing a speaker from your business
- Generate strong leads and drive ROI potential

Delegates are looking for solutions in:

- Refrigeration systems, equipment and components
- Refrigerants
- Energy recovery systems
- Assembly supplies for refrigeration
- Refrigerated transportation
- Humidifiers and dehumidifiers
- Valves and controls
- Doors and dock levellers
- Cold storage software
- Data loggers
- Storage solutions and warehousing
- Chillers and cold rooms
- Compressors
- Evaporators
- Heat Exchangers
- Weighing systems
- Specialised climate control systems

Lock in your sponsorship position to guarantee minimum competition

Sponsor the event to promote your products or solutions for the refrigeration industry

Official Media Partner

TECHNICAL REVIEW
الشفرة التقنية - الشرق الأوسط
MIDDLE EAST

For more information on the conference and sponsorship packages:

✉ sponsorship@technicalreview.me

☎ +971 4 4489260



Electrical Equipment and Materials Buyers' Guide

2017

The Middle East's annual where-to-buy guide

Section One: Listings by category

Section Two: Suppliers of electrical equipment and materials, page 66

Section Three: Contact details of Middle East agents & subsidiaries listed by country, page 80

Section One: Listings by category

AC Alternators

Mecc Alte UK Ltd.

AC Drives

CG

Control Techniques, business unit of Emerson Industrial Automation

Lloyd Dynamo Werke GmbH

Accumulators

Saft SA

Air Compressors

FAMCO (Al-Futtaim Auto & Machinery Co. LLC)

Gardner Denver FZE

Hanwha Techwin

Kaeser Kompressoren FZE

Air Conditioning / Chillers / Heat Exchangers

Aggreko Middle East Ltd.

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

LG Electronics Gulf FZE

Luvata Söderköping AB

Rittal Middle East FZE

UL

Ammeters

KFB Holding Group

Asbestos, GRP, Fibre Glass

Huegli Tech AG Ltd.

Auto Recloser

KFB Holding Group

Tripp Lite

Automation Systems

ASCO Numatics, business unit of Emerson Industrial Automation

Emerson Industrial Automation

HIMA Middle East FZE

Kempston Controls LLC

KFB Holding Group

Phoenix Contact Middle East

FZ LLC

Transfer Multisort Elektronik

Sp. Z o.o.

Batteries

ASCO Numatics, business unit of Emerson Industrial Automation

Dale Power Solutions

KFB Holding Group

Saft SA

Silicon Power Systems

Battery Lighting

Saft SA

Biomass Systems

Jeremias Middle East

Boiler Plant/Instrumentation

HIMA Middle East FZE

Jeremias Middle East

MHPS Dongfang Boiler Co.,Ltd

Boilers & Auxiliary Equipment

Jeremias Middle East

MHPS Dongfang Boiler Co.,Ltd

Bus Bar Systems

AREL®- New Arel Srl

Eaton Electric Ltd.

Imequadri Duestelle S.p.A.

KFB Holding Group

Pollmann Elektrotechnik GmbH

UL

Cable - Conductor Products

HellermannTyton GmbH

HELUKABEL GmbH

KFB Holding Group

UL

We4Growth

Cable Fault Locator

BAUR GmbH

Megger Ltd.

Cable Handling Equipment

Eland Cables

HellermannTyton GmbH

HELUKABEL GmbH

Cable Jointing & Termination

Eland Cables

HellermannTyton GmbH

KFB Holding Group

Mosdorfer GmbH

Novoflex Marketing Pvt. Ltd.

Power Testing Ltd.

Shawcor

Sicame Group

Yamuna Cable Accessories

Pvt. Ltd.

Cable Labeling

Brady Middle East FZE

HellermannTyton GmbH

Cable Laying Equipment

HellermannTyton GmbH

Cable Protection & Support

HellermannTyton GmbH

Novoflex Marketing Pvt. Ltd.

Thomas & Betts / A member of the

ABB Group

Valdinox

Cable Testing Equipment

BAUR GmbH

Eland Cables

Megger Ltd.

Phenix Technologies Inc.

Tripp Lite

Udeyraj Electricals Pvt. Ltd.

XBK-KABEL Xaver Bechtold GmbH

Cable Tiles / Protections

Novoflex Marketing Pvt. Ltd.

Cable Trays

Eland Cables

Electric House Est.

Galva Coat for Galvanizing & Light Poles

HellermannTyton GmbH

KFB Holding Group

Thomas & Betts / A member of the

ABB Group

UL

Valdinox

Cable Trunking & Support

Galva Coat for Galvanizing & Light Poles

Valdinox

Cables & Cable Accessories

alfanar trading

Bahra Cables Co.

Brady Middle East FZE

Eland Cables

HELUKABEL GmbH

KFB Holding Group

Pollmann Elektrotechnik GmbH

Shawcor

Yamuna Cable Accessories

Pvt. Ltd.

Capacitor Banks

ICAR S.p.A.

ORTEA S.p.A.

Powertech Switchgear

Industries FZE

UL

Capacitors

ICAR S.p.A.

Cast Resin Transformers

Kalpa Elektrikal Pvt Ltd.

KFB Holding Group

Power Testing Ltd.

Udeyraj Electricals Pvt. Ltd.

Ceiling Fans & Exhaust Fans

Jeremias Middle East

Leroy-Somer Electric Power

Generation

Centrifugal Machineries

Hanwha Techwin

Circuit Breakers

alfanar trading

AREL®- New Arel Srl

Eaton Electric Ltd.

Electric House Est.

KFB Holding Group

KoCoS Messtechnik AG

Cogeneration

Broadcrown Ltd.

Deep Sea Electronics PLC

Hanwha Techwin

Kohler Power Systems

KOHLER SDMO

S.I.C.E.S. S.r.l.

Coiled Tubing

DHYBRID Power Systems

Communication Equipment

Deep Sea Electronics PLC

Components

Bin Ham Eletrical Equipment

Trading LLC

Metal Deploye Resistor

Powersource Projects Ltd.

Top Screw Metal Corp.

Compressor and Turbine Blades

Ansaldo Energia S.p.A.

Hanwha Techwin

Compressors

DHYBRID Power Systems

Hanwha Techwin

Kaeser Kompressoren FZE

MAN Diesel & Turbo SE

Conductors

A.N. Wallis & Co. Ltd.

Bahra Cables Co.

Oriental Copper Co. Ltd.

Pollmann Elektrotechnik GmbH

Conduit & Fittings

Appleton Group, business unit of

EMERSON Industrial

Automation

HellermannTyton GmbH

Novoflex Marketing Pvt. Ltd.

Super Impex

UL

Valdinox

Connectors

Marechal Electric

Pollmann Elektrotechnik GmbH

Transfer Multisort Elektronik

Sp. Z o.o.

Connectors and Fittings

HellermannTyton GmbH

Transfer Multisort Elektronik

Sp. Z o.o.

Consultancy Services

HIMA Middle East FZE

TECNALIA

UL

Control Equipment/Systems

CG

Deep Sea Electronics PLC

HIMA Middle East FZE

MOTORTECH GmbH

Rotork PLC

S.I.C.E.S. S.r.l.

WAGO Middle East FZC

Control Instruments

Dwyer Instruments

National Instruments

Control Safety, System Protection & Monitoring Equipment

HIMA Middle East FZE

Power Testing Ltd.

Control System - Industrial & Residential

alfanar trading

COELMO Spa

Deep Sea Electronics PLC

HIMA Middle East FZE

Conversion & Storage of Electrical Energy

Layer Electronics S.r.l.

Cooling & Heating Equipment

Aggreko Middle East Ltd.

Luvata Söderköping AB

Copper Rod & Wire

Bahra Cables Co.

John Deere Power Systems

Motorenfabrik Hatz GmbH & Co. KG

Oriental Copper Co. Ltd.

Crimping Sockets

Super Impex

Current Transformers

Altaaqa Global CAT Rental Power

CG

Kalpa Elektrikal Pvt Ltd.

KFB Holding Group

Damper System

Mosdorfer GmbH

Data Communications Equipment

Netcontrol

Data Logging

Leroy-Somer Electric Power

Generation

National Instruments

Detectors

Bin Ham Eletrical Equipment

Trading LLC

Diesel Engines

Caterpillar Inc.

Cummins Middle East FZE

Deep Sea Electronics PLC

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

INMESOL S.L

JCB Power Products

JMG Limited

John Deere Power Systems

Jubail Bros

Kirloskar Oil Engines Ltd.

KOHLER SDMO

Lister Petter Ltd.

Mahindra Powerol - Mahindra & Mahindra Ltd.

MAN Diesel & Turbo SE

Mantrac Group

Perkins Engines Co. Ltd.

Rollo Power Solutions

Scania CV AB

SES SMART Energy Solutions

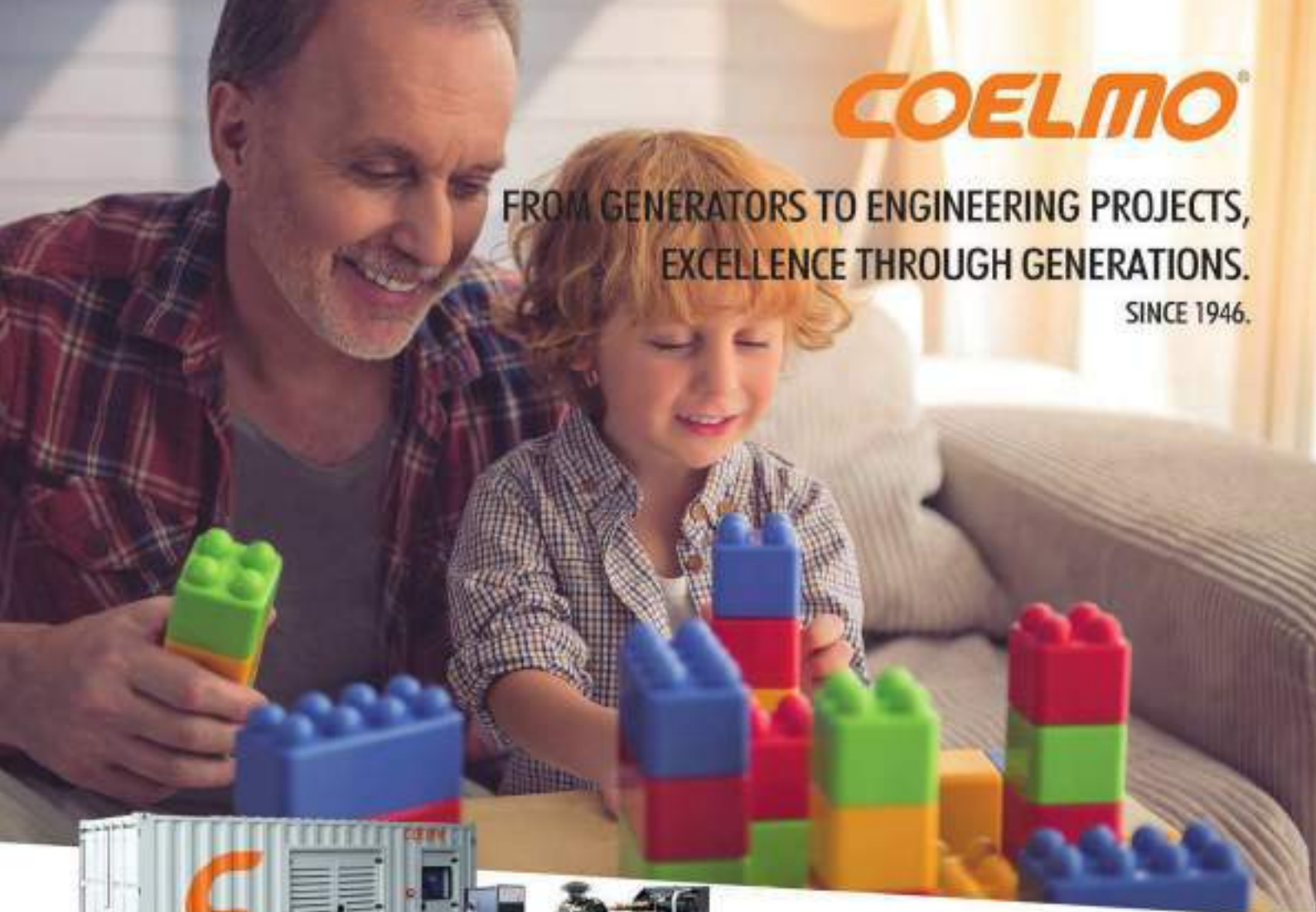
FZCO

Volvo Penta

COELMO®

FROM GENERATORS TO ENGINEERING PROJECTS,
EXCELLENCE THROUGH GENERATIONS.

SINCE 1946.



Coelmo, know how and experience for different Applications.

For 70 years, Coelmo has meant innovation, reliability, security and sustainability. Coelmo designs, manufactures and provides assistance for Industrial and Marine Generating Sets from 3 up to 3000 kVA supplying worldwide Power Engineered Solutions for different applications.

Coelmo is able to provide all the energy you need, ensuring safety, comfort and maximum performance. An international network of technical support ensures customers immediate technical support and rapid delivery of spare parts.

APPLICATIONS



Designed and Manufactured in Italy, Since 1946.

www.coelmo.it | sales@coelmo.it

Follow us on:



Coelmo incorporates  

Dimmers

alfanar trading
Leroy-Somer Electric Power Generation

Distance Relays

CG

Distribution Services / Equipment

Fluke MEA
KFB Holding Group
Power Testing Ltd.

Earthing / Lightning Equipment & Accessories

A.N. Wallis & Co. Ltd.
Cressall Resistors Ltd.
Metal Deploy Resistor
Phoenix Contact Middle East FZ LLC
Pollmann Elektrotechnik GmbH
Super Impex
Thomas & Betts / A member of the ABB Group

Education & Training

OMICRON Electronics Middle East

Electric Cabling & Substation Technology

Lucy Middle East FZE

Electric Drives

Control Techniques, business unit of Emerson Industrial Automation
IGEL Electric GmbH
Lloyd Dynamo Werke GmbH

Electric Generators - Turbo Generators & Hydro Generators

AJ Power Ltd.
Altaaq Global CAT Rental Power
Ascot Industrial S.r.l.
Cummins Middle East FZE
Deep Sea Electronics PLC
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Gamesa Electric
HIMOINSA
INMESOL S.L.
Jeremias Middle East
Kohler Power Systems
Leroy-Somer Electric Power Generation
Linz Electric S.p.A.
Lloyd Dynamo Werke GmbH
Mahindra Powerol - Mahindra & Mahindra Ltd.
Marelli Motori S.p.A.
Mecc Alte UK Ltd.
We4Growth

Electric Motors / Repairs Equipment

CG
Gamesa Electric
Lloyd Dynamo Werke GmbH
Marelli Motori S.p.A.
Tripp Lite
Udeyraj Electricals Pvt. Ltd.

Electrical Control Unit Equipment

National Instruments
S.I.C.E.S. S.r.l.
Sakr Power Systems S.A.L

Electrical Meters / Actuators

ASCO Numatics, business unit of Emerson Industrial Automation
KFB Holding Group

Electrical Testing & Certification

LOVAG
OMICRON Electronics Middle East
Phenix Technologies Inc.
Power Testing Ltd.

Electrical Wiring Accessories

Eaton Electric Ltd.
Electric House Est.
Fluke MEA
Novoflex Marketing Pvt. Ltd.
One Electrical Ltd.
Super Impex
Top Screw Metal Corp.

Electricity Utilities

Dale Power Solutions
FAMCO (Al-Futtaim Auto & Machinery Co. LLC)
Huegli Tech AG Ltd.
Sergi France

Electronics

LG Electronics Gulf FZE

Emergency Lighting

Eaton Electric Ltd.
Thomas & Betts / A member of the ABB Group

Emission Monitoring Equipment

DILO Armaturen und Anlagen GmbH

Enclosures

alfanar trading
AP Lanka Pvt. Ltd.
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.
Jubaili Bros
Rittal Middle East FZE
Sakr Power Systems S.A.L

Energy Conservation Products

Ascot Industrial S.r.l.
INMESOL S.L

Energy Efficiency/Savers

Emerson Industrial Automation
INMESOL S.L
IREM S.p.A.

Energy Management & Services

DEIF India Pvt. Ltd.
Eaton Electric Ltd.
Galva Coat for Galvanizing & Light Poles
IREM S.p.A.
Lovato Electric S.p.A.
Lucy Middle East FZE

Energy Measurements

KFB Holding Group
Lovato Electric S.p.A.
Phoenix Contact Middle East FZ LLC

Engineering Services

alfanar trading
COELMO Spa
Jeremias Middle East
Jubaili Bros
Mosdorfer GmbH
MOTORTECH GmbH
Rittal Middle East FZE

Engines/Motors/Engine Parts

Caterpillar Inc.
Cummins Middle East FZE
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

INMESOL S.L
KOHLER SDMO
Marelli Motori S.p.A.
Powersource Projects Ltd.
Rollo Power Solutions
SIEMENS

Top Screw Metal Corp.
Volvo Penta
We4Growth
Weichai Middle East FZE

Environmental Control System

DILO Armaturen und Anlagen GmbH

Equipment for Electric Motor Repair

Marelli Motori S.p.A.
Phenix Technologies Inc.

Equipment for Power Transmission Lines

Cressall Resistors Ltd.
Galva Coat for Galvanizing & Light Poles
Mosdorfer GmbH

Equipment Inspection & Repair**Power Testing Ltd. Explosion Proof Equipment /Lighting & Switchgear**

Appleton Group, business unit of EMERSON Industrial Automation
Eaton Electric Ltd.
IGEL Electric GmbH
KFB Holding Group
Marelli Motori S.p.A.
Rittal Middle East FZE
Sakr Power Systems S.A.L
UL

Fan & Exhaust Systems

Jeremias Middle East
Rittal Middle East FZE

Fault Recorder/Event Recorder

Huegli Tech AG Ltd.
KoCoS Messtechnik AG

Fiber Glass Products

Rittal Middle East FZE

Field Instrumentation / Process Control / Valves

Dwyer Instruments
MOTORTECH GmbH

Filters

Jubaili Bros
Powersource Projects Ltd.

Fire Safety Systems

Eaton Electric Ltd.
Sergi France
UL

Firefighting Equipment & System

Green Power Systems S.r.l.
UL

Fuses / Fuse Switches / Fuse Gear

Bin Ham Eletrical Equipment Trading LLC
Eaton Electric Ltd.
Huegli Tech AG Ltd.
Kempston Controls LLC
KFB Holding Group
Leroy-Somer Electric Power Generation
Motorenfabrik Hatz GmbH & Co. KG
Rittal Middle East FZE
Sakr Power Systems S.A.L

Galvanizing Products

Galva Coat for Galvanizing & Light Poles

Gas & Power Equipment

Altaaq Global CAT Rental Power
COELMO Spa

FAMCO (Al-Futtaim Auto & Machinery Co. LLC)
GENMAC Generators
Green Power Systems S.r.l.
Hanwha Techwin
HIMOINSA
IGEL Electric GmbH
JMG Limited
KOHLER SDMO
Leroy-Somer Electric Power Generation
MOTORTECH GmbH

Gas Analyzers / Blenders

DILO Armaturen und Anlagen GmbH

Gas Compressors / Detectors

DILO Armaturen und Anlagen GmbH
Hanwha Techwin

Gas Engines

Ansaldo Energia S.p.A.
Cummins Middle East FZE
Deep Sea Electronics PLC
Lister Petter Ltd.
MAN Diesel & Turbo SE
Mantrac Group
SIEMENS
Weichai Middle East FZE

Gas Insulated Switch Gear

KoCoS Messtechnik AG

Gas Turbines

Dale Power Solutions
Hanwha Techwin
Jeremias Middle East
MAN Diesel & Turbo SE

General Renewable Energy Services

TECNALIA

Generating Sets

ABZ Aggregate-Bau GmbH & Co. KG
AJ Power Ltd.
Aksa Power Generation FZE
Altaaq Global CAT Rental Power
Broadcrown Ltd.
COELMO Spa
Deep Sea Electronics PLC
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.
Enrogen Ltd.
FG Wilson
Genesal Energy
GENMAC Generators
Green Power Systems S.r.l.
HIMOINSA
JCB Power Products
Jeremias Middle East

**Green Roof Ventilators**

- Reduces heat
- 0% Power consumption
- Zero maintenance

**Solar Sky Tubes**

- Natural daylighting
- 0% Power consumption
- Zero maintenance

**Solar Skylights**

- Uniform daylighting for upto 2000sq.ft
- Negligible heat transfer
- 0% Power consumption
- Zero maintenance

**Industrial Insulation & Cladding**

- Hot/Cold Insulation & Sheet metal cladding

**Stainless Steel Exhaust System**

- Double wall Insulated
- Without welding joints

Dedicated to
serve needs

Committed to
save nature



Dubai - U.A.E.
Tel: 04 2674966 Fax: 04 2675477
Mob: 050-4539748
e-mail: lijian@eim.ae www.lijiangroup.com

EXPERIENCE
AND
KNOW-HOW

Perfect equilibrium

PRODUCTION IN
INTERNATIONAL
STANDARDS

WORLD'S LEADING
ALTERNATORS
AND ENGINES

HYBRID POWER
SYSTEMS

SUPER SILENT
SOLUTIONS

...for the
perfect
products!

To provide you the best product experience, we couple world's leading engines and alternators together with high quality equipment and labor. We deliver our cutting edge solutions such as super silent canopies, and remote monitoring, along with exclusive after sales services.



EVERLASTING COMPANY



SALES and AFTERSALES SERVICES CENTER Merkez Mah. Katip Celebi Cad. No:9/2 Orhanli-Tuzla ISTANBUL / TURKEY
ISTANBUL FACTORY Yenidogan Mah. Edebali Cad. No:12 34791 Sancaktepe / ISTANBUL / TURKEY
KOCAELI FACTORY Sepetlipinar Serbest Bolge Mah. 107.Cad. No:18 41090 Basiskele / KOCAELI / TURKEY



444 8576 info@teksangenerator.com
TKSN www.teksangenerator.com

TEKSAN

JMG Limited
Jubaili Bros
KFB Holding Group
Kirkoskar Oil Engines Ltd.
Kohler Power Systems
KOHLER SDMO
Linz Electric S.p.A
Lister Petter Ltd.
Lovato Electric S.p.A.
Mahindra Powerol - Mahindra & Mahindra Ltd.
MAN Diesel & Turbo SE
Mantrac Group
Mecc Alte UK Ltd.
Power Engineering (I) Pvt. Ltd.
Powersource Projects Ltd.
PR Middle East FZE
S.I.C.E.S. S.r.l.
SAB, Standard Aggregatebau Evers GmbH & Co. KG
Sakr Power Systems S.A.L
SES SMART Energy Solutions FZCO
SIEMENS
Silicon Power Systems
Teksan Generator
Visa S.p.A.
We4Growth
Weichai Middle East FZE

Generating Technologies

Altaaq Global CAT Rental Power
Deep Sea Electronics PLC
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Enrogen Ltd.
FG Wilson
INMESOL S.L
Kirkoskar Oil Engines Ltd.
KOHLER SDMO
Power Engineering (I) Pvt. Ltd.
S.I.C.E.S. S.r.l.
Teksan Generator

Generators

Aggreko Middle East Ltd.
AJ Power Ltd.
Aksa Power Generation FZE
Ascot Industrial S.r.l.
Autotank International Ltd.
Broadcrown Ltd.
Caterpillar Inc.
COELMO Spa
Cummins Middle East FZE
Dale Power Solutions
Deep Sea Electronics PLC
Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Enrogen Ltd.
FG Wilson
Gamesa Electric
GENMAC Generators
Green Power Systems S.r.l.
Grupos Electrôgenos Europa SA
HIMOINSA
INMESOL S.L

JCB Power Products
Jeremias Middle East
JMG Limited
Kirkoskar Oil Engines Ltd.
Kohler Power Systems
KOHLER SDMO
Linz Electric S.p.A
Lloyd Dynamo Werke GmbH
Mahindra Powerol - Mahindra & Mahindra Ltd.

Mantrac Group
Mecc Alte UK Ltd.
ORTEA S.p.A.
Power Engineering (I) Pvt. Ltd.
Powersource Projects Ltd.
PR Middle East FZE
Teksan Generator
We4Growth
Weichai Middle East FZE

Geothermal Power Engineering

Cummins Generator Technologies

Hardware Tools & Tackles, Gaskets

Inmarco Industries FZC
Top Screw Metal Corp.

Heat & Power Integration, Products & System, Co-Generation

Broadcrown Ltd.
Jeremias Middle East
Marelli Motori S.p.A.
Teksan Generator

Heat Recovery & Exchangers

Inmarco Industries FZC
Luvata Söderköping AB
MHPS Dongfang Boiler Co., Ltd.
Rittal Middle East FZE

High-Voltage Equipment of Distribution & Control

alfanar trading
Cressall Resistors Ltd.
DILÖ Armaturen und Anlagen GmbH
Eaton Electric Ltd.

Fluke MEA
Phenix Technologies Inc.
Udeyraj Electricals Pvt. Ltd.

Hydraulic & Pneumatic

Kaesser Kompressoren FZE
Tripp Lite

Hydraulic Structure

Motorenfabrik Hatz GmbH & Co. KG

Hydro-Electric Power Plant

Marelli Motori S.p.A.

Independent Power Producers

Altaaq Global CAT Rental Power
Caterpillar Inc.
INMESOL S.L
JMG Limited
We4Growth

Industrial & Power Automation

DEIF India Pvt. Ltd.
Emerson Industrial Automation
HIMA Middle East FZE
Lovato Electric S.p.A.
National Instruments
Rittal Middle East FZE
WAGO Middle East FZC
Industrial Electronics
Phoenix Contact Middle East FZ LLC
Transfer Multisort Elektronik Sp. Z o.o.

Industrial Power Engineering

Altaaq Global CAT Rental Power
HIMA Middle East FZE
IGEL Electric GmbH
KoCoS Messtechnik AG
KOHLER SDMO
Lister Petter Ltd.
Rittal Middle East FZE

Industrial Relays

KoCoS Messtechnik AG
WAGO Middle East FZC

Industrial Ventilation Systems

HIMA Middle East FZE
Jeremias Middle East

Information Systems and Telecommunication

Rittal Middle East FZE

Inspection and Testing

KoCoS Messtechnik AG
LOVAG
Megger Ltd.

Instrumentation & Calibration

Dwyer Instruments
Rotork PLC

Insulation Materials

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.
HellermannTyton GmbH

Inverters

AEG Power Solutions B.V.
Control Techniques, business unit of Emerson Industrial Automation
Delta Energy Systems AG
Fronius International GmbH
Layer Electronics S.r.l.

Irrigations Systems

Green Power Systems S.r.l.
Visa S.p.A.

We4Growth

Isolators

Phoenix Contact Middle East FZ LLC

Junction Boxes

alfanar trading
Appleton Group, business unit of EMERSON Industrial Automation
Marechal Electric
Rittal Middle East FZE

Labeling & Identification

HellermannTyton GmbH
Shawcor

Laboratory Equipment

Udeyraj Electricals Pvt. Ltd.

Lamps - Discharge & Special Lamps

alfanar trading

Leak Detection Equipment

Fluke MEA

Level Detection & Control

Fluke MEA

Lifting Equipment

Mantrac Group
PR Middle East FZE

Lighting Design, Building etc.

One Electrical Ltd.

Lighting Equipment & Fittings

Galva Coat for Galvanizing & Light Poles
Grupos Electrôgenos Europa SA
HIMOINSA
Panasonic Marketing Middle East and Africa FZE
PR Middle East FZE

Lighting Fixtures - Industrial & Residential

One Electrical Ltd.
Panasonic Marketing Middle East and Africa FZE

Lighting Protection

A.N. Wallis & Co. Ltd.
Specialist Services
Super Impex
Thomas & Betts / A member of the ABB Group

Limit Switches

Bin Ham Eletrial Equipment Trading LLC
Kempston Controls LLC

Load Banks

Aggreko Middle East Ltd.
Cressall Resistors Ltd.
Metal Deploye Resistor

Lugs & Sockets

Sicame Group

Magnetic Cores

AEM Cores Pty Ltd.

Maintenance Services

SAB, Standard Aggregatebau Evers GmbH & Co. KG

Measure & Test Equipment/ Systems/Monitoring

BAUR GmbH
Dwyer Instruments
Megger Ltd.

National Instruments
OMICRON Electronics Middle East
Phenix Technologies Inc.
Udeyraj Electricals Pvt. Ltd.

Measurement, Control & Diagnostic Instrumentation, Diagnostic Equipment

BAUR GmbH
FAMCO (Al-Futtaim Auto & Machinery Co. LLC)
Megger Ltd.
OMICRON Electronics Middle East
S.I.C.E.S. S.r.l.

Transfer Multisort Elektronik Sp. Z o.o.

Udeyraj Electricals Pvt. Ltd.

Metallic Expansion Joints

Inmarco Industries FZC

Meter Cabinets

KFB Holding Group
Sicame Group
Specialist Services

Metering Devices

KFB Holding Group

Minor Hydro-Power Engineering

DHYBRID Power Systems
Marelli Motori S.p.A.

Motors & Motor Winding Equipment

Gamesa Electric

Motors/Starters/Control Gear/Protection Relays

IGEL Electric GmbH

Mud

DHYBRID Power Systems
Leroy-Somer Electric Power Generation

New & Renewable Energy

AEG Power Solutions B.V.
Fronius International GmbH
HellermannTyton GmbH
SES SMART Energy Solutions FZCO
Teksan Generator
Visa S.p.A.

New Energy-Related Organizations

DHYBRID Power Systems

Noise Control Equipment

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Non Metallic Expansion Joints

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Outdoor Lighting / Floodlighting

Appleton Group, business unit of EMERSON Industrial Automation
Eaton Electric Ltd.
One Electrical Ltd.

Overhead Line Equipment

Materials/ Hardware & Accessories

Galva Coat for Galvanizing & Light Poles
KFB Holding Group
Sicame Group

Package Transformer Substations

alfanar trading
Altaaq Global CAT Rental Power
FAMCO (Al-Futtaim Auto & Machinery Co. LLC)
KFB Holding Group

Panel Instruments

KFB Holding Group

Photovoltaic

Control Techniques, business unit of Emerson Industrial Automation

Fronius International GmbH
UL

Pipe & Pipeline Fittings / Coating Items

Inmarco Industries FZC
We4Growth

Pipe Laying

We4Growth

Pipeline Accessories

We4Growth

Plant Monitoring

JCB Power Products

Plugs & Sockets

Appleton Group, business unit of EMERSON Industrial Automation
Electric House Est.
Marechal Electric

Pneumatics

ASCO Numatics, business unit of Emerson Industrial Automation
MOTORTECH GmbH
Rotork PLC

Power Control & Regulation Equip't for Generators & Motors

Deep Sea Electronics PLC
DEIF India Pvt. Ltd.
Genesal Energy
INMESOL S.L
Leroy-Somer Electric Power Generation
S.I.C.E.S. S.r.l.
Silicon Power Systems
We4Growth

Power Factor Correction Equip/Regulators

ICAR S.p.A.
Leroy-Somer Electric Power Generation
Powertech Switchgear Industries FZE

Power Monitoring & Supplies

AEG Power Solutions B.V.
Deep Sea Electronics PLC
Eaton Electric Ltd.
We4Growth

Power Plant Design

Broadcrown Ltd.
Genesal Energy
HIMOINSA
KOHLER SDMO
MAN Diesel & Turbo SE
SAB, Standard Aggregatebau Evers GmbH & Co. KG
SES SMART Energy Solutions FZCO
SIEMENS
Weichai Middle East FZE

Power Transformers

AEM Cores Pty Ltd.
Altaaq Global CAT Rental Power
Kalpa Elektrikal Pvt Ltd.
KoCoS Messtechnik AG
Manumag SL
ORTEA S.p.A.
Power Testing Ltd.

Private Power & Water Utilities

Altaaq Global CAT Rental Power
Power Testing Ltd.

Process Control & Process Automation

HIMA Middle East FZE
WAGO Middle East FZC

Process Control Equipment

HIMA Middle East FZE
Rotork PLC

Production Systems

Altaaq Global CAT Rental Power

Protection Systems

AREL®- New Arel Srl
Metal Deploye Resistor

Public Power Utilities

Altaaq Global CAT Rental Power
Huegli Tech AG Ltd.

Pump Equipment and Services

We4Growth

Pumps, Compressors & Filters

Hanwha Techwin
Kaeser Kompressoren FZE
Lister Petter Ltd.

Reactors

ICAR S.p.A.
Kalpa Elektrikal Pvt Ltd.
Powertech Switchgear Industries
FZE

Refineries/ Refinery Equipment

HIMA Middle East FZE

Regulators

ICAR S.p.A.
Silicon Power Systems

Relays - Control & Protection

Kempston Controls LLC
KoCoS Messtechnik AG
Powertech Switchgear Industries
FZE

S.I.C.E.S. S.r.l.
Specialist Services

Research & Consultancy

TECNALIA

Ring Main Units

alfanar trading
Eaton Electric Ltd.

Safety Equipment

AREL®- New Arel Srl
Sicame Group

Sensors

Dwyer Instruments
Kempston Controls LLC

Silicon Rubber Insulators Cuts-Outs

Tripp Lite

Solar Energy Equipment

Delta Energy Systems AG
Eaton Electric Ltd.
Emerson Industrial Automation
Fronius International GmbH
HellermannTyton GmbH
HELUKABEL GmbH
Laser Electronics S.r.l.
Specialist Services

Solar Power Engineering

Emerson Industrial Automation
KoCoS Messtechnik AG
Mahindra Powerol - Mahindra &
Mahindra Ltd.

Solar Thermal Application

SES SMART Energy Solutions FZCO

Stand-Alone Sources of Energy

ABZ Aggregate-Bau GmbH &
Co. KG
AJ Power Ltd.
Altaaq Global CAT Rental Power
Genesal Energy
INMESOL S.L
Saft SA
Visa S.p.A.

Steam Turbines, Electric-Power, Combined-Cycle & Gas-Turbine Units

Deep Sea Electronics PLC
Hanwha Techwin

Steam Turbines/Metering Systems

Hanwha Techwin
XBK-KABEL Xaver Bechtold GmbH

Street Lighting & Poles

One Electrical Ltd.

Substations

alfanar trading
Imequadri Duestelle S.p.A.

Switchboards & Switchgear

Aksa Power Generation FZE
AREL®- New Arel Srl
Eaton Electric Ltd.
Enrogen Ltd.
Imequadri Duestelle S.p.A.
INMESOL S.L
KFB Holding Group
Kohler Power Systems
LOVAG
Panasonic Marketing Middle East
and Africa FZE
Power Testing Ltd.
Rittal Middle East FZE
S.I.C.E.S. S.r.l.
SAB, Standard Aggregatbau Evers
GmbH & Co. KG
UL

Switches

alfanar trading
Panasonic Marketing Middle East
and Africa FZE

Switchgear Products, Low & Med Voltage

A.N. Wallis & Co. Ltd.
alfanar trading
Bin Ham Electrical Equipment
Trading LLC
HellermannTyton GmbH
Imequadri Duestelle S.p.A.
KoCoS Messtechnik AG
Kohler Power Systems
LOVAG
Lucy Middle East FZE
Powertech Switchgear Industries
FZE
Rittal Middle East FZE
S.I.C.E.S. S.r.l.
UL

Synchronizing Equipment

Aksa Power Generation FZE
Deep Sea Electronics PLC
DEIF India Pvt. Ltd.
INMESOL S.L
Kohler Power Systems
S.I.C.E.S. S.r.l.

Systems

HIMA Middle East FZE
Netcontrol

Systems Engineering

Delta Energy Systems AG
HIMA Middle East FZE
Jeremias Middle East
Power Testing Ltd.
Rittal Middle East FZE

Systems Operation & Control

Deep Sea Electronics PLC
HIMA Middle East FZE

Lucy Middle East FZE
Netcontrol
S.I.C.E.S. S.r.l.

Tanks & Silos

UL

Technology & System of Water Treatment

Ascot Industrial S.r.l.

Technology of Energy Efficiency and Energy Saving

Ascot Industrial S.r.l.
Hanwha Techwin
INMESOL S.L
KoCoS Messtechnik AG

Telecommunication Equipment

INMESOL S.L
Mahindra Powerol - Mahindra &
Mahindra Ltd.
Mecc Alte UK Ltd.
Netcontrol
Power Engineering (I) Pvt. Ltd.
S.I.C.E.S. S.r.l.
Visa S.p.A.

Testing & Inspection Services

KoCoS Messtechnik AG
LOVAG
OMICRON Electronics Middle East
Power Testing Ltd.
TECNALIA

Transducers

KoCoS Messtechnik AG
WAGO Middle East FZC

gc GALVA COAT
For Galvanizing & Lighting Poles

NEW PRESS BREAK MACHINE

We are proud to introduce one of the biggest **FOLDING MACHINE** in the world, with the following capacity:

- ✦ Folding Length: 15 meters
- ✦ Maximum thickness of 50 millimeter steel plates
- ✦ Variable Punch, Die Setting & Bending

NEW CNC PUNCH MACHINE

Perforation and Decoration Cable Management System (Tray / Ladder / Trunking, etc.)

NEW LASER MACHINE

Laser Cutting Services (Flat plates / Tubes, etc.)

P.O.Box: 5485, Abu Dhabi - U.A.E.
Tel: +971 2 5511188 - Fax: +971 2 5510188
Email: galvaand@emirates.net.ae, Website: www.galvacoat.ae

TOP SCREW METAL CORP.

TEL: 886-4-7237159 FAX: 886-4-7246640
MAIL: cherry_chou@topscrow.com.tw
http://www.topscrow.com.tw/

183 9011 3015

TE: LANE 415, TAY HO RD., SEC.2, KU YI LI, CHANG HWA CITY, TAIWAN, R.O.C.

Transformers

AEM Cores Pty Ltd.
Aggreko Middle East Ltd.
alfanar trading
Altaaq Global CAT Rental Power
KFB Holding Group
KoCoS Messtechnik AG
Manumag SL
Power Testing Ltd.
Sergi France
Udeyraj Electricals Pvt. Ltd.

Transmission & Distribution

AEM Cores Pty Ltd.
Imequadri Duestelle S.p.A.
Metal Deploye Resistor
Netcontrol
Power Testing Ltd.

Tubes

Jeremias Middle East

Top Screw Metal Corp.

Tubes and Tubing Services

Jeremias Middle East

Turbines

Hanwha Techwin
IREM S.p.A.

Turnkey Installations

Aksa Power Generation FZE
Altaaq Global CAT Rental Power
Delta Energy Systems AG
Genesal Energy
SIEMENS
We4Growth

Uninterruptible Power Systems

AEG Power Solutions B.V.
Caterpillar Inc.
Dale Power Solutions
Delta Energy Systems AG

Eaton Electric Ltd.
GENMAC Generators
INMESOL S.L.
KFB Holding Group
Layer Electronics S.r.l.
Marelli Motori S.p.A.
Power Engineering (I) Pvt. Ltd.
SAB, Standard Aggregatebau Evers GmbH & Co. KG

Valves / Gauges / Fittings

ASCO Numatics, business unit of
Emerson Industrial Automation
Inmarco Industries FZC
Rotork PLC

Variable Speed Drives

Control Techniques, business unit
of Emerson Industrial Automation
Eaton Electric Ltd.
Mahindra Powerol - Mahindra & Mahindra Ltd.

Voltage Stabilizers & Regulators

IREM S.p.A.
Layer Electronics S.r.l.
Manumag SL
ORTEA S.p.A.

Welding Equipment / Electrodes / Services

A.N. Wallis & Co. Ltd.
Fronius International GmbH
GENMAC Generators

Wind Energy

HellermannTyton GmbH
HELUKABEL GmbH
UL

Wind Power Engineering

KoCoS Messtechnik AG
Power Testing Ltd.

Wind Turbines and Related Equipment

Deep Sea Electronics PLC
DEIF India Pvt. Ltd.

Wire Manufacturing

Bahra Cables Co.
Shawcor

Wiring / Tubes & Accessories

Bahra Cables Co.
Electric House Est.
Novoflex Marketing Pvt. Ltd.

Wiring Identification / Wire Markers

Brady Middle East FZE
Shawcor

Section Two: Suppliers**3GK Ltd.**

Unit 3 Price Street Business Park
Park Street, Birkenhead, Wirral
CH41 3PE, United Kingdom
Tel: +44 151 6475380
Fax: +44 151 6662660
Web: www.3gk.co.uk
E-mail: sales@3gk.co.uk

**A.N. Wallis & Co. Ltd.**

Greasley Street, Bulwell
Nottingham, United Kingdom
Tel: +44 115 9271721
Fax: +44 115 8756630
Web: www.an-wallis.com
E-mail: info@an-wallis.com

A. N. Wallis is a world leader in the design, manufacture and sale of high-quality Earthing & Lightning Protection, Exothermic Welding and Surge Protection materials. We also offer advanced technical backup including the design of Lightning Protection, Earthing Systems and Site services. Wallis is always your first point of contact.

Agents:

United Arab Emirates - A. N. Wallis & Co. Ltd.

ABZ Aggregate-Bau GmbH & Co. KG

Gutenbergstraße 11, Henstedt-Ulzburg
D-24558, Germany
Tel: +49 4193 90360
Fax: +49 4193 93473
Web: www.abz-power.com
E-mail: info@abz-power.com

ABZ manufactures, installs and services custom-built diesel gensets of 50 kVA to 5000 kVA capacity for continuous, stand by or peak load operation for all possible applications as stationary, mobile, containerized or canopied units. A wide range of control systems and switchboards for all kinds of operations is available.

AEG Power Solutions B.V.

Weerenweg 29, AG Zwanenburg
1161, Netherlands
Tel: +31 20 4077800
Fax: +31 20 4077801
Web: www.aegps.com
E-mail: info@aegps.com

AEG Power Solutions helps customers

worldwide to meet their power challenges with rugged, highly reliable, innovative, premium power solutions. The company offers a full range of AC and DC Power Systems.

Agents:

United Arab Emirates - AEG Power Solutions - Dubai

AEM Cores Pty Ltd.

Gillman, South Australia, 5013
Australia
Tel: +61 8 83410086
Web: www.aemcores.com.au
E-mail: sales@aemcores.com.au

AEM Unico manufactures Unico Machinery and Transformer Core Test Equipment. Globally renowned, with nearly 400 machines sold in over 40 countries, Unico is the preferred method of core manufacture for low loss distribution transformers and a range of voltage and special purpose transformers. NEW Automatic DUO Core Machine available.

**Aggreko Middle East Ltd.**

PO Box 16875, Jebel Ali, Dubai
United Arab Emirates
Tel: +971 4 8086100
Fax: +971 4 8831825
Web: www.me.aggreko.com
E-mail: rentals@aggreko.ae

Aggreko has grown to become the world's leading provider of rental power and temperature control solutions and offers round-the-clock service, support and equipment availability in the Middle East through a network of twelve locations. Aggreko serves a diverse market from construction sites to quarrying, oil & gas to refineries and events.

AJ Power Ltd.

1 Charlestown Drive
Carn Industrial Area, Craigavon
Northern Ireland, BT63 5GA
United Kingdom
Tel: +44 28 38361000
Fax: +44 28 38361010
Web: www.ajpower.net
E-mail: sales@ajpower.net
info@ajpower.net

AJ Power specializes in the volume manufacture and design of diesel generating

sets from 10kVA to 3340kVA. These are provided as open skid base units, as well as in sound attenuated canopies and containers. Our range includes 110V single phase to 13.8kV, 60Hz. The company offers volume production of high sets on short lead time at highly competitive prices.

Agents:

United Arab Emirates - AJ Power Ltd.

**Aksa Power Generation FZE**

PO Box 18167
Jebel Ali Free Zone, Dubai
United Arab Emirates
Tel: +971 4 8809140
Fax: +971 4 8809141
Web: www.aksa.ae
E-mail: sales@aksauae.com

For 30 years, Aksa Power Generation has manufactured generating sets from 1kVA up to 2500kVA, supplies comprehensive spare parts, rental solutions and a customer-focused after sales service all around the world.

Al Muqarram Auto Spare Parts LLC

PO Box 60235
Rolex Twin Towers, 17th Floor
Office Suite 1701 & 1702
Dubai, United Arab Emirates
Tel: +971 4 2241423
Fax: +971 4 2241450
Web: www.a-map.net
E-mail: info@a-map.net

A-Map trading is the sole distributor of Solite Batteries in the region. Solite Batteries are O.E.M to Hyundai and KIA motors. The batteries are currently being used by some of the biggest Construction and Heavy Equipment companies in the UAE.

alfanar trading

PO Box 16396
alfanar Trading Building,
Near exit - 18, Sulai District
Riyadh, 11464
Saudi Arabia
Tel: +966 11 920006111
Fax: +966 11 2756699
Web: www.alfanar.com
E-mail: hossam.fashtaki@alfanar.com

Headquartered in Riyadh, alfanar operates a group of companies within a wide spectrum of

industries covering electrical, electromechanical and civil engineering construction in addition to manufacturing and marketing electrical construction products and allied engineering services. Numerous design and development centers integrate with a distinguished host of facilities in the Kingdom, the Middle East and other countries.

Agents:

United Arab Emirates - Alfano Electric LLC

Alkhorayef Commercial Co.

PO Box 281808
Riyadh
11392
Saudi Arabia
Tel: +966 11 4955452
Web: www.alkhorayefcommercial.com
E-mail: info@alkhorayefcommercial.com

Altaaq Global CAT Rental Power

PO Box 262989
VA 01, Jebel Ali Free Zone North
(JAFZA North)
Jebel Ali
Dubai
United Arab Emirates
Tel: +971 4 8808006
Fax: +971 4 8808007
Web: www.altaaqglobal.com
E-mail: info@altaaqglobal.com

Altaaq Global, subsidiary of Zahid Group, has been selected by Caterpillar Inc. to deliver multi-megawatt turnkey temporary power solutions. The company owns, mobilizes, installs, and operates temporary independent power plants at customer sites, focusing on markets in Sub-Saharan Africa, Central Asia, Indian Subcontinent, Latin America, South East Asia and MENA.

Ansald Energia S.p.A.

Via Carlo Navone 9-20
16152
Italy
Tel: +39 010 6557393
Web: www.ansaldoenergia.com

Ansald Energia is a leading international player in the power generation industry, to which it brings an integrated model embracing turnkey plants, components (gas turbines, steam turbines, generators and microturbines), servicing and work in the nuclear energy sector.



meccalte


Totally Focused. Totally Independent.

Unique Company Unique People

"Despite a reduction in their numbers in recent years, the traditional British red telephone box can still be seen in many places throughout the UK, and in current or former British colonies around the world. The colour red was chosen for its stand out nature."

Globally we employ over 1,200 unique people. Over 140 of them are based at our UK manufacturing plant. Every one of our employees, whether here at home or abroad, is totally committed to the extensive support we offer our customers. It's thanks to them that every single alternator we produce meets the world-class standards that we're renowned for.

**The world's largest independent
producer of alternators 1 - 5,000kVA**



www.meccalte.com

AP Lanka Pvt. Ltd.

No 416/5 Leyland Road
Panagoda, Homagama, Sri Lanka
Tel: +94 11 2751751/750288
Fax: +94 11 2 751740
Web: www.timikenclosures.com
E-mail: info@timikenclosures.com

AP Lanka Pvt. Ltd. manufacture and supply high quality electrical enclosures. Our products include Modular Panel Systems, Wall Mounting Enclosures, Stainless steel Enclosures, Stainless steel Terminal Boxes, 19" Racks under 'TIMIK' brand name. Our enclosures are manufactured in an ultra-modern factory and tested and complied with international standards.

**Apar Industries Ltd.**

Apar House, Corporate Park
Sion Trombay Road, Chembur
Mumbai, 400071, India
Tel: +91 22 25263400/67800400
Fax: +91 22 25246326
Web: www.apar.com
E-mail: corporate@apar.com

APC by Schneider Electric

PO Box 341057,
Dubai Technology Entrepreneurship
Level 2, Dubai, United Arab Emirates
Tel: +971 4 7099333
Web: www.apc.com/ae/en

APC by Schneider Electric provides industry leading products, software and systems for home, office, data center and factory floor applications. APC solutions include uninterruptible power supplies (UPS), precision cooling units, racks, physical security and design and management software, including APC's InfraStruxure® architecture, the industry's most comprehensive integrated power, cooling and management solution.

Appleton Group, business unit of EMERSON Industrial Automation

PO Box 17034, Jebel Ali South Zone 2
Dubai, United Arab Emirates
Tel: +971 4 8118100
Fax: +971 4 8865465
Web: www.emersonindustrial.com
E-mail: industrialautomation.mea@emerson.com

As a global manufacturer of electrical products for commercial, industrial, hazardous and adverse environments, Appleton Group combines the industry's best known brands, including ATX and SolaHD. Together, these brands offer a complete solution for electrical power, distribution, control and lighting that lead the industry in efficiency, durability, safety, quality and ease of installation.

APR Energy

Dubai, United Arab Emirates
Tel: +971 800 27738224
Web: www.aprenergy.com
E-mail: info@aprenergy.com

APR Energy is a global leader in rapidly delivered large-scale power solutions and, following its purchase of GE's power rental business, is the world's leading provider of fast-track mobile turbine power. APR Energy sells electricity and generation capacity to

utility and industrial customers that require power generation solutions.

AREI®- New Arel Srl

Via Carnevali 14, Milano, Italy
Tel: +39 02 39320325/10516
Fax: +39 02 39313518
Web: www.arel-locks.com
E-mail: g.frigio@newarel.com

ASCO Numatics, business unit of Emerson Industrial Automation

PO Box 17034, Jebel Ali South Zone
Dubai, United Arab Emirates
Tel: +971 4 8118100
Fax: +971 4 8865465
Web: www.ascnumatics.com
E-mail: industrialautomation.mea@emerson.com

ASCO is the worldwide leader in high-quality solenoid valves and related fluid control products used to control the flow of air, gas, water, oil and steam. Numatics is a leading supplier of fluid power and motion control products. The strengths of these two have been combined to offer comprehensive fluid automation solutions.

Ascot Industrial S.r.l.

Zona Industriale, Terza Strada, Gela
93012, Italy
Tel: +39 093 3901192/392 2116904
Fax: +39 093 3917682
Web: www.ascotinternational.com
E-mail: sales@ascotinternational.com

Ascot is an Italian company providing diesel generating sets in the range 20-2000kVA; hybrid power plant (PV+diesel) 10 MW onwards for off or unstable grid application; hybrid diesel generator for telecom & defense application, range 1-20kW. More than 38,000 Power Solutions are installed worldwide. The Ascot mission is "ENERGY EVERYWHERE"

Autotank International Ltd.

111 Washingbay Road, Coalisland
County Tyrone, Dungannon
BT71 4QE, United Kingdom
Tel: +44 28 87741581
Fax: +44 28 88749868
Web: www.autotank.co.uk
E-mail: sales@autotank.co.uk

Bahra Cables Co.

PO Box 5989, Jeddah, 21432
Saudi Arabia
Tel: +966 12 5911115
Fax: +966 12 5915683
Web: www.bahra-cables.com
E-mail: sales@bahra-cables.com

Since 2008, Bahra Cables Co. has been committed to provide an exceptional service in the manufacturing of Electric Cables (Building Wires, Low, Medium and High Voltage Cables, Fire Resistant Cables, Flame Retardant Cables, Overhead Lines, etc.) to serve the Saudi & GCC markets.

BAUR GmbH

Raiffeisenstrasse 8, Sulz, 6832
Austria
Tel: +43 5522 49410
Fax: +43 5522 49413
Web: www.baur.eu
E-mail: headoffice@baur.at

BAUR GmbH is a market leader in the servicing and maintenance of electrical power distribution systems and their components

Bin Ham Eletrical Equipment Trading LLC

PO Box 4301, Al Burj Street, Naif
Deira, Behind Al Khansaheb Parking

Dubai, United Arab Emirates
Tel: +971 4 2273939
Fax: +971 4 2217619
Web: www.binhameet.com
E-mail: sales@binhameet.com

Electrical trading distributor.

Brady Middle East FZE

PO Box 18015, Jebel Ali, Dubai
United Arab Emirates
Tel: +971 4 8812524
Fax: +971 4 8813183
Web: www.bradymiddleeast.com
E-mail: emea_request@bradycorp.com
cs_me@bradycorp.com

With Brady's cable & component identification labels, you can install faster, lower the risk of mistakes, spend less time on maintenance diagnostics, reduce the cost of downtime and create a safer workplace. Brady has a label material for every application in the most versatile offer on the market.

Broadcrown Ltd.

Airfield Industrial Estate, Hixon
Stafford, Staffordshire, ST18 0PF
United Kingdom
Tel: +44 1889 272200
Fax: +44 1889 272220
Web: www.broadcrown.com
E-mail: generator.sales@jcb.com

Broadcrown is a leading independent manufacturer of standard generator sets and bespoke power generation systems from 6kVA to +30mVA. All generators systems are manufactured in our UK factories and carry world wide warranties. Broadcrown designs, delivers and supports highly specified power generation systems, including renewable energy power plants.

Agents:

Saudi Arabia - AlKhorayef

C & S Electric Ltd.

222, Okhla Industrial Estate
Phase - 111, New Delhi, 110020, India
Tel: +91 11 33849000/9009
Web: www.cselectric.co.in
E-mail: info@cselectric.co.in
cmo@cselectric.co.in
exports@cselectric.co.in

**Caterpillar Inc.**

501 SW Jefferson Avenue
Peoria, IL, 61630, USA
Tel: +1 309 6752337

For nearly 90 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Customers turn to Caterpillar for infrastructure, energy and natural resources assets. Caterpillar is the world's leading manufacturer of construction/mining equipment, diesel/natural gas engines, industrial gas turbines and diesel-electric locomotives.

Agents:

United Arab Emirates - Caterpillar SARL Branch

Caterpillar SARL

PO Box 262147, Jebel Ali Free Zone
Aekalpana, Dubai, UAE
Tel: +971 4 8116120
Web: www.cat.com

For more than 85 years, Caterpillar Inc. has been making sustainable progress possible

and driving positive change on every continent. With 2012 sales and revenues of \$ 65.875 billions, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives.
www.caterpillar.com

CG

PO Box 341201
Dubai Silicon Oasis E/6/7, Dubai
United Arab Emirates
Tel: +971 4 3724667
Fax: +971 4 3724677
Web: www.cgglobal.com
E-mail: middleeast@cgglobal.com

With over 75 years of experience in the energy sector, CG is an established manufacturer of three-phase distribution and power transformers, and a strong competitor in the market of substations, integrated solutions, automation systems and services. At CG we continually focus on providing smart solutions to our customers' challenges.

CGS Instrument Transformers S.r.l.

Via Ercolano, 25, Monza (MB)
20900, Italy
Tel: +39 039 394141
Fax: +39 039 39414202
Web: www.cgs-monza.it
E-mail: sales@it-cgs.it

**COELMO SpA**

Via delle Industrie
278 Agglomerato Industriale ASI
Acerra (Napoli), 80011, Italy
Tel: +39 081 8039731
Fax: +39 081 8039724
Web: www.coelmo.it
E-mail: sales@coelmo.it
COELMO is one of the oldest European manufacturers of industrial and marine generators from 3kVA up to 3000kVA. Based in Italy, with a large stock of generating sets available to be shipped overnight to any destination in the world. Company profile, products and models are available online at www.coelmo.it.

Agents:

United Arab Emirates - COELMO S.P.A.
(DMCC BRANCH)

Control Techniques, business unit of Emerson Industrial Automation

PO Box 17034, Jebel Ali South Zone
Dubai, United Arab Emirates
Tel: +971 4 8118100
Fax: +971 4 8865465
Web: www.emersonindustrial.com
E-mail: corporate.emerson@emerson.com

Control Techniques is renowned for quality, durability and innovation in the field of AC and DC variable speed drives, servo systems and power conversion technologies. Commercial and industrial customers worldwide count on the Control Techniques brand to deliver performance, reliability and energy efficiency in the most demanding applications.

Cressall Resistors Ltd.

Evington Valley Road, Leicester
England, LE5 5LZ, United Kingdom
Tel: +44 116 2733633
Fax: +44 116 2737911
Web: www.cressall.com
E-mail: sales@cressall.com

Cressall Resistors manufacture high power resistors, neutral earthing resistors (NERS), portable load units, bespoke LV and HV load banks, dummy loads and dynamic braking resistors as well as resistors for use in high voltage filters such as HVDC, SVC and MSC Systems.

Cummins Generator Technologies

Fountain Court, Lynch Wood
Peterborough, PE2 6FZ, United Kingdom
Tel: +44 1733 395300
Web: stamford-avk.com
E-mail: info@cumminsgeneratortechologies.com

Agents:

United Arab Emirates - Cummins Generator Technologies (Middle East)

Cummins Middle East FZE

PO Box 17636
South Zone 2, Jebel Ali Free Zone
Dubai, United Arab Emirates
Tel: +971 4 8809911/800
Fax: +971 4 8860518/9
Web: www.middleeast.cummins.com
E-mail: cummins.middleeast@cummins.com

Cummins Middle East FZE, the first wholly-owned Cummins Inc. distributor in the region, was established in 2000. In early 2014, CME transitioned to an area business organization structure to allow the company to invest and grow in the region by bringing all Cummins business units closer to the market and covers UAE, Bahrain, Qatar, Yemen, Oman, Saudi Arabia, Kuwait, Jordan, Iraq, Lebanon, Afghanistan and Pakistan.

Cummins offers one of the widest ranges in diesel power generators, starting from 17 kVA till 3750 kVA.

Dale Power Solutions

PO Box 487282, Suite 30, 33rd Floor
HDS Business Centre, Cluster M1
Jumeirah Lake Towers
Dubai
United Arab Emirates
Tel: +971 4 3641230
Web: www.dalepowersolutions.com
E-mail: info@dalepowersolutions.com

Founded in 1935 as a diesel generator manufacturer, Dale Power Solutions has since grown into a manufacturer of UPS systems, AC/DC systems and generators which manage and provide back-up electricity and can ensure a smooth transition between mains and generator power. On top of this we can provide turnkey solutions - keeping your power in safe hands.

Danfoss FZCO

PO Box 61248, Jebel Ali Free Zone
Dubai, United Arab Emirates
Tel: +971 4 8123000
Fax: +971 4 8872221
Web: www.danfoss.ae

Deep Sea Electronics PLC

Highfield House
Hunmanby Industrial Estate
Hunmanby, North Yorkshire, England
YO14 0PH, United Kingdom
Tel: +44 1723 890099
Fax: +44 1723 893303
Web: www.deepseaplcm.com
E-mail: sales@deepseaplcm.com

DSE is a UK manufacturer of genset engine only and ATS controls, battery chargers & power supplies. With an outstanding worldwide reputation for a range of expertly engineered products that offer user-friendly operation and with 24hr global support there's no surprise DSE is the world's Number 1.

DEHN + SÖHNE GmbH + Co. KG

Hans-Dehn-Str. 1, Neumarkt
92318, Germany
Tel: +49 9181 9060
Fax: +49 9181 9061100
Web: www.dehn.de
E-mail: info@dehn.de

DEIF India Pvt. Ltd.

602, Town Centre II
Andheri Kurla Road
Sakinaka
Andheri (E), Mumbai, 400059
India
Tel: +91 22 42452000
Fax: +91 22 42452020
Web: www.deif.com
E-mail: india@deif.com

DEIF is a multi-national company HQ in Denmark engaged in the field of power management systems for diesel, gas, hydro and wind power for over 7 decades delivering "Power in Control". To know more about our intelligent power management to operate upto 256 plants in group, visit www.deif.com.

Agents:

United Arab Emirates - KDU Worldwide Technical Services FZC

Delta Energy Systems AG

PO Box 185668, Gate 7, 3rd Floor
Hamarain Centre, Dubai, UAE
Tel: +971 4 2599553/2689901
Fax: +971 4 2689912
Web: www.deltapowersolutions.com
E-mail: info.middle-east@deltawww.com

Delta provides its customers with a wide range of power products and services globally. Operating in the area of telecom power, UPS and photovoltaic solutions the core of our business is securing the vital processes of our customers with innovative easy-to-use technology. We also aim to promote sustainable development with energy efficient solutions.

DHYBRID Power Systems

Perchtinger Straße 1A
Gauting
82131, Germany
Tel: +49 89 8994810
Fax: +49 89 899481200
Web: www.dhybrid.de
E-mail: contact@dhybrid.de

DHYBRID Power offers self-developed high quality HyGRID Controllers, made in Germany, for HyGRID Fuel Reduction Systems and all high quality material needed. We are your provider for industrial-scale Diesel-Photovoltaic-Hybrid-Systems to synchronize photovoltaic with diesel gensets. Our Products are all proven. Our customized projects are realized with a global partner network.

DIL0 Armaturen und Anlagen GmbH

Frundsbergstrasse 36
Babenhausen
87727, Germany
Tel: +49 8333 3020
Fax: +49 8333 30252
Web: www.dilo-gmbh.com
E-mail: sales@dilo-gmbh.com

DIL0 is a specialist manufacturer of SF6 gas handling equipment comprising SF6 service carts and measuring devices, devices for SF6 gas monitoring, SF6 leak testing machines, as well as SF6 gas fittings. The product offering is complemented by a comprehensive range of hermetically sealing high-pressure tube unions.

Dwyer Instruments

16 The Wye Estate
London Road, High Wycombe
HP11 1LH, United Kingdom
Tel: +44 14 94461707
Web: www.dwyer-inst.com/index_intl.cfm
E-mail: salesME@dwyer-inst.co.uk

Dwyer Instruments manufacture and supply gauges, instruments, sensor and switches for measurement of pressure and differential pressure, humidity, temperature, air quality, air and water flow and liquid level for AHU, HVAC and BMS.

Eaton Electric Ltd.

PO Box 9398
Dubai World Trade Center, Level 16
Dubai, United Arab Emirates
Tel: +971 4 3313938
Fax: +971 4 3329239
Web: www.eaton.eu
E-mail: customerservice-me@eaton.com

Eaton, with 2012 sales of \$16.3 billion, is a global technology leader in electrical products, system and services for power quality, distribution and control, power transmission, lighting and wiring products. Eaton acquired Cooper Industries PLC in 2012. Eaton has approximately 103,000 employees and sells products to customers in more than 175 countries.

Agents:

Egypt - Eaton
Jordan - Eaton
Kuwait - Eaton Electric
Lebanon - Eaton
Qatar - Eaton
Saudi Arabia - Eaton Corporation

Eksen Teknik Sunger San. ve Tic. Ltd. Sti.

Ortaköy Mh. Harput Sk. No:4/A
Silivri, Istanbul, Turkey
Tel: +90 212 5831241
Fax: +90 212 5831285
Web: www.eksensunger.com
E-mail: info@eksensunger.com

Eksen specializing in technical foams delivers the best combination of functions in acoustic comfort with fire-safe products. Procell® Flame proof acoustical foam, PE, EPDM and rubber tapes, seals and auxiliary items are customized for clients' requirements for genset enclosures, engine housing linings, lagging in air-ducting & hvac applications.

Eland Cables

120 Highgate Studios
53-79 Highgate Road, London
NW5 1TL, United Kingdom
Tel: +44 20 72418740
Fax: +44 20 72418700
Web: www.elandcables.com
E-mail: international@elandcables.com

Eland Cables is a global supplier of power, data, instrumentation and control cables to the world's most demanding industries including prestigious mining, construction, petrochemical and infrastructure projects. Our unwavering focus on quality, technical expertise and customer service makes us a key contributor to projects in over 130 countries each year.

Electric House Est.

PO Box 11967, Jeddah, 21463
Saudi Arabia
Tel: +966 12 2879111
Fax: +966 12 2879191/92
Web: www.electric-house.com
E-mail: info@electric-house.com

Electric House was established in 1955 as a family business for supply and distribution of parts in the electrical industry. The great success of the business over the last half century is based on its record of comprehensive stockholding, service and reliable delivery to the customer. These remain the core strengths of the business.

Emerson Industrial Automation

Emerson FZE, PO Box 17034
Jebel Ali Free Zone, Dubai, UAE
Tel: +971 4 8118100/945
Fax: +971 4 8865465
Web: www.emersonindustrial.com
E-mail: corporate.emerson@emerson.com

Emerson Industrial Automation is a global technology provider that enables productivity, efficiency and quality gains for customers across a spectrum of industries. Our products include alternators, electric motors and drives, electrical protection and power quality and fluid automation. Emerson brands include Appleton, Asco Numatics, Control Techniques, Leroy-Somer and much more.



Energy Exemplar Pty Ltd.

17 Bagot St, North Adelaide
5006, Australia
Tel: +61 8 83619312
Web: www.energyexemplar.com
E-mail: info@energyexemplar.com

Enrogen Ltd.

Electricity Building, Blenheim Road
Pocklington Ind Est, York
YO42 1NR, United Kingdom
Tel: +44 1759 307070
Fax: +44 1759 305070
Web: www.enrogen.com
E-mail: mail@enrogen.com

Enrogen supply, install and maintain diesel generating sets from 10kVA to 2500kVA. All our generating sets are of United Kingdom origin, powered by Perkins, Sisu, Scania and Mitsubishi engines at 1500 RPM. We can also assist with spare parts, switch-gear and distribution panels. Standard changeovers range from 63A to 4000A.

FAMCO (Al-Futtaim Auto & Machinery Co. LLC)

PO Box 5502, Dubai
United Arab Emirates
Tel: +971 4 2135100
Fax: +971 4 2135400
Web: www.famcouae.com
E-mail: famco@alfuttaim.ae

FAMCO is a market leading supplier of products and services to a diverse range of industries and commercial undertakings covering the transportation, construction, manufacturing, warehousing, oil & gas and marine sectors. FAMCO serves these industries with world-class brands like Yanmar generators & Himoinsa generators & lighting towers, Volvo, Merlo, Ingersoll Rand, Linde, Dexion, Hart, Nassau, Steril & Stanley Proto. FAMCO's operations cover the entire UAE, with bases in Dubai, Abu Dhabi, Al Ain and Ras Al Khaimah, plus branches across Saudi Arabia, Oman, Qatar, Bahrain Lebanon & Egypt. The company's development and success has been based on an in-depth understanding of customer needs and the dedication of its skilled staff.

**FG Wilson**

1 Millennium Way
Springvale Business Park
Springfield Road, Belfast, County
Antrim, Northern Ireland, BT12 7AL
United Kingdom
Tel: +44 28 90495000
Fax: +44 28 28261111
Web: www.fgwilson.com
E-mail: web_editor@fgwilson.com

From 6.8 - 2500 kVA, FG Wilson diesel and gas generators sets are reliable, efficient and designed, tested and manufactured to the highest UK standards.

We have installed over 140,000 generator sets in the Middle East since 1990, all supported by our established, fully trained dealer network across the region.

Fluke MEA

PO Box 71569
2nd Level, Building #34
Al Zahrawi, Dubai Healthcare City
Dubai, United Arab Emirates
Tel: +971 4 5607900
Fax: +971 4 5607999
Web: www.fluke.com
E-mail: info.me.africa@fluke.com

Founded in 1948, Fluke Corporation is the world leader in compact, professional electronic test tools. Fluke customers are

technicians, engineers, electricians, and metrologists who install, troubleshoot and manage industrial, electrical and electronic equipment and calibration processes. The Fluke brand has a reputation for portability, ruggedness, safety, ease of use and rigid standards of quality.

Forest City Export Services Ltd.

Bowden Hall, Bowden Lane
Marple, Cheshire, England, SK6 6NE
United Kingdom
Tel: +44 161 4490660/0770
Fax: +44 161 4490880
Web: www.forestcitygenerators.com
E-mail: sales@forestcitygenerators.com

Suppliers of UK manufactured diesel generator sets from 7.5kVA to 3045kVA and associated spare parts.

Fronius International GmbH

Froniusplatz 1, Wels, 4600, Austria
Tel: +43 7242 2413000
Fax: +43 7242 2413013
Web: www.fronius.com
E-mail: contact@fronius.com

With 3,723 employees worldwide and 838 granted patents Fronius International GmbH is an Austrian innovation leader active in the fields of welding technology, photovoltaics and battery charging technology. Around 90% of its products are exported through 24 international Fronius subsidiaries and sales partners in more than 60 countries.

Agents:

United Arab Emirates - Fronius Middle East FZE

**Galva Coat for Galvanizing & Light Poles**

PO Box 8485
Mussaffah Industrial Area - West 4
Abu Dhabi
United Arab Emirates
Tel: +971 2 5511188
Fax: +971 2 5510188
Web: www.galvaccoat.net
E-mail: galvaintd@eim.ae

Galvaccoat, 3 time winner of Sheikh Khalifa Industry Golden Award, winner of Sheikh Khalifa Excellence Quality Award and having ISO 9001-2008 & 14001-2004 & Oshad approval certificates is one of the major manufacturers of various kinds of lighting & transmission poles, guard rails and providing hot dip galvanizing services in UAE.

Agents:

Saudi Arabia - M/s Inanra Co. Ltd.

Gamesa Electric

Parque Tecnológico de Bizkaia, Ed.
100, Zamudio (Vizcaya), 48170, Spain
Tel: +34 94 4037352
Web: www.gamesaelectric.com
E-mail: gamesaelectric@gamesacorp.com

Gamesa Electric has more than 80 years of experience in the design and manufacture of state of the art motors and generators for the

most demanding applications in low, medium and high voltage. Tailor made solutions up to 40 MVA and 15KV. Low and high speed. Asynchronous, synchronous and permanent magnet motors and generators. Nuclear, Oil & Gas, marine and military norms available under request.

**Gardner Denver FZE**

PO Box 61146
Office No. 180202
JAFZA View 18
Jebel Ali Free Zone (South)
Dubai
United Arab Emirates
Tel: +971 4 8811744
Fax: +971 4 8811898
Web: www.gardnerdenver.com
E-mail: enquiries.fze@gardnerdenver.com

Gardner Denver is a leading supplier of compressed air solutions and with over 200 years experience in the design of portable compressors, can offer from the smallest model, powering a single pneumatic tool, through to the innovative Turboscrew range. With an extensive network of sales companies and distributors, Gardner Denver offers global expertise with local service capability.

POWEROIL® - The Power of Perfection
Optimised Performance for Protection of Transformers

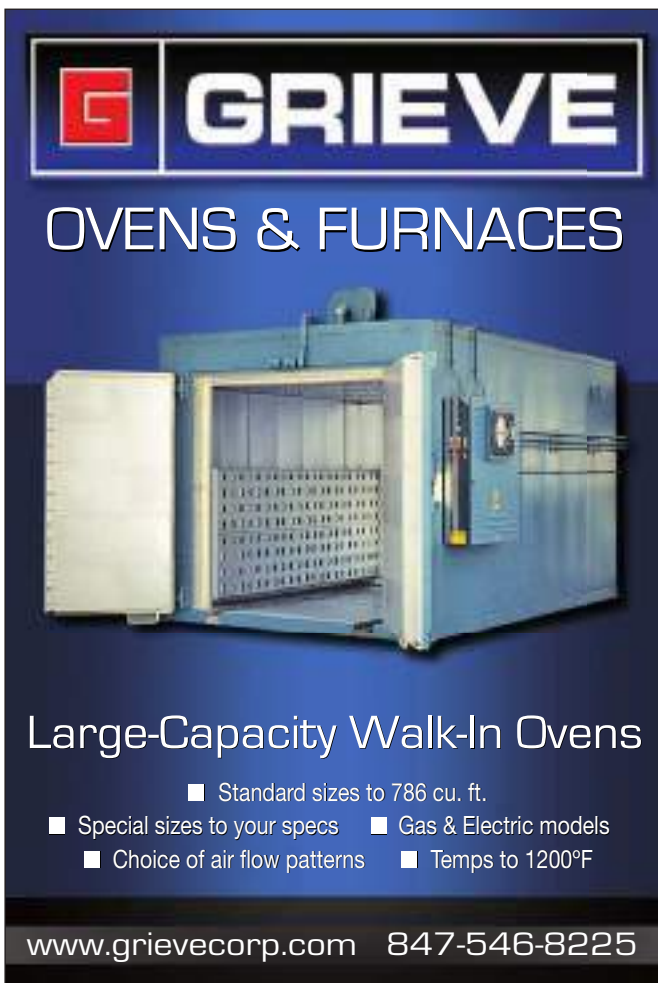


POWEROIL® Transformer Oil

- Extensive Range covering all latest Global Standards
- Market leader in India & Fourth Largest in the world
- Exporting Transformer Oils to over 100 Countries
- Supplying oil up to 765 KV-AC & 800 KV-HVDC
- Globally approved by major OEMs & Utilities

APAR INDUSTRIES LIMITED
(An ISO 9001-2008, ISO 14001-2004 & OHSAS 18001-2007 Certified Company)
Apar House, B-11, Corporate Park, Sion - Trombay Road, Chembur, Mumbai 400 071, Maharashtra, India
Phone: +91 22 25263400, Fax: +91 22 67600400 E-Mail: corporate@apar.com Website: www.apar.com

GRIEVE
OVENS & FURNACES



Large-Capacity Walk-In Ovens

- Standard sizes to 786 cu. ft.
- Special sizes to your specs
- Gas & Electric models
- Choice of air flow patterns
- Temps to 1200°F

www.grievcorp.com 847-546-8225

Genesal Energy

Parroquia De Cortinan
Polígono Industrial de Bergondo
A Coruña, 15165, Spain
Tel: +34 981 674158
Fax: +34 981 676462
Web: www.genesalenergy.com
E-mail: genesal@genesal.es

Genesal Energy is a European company which has been providing worldwide power generation solutions for over 20 years, focusing on adaptability and innovation. Our power range starts from 5kVA up to 2500kVA diesel and gas powered, as well as hybrid Gensets for eco-friendly solutions.

Agents:

United Arab Emirates - Bauer GT
(GENESAL ENERGY)

**GENMAC Generators**

Via Don Minzoni 13, Gualtieri (RE)
42044, Italy
Tel: +39 0522 222311
Fax: +39 0522 829218
Web: www.genmac.it
E-mail: info@genmac.it

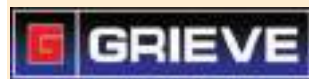
Generators manufactured since 1983. Made in Italy. Power range 2kVA - 2000kVA. Gas version available full range of accessories. References for: telecom, oil & gas, hospitals, government projects, arms rental & construction.

Green Power Systems S.r.l.

Localita' Maiano
Caprazzino Di Sassocorvaro
61028, Italy
Tel: +39 0722 726411
Fax: +39 0722 720092
Web: www.greenpowergen.com
E-mail: giovanni@greenpowergen.com

Manufacture of generating sets up to 2200 kVA

1. Different engine types: Perkins - Cummins - Deutz - Volvo - John Deere - Iveco - Lombardini - Yanmar - Mitsubishi - Honda
2. Telecommunication Power solutions
3. Customized generators
4. Natural Gas and LPG gensets
5. Lighting towers
6. Welding Machines
7. ISO 9001/2000 - ISO 14001/2004

**Grieve Corporation**

500 Hart Road, Round Lake
Illinois, 60073-2898, USA
Tel: +1 847 5468225
Fax: +1 847 5469210
Web: www.grievcorp.com
E-mail: sales@grievcorp.com

Grupos Electr6genos Europa SA

Polígono Pitarco II, Parcela 20
Muel (Zaragoza), 50450, Spain
Tel: +34 976 145432
Web: www.gesan.com
E-mail: export@gesan.com
info@gesan.com

Founded in 1986, Gesan is today an energy solutions integrator engaged in the manufacture of water and air-cooled diesel

generators, welders, petrol units and lighting towers.
Offering a complete range of products up to 3,100 kVA, we are able to supply over 778,000 kVA per annum in 90 countries around the world.

Haci Ayvaz Endustriyel Mamuller Sanayi Ve Tic. AS

Atatürk Sanayi Bölgesi Hadımköy
Mahallesi Mustafa
İnan Caddesi No: 44
Arnavutköy, İstanbul, Turkey
Tel: +90 212 7710145
Fax: +90 212 7712560/7714727
Web: www.ayvaz.com
E-mail: info@ayvaz.com

Hanwha Techwin

Hanwha Techwin R&D Center
6, Pangyo-ro, 319 Beon-gil
Bundang-gu, Seongnam-si
Gyeonggi-do, 463-400, Korea
Tel: +82 2 7292900
Web: www.hanwhatechwin.com

Hanwha Techwin is specialized in designing and manufacturing of integrally geared air and gas compressors which are being operated around the world for plant air, process air and gas applications.

Agents:

United Arab Emirates - Hanwha Techwin Co. Ltd.
Dubai Branch

HellermannTyton GmbH

HellermannTyton Group PLC
PO Box 124011, SAIF Zone, Sharjah
United Arab Emirates
Tel: +971 6 5375637
Web: www.hellermanntyton.ae
E-mail: info@hellermanntyton.ae

HellermannTyton are one of the leading suppliers of products for fastening, fixing and protecting cables and their connecting components. We also develop pioneering systems in the field of data and network technology. Our corporate philosophy focuses on our customers and their requirements for the best possible solutions to all their cable needs.

HELUKABEL GmbH

Dieselstr. 8-12
Hemmingen
71282
Germany
Tel: +49 7150 92090
Web: www.helukabel.com
E-mail: info@helukabel.com

Since its founding in 1978, HELUKABEL GmbH has developed into an internationally leading manufacturer and supplier of cables, wires and accessories. With 48 locations in 29 countries and 1,200 employees based all over the world, the company generates annual Group turnover of 476 million. Certified according to DIN EN ISO 9001, 14001 and 50001. HELUKABEL is a reliable partner to its customers and suppliers.

Agents:

United Arab Emirates - HELUKABEL Middle East
DWC LLC

HIMA Middle East FZE

PO Box 261487
UC # 06, RA # 08
Jebel Ali Free Zone
Dubai
United Arab Emirates
Tel: +971 4 8834489
Fax: +971 4 8834778
Web: www.hima.ae
E-mail: info.hme@hima.com

**HIMOINSA**

Ctra. Murcia-San Javier, km. 23.6
San Javier / Murcia, 30730, Spain
Tel: +34 968 191128
Fax: +34 968 191217
Web: www.himoinsa.com
E-mail: info@himoinsa.com

HIMOINSA is a global corporation that designs, manufacturers and distributes power generation equipment worldwide. The company adds incomparable application and engineering know-how, excellent design and service capabilities, delivering value beyond the equipment it produces.

The product range that the brand offers includes diesel and gas generator sets, control panels and paralleling systems for standby emergency power, prime power, peak power and distributed power. It also develops hybrid power gensets for the telecom sectors and manufacturers lighting towers for the rental and construction markets.

Agents:

United Arab Emirates - HIMOINSA Middle East

Huegli Tech AG Ltd.

Murgenthalstrasse 30, Langenthal
4900, Switzerland
Tel: +41 62 9165030
Fax: +41 62 9165035
Web: www.huegli-tech.com
E-mail: rhellemann@huegli-tech.com

Huegli Tech is a leading supplier and wholesaler with core competences in Engine Governing Systems, Generating Set Controls, Hydraulic Engine Starting Systems, Vehicle Control Systems, Gas Engine Management System, Engine Accessories and Dual Fuel Conversions. We are active worldwide and our distribution network is well developed.

Agents:

Lebanon - Black Box SARL
Saudi Arabia - Black Box KSA
United Arab Emirates - Natheer Technical Services

ICAR S.p.A.

Via Isonzo, 10, Monza (MB), 20900
Italy
Tel: +39 039 83951
Fax: +39 039 833227
Web: www.icar.com
E-mail: sales@icar.com

ICAR is one of Europe's leading capacitor specialists and bases its reputation on over 70 years of experience in the design, development and production of high performance capacitors. Today ICAR range is made of capacitors and automatic systems for power factor correction, capacitors for motors and lighting, DC and AC capacitors for power electronics use.

IGEL Electric GmbH

Hauert 14a, Dortmund, 44227
Germany
Tel: +49 231 7930500
Fax: +49 231 7930502020
Web: www.igeelectric.de
E-mail: verttrieb@igeelectric.de

IGEL Electric boasts the largest range of products in the field of soft starter systems worldwide. IGEL supplies drive solutions with quality that is "Made in Germany". IGEL products are installed in Europe, in the Far East, the Middle East as well as in the America and in Africa.

Agents:

United Arab Emirates - IGEL Electric Dubai

Imequadri Duestelle S.p.A.

Via Provinciale, 568, Ugnano (BG)
24059, Italy
Tel: +39 035 4814211
Fax: +39 035 4814333
Web: www.imequadruestelle.com
E-mail: commerciale.quadri@imequadruestelle.it

Imequadri Duestelle designs and produces: LV switchgears: PC and MCC; MV switchboards: Metal Clad LSC2B-PM, Metal Enclosed LSC2A-PI with air insulated LBS, Metal Enclosed LSC2A-PM with SF6 insulated LBS, Busducts and Prefabricated substations; indoor MV LBS and Disconnectors (air or SF6 gas-insulated), fix Circuit breakers and Earthing Switches for panel or wall mounting.

**Inmarco Industries FZC**

PO Box 120284
SAIF-Zone, Sharjah
United Arab Emirates
Tel: +971 6 5578378
Fax: +971 6 5578948
Web: www.inmarco.ae
E-mail: info@inmarco.ae

Inmarco is one of the leading manufacturers of superior quality fluid sealing and thermal insulation products. An ISO 9001:2008 certified company serving the entire Middle East countries.

**INMESOL S.L.**

Ctra. Fuente Álamo, 2
Corvera - Murcia, 30153, Spain
Tel: +34 968 380300
Fax: +34 968 380400
Web: www.inmesol.com
E-mail: inmesol@inmesol.com

INMESOL S.L. is a Spanish company dedicated to the design, manufacture and technical services of generators from 3-2500 kVA, engine-driven welders, lighting towers and hybrid modules. His philosophy is to satisfy the requirements of all kinds of projects, including those most demanding.

IREM S.p.A.

Via Abegg 75, Borgone (Torino)
10050
Italy
Tel: +39 011 9648211
Fax: +39 011 9648222
Web: www.irem.it
E-mail: svm@irem.it

IREM S.p.A. specialises in design and manufacture of 1PH and 3PH electro-dynamic voltage regulators and line conditioners - in standard and customized versions - with power ratings from 1 to 4750kVA for indoor and outdoor installation. In business since 1947, IREM is a medium size company (staff 110 people) exporting all over the world. Company according to ISO9001 (since 1983) and ISO 14001 (since year 2000), BS OHAS 18001 (since 2014) Standards. Typical application fields: Broadcast, telecommunication, industrial applications, electro-medical appliances, machine tools, manufacturing plants, banks and insurance companies, construction, oil and gas, mining, a.s.o.



JCB Power Products

Airfield Industrial Estate, Hixon
Stafford, Staffordshire, ST18 0PF, UK
Tel: +44 1889 272200
Web: www.jcb.com/en-me
Email: generator.sales@jcb.com

JCB Power Products offer a comprehensive range of diesel generators and lighting towers ranging from 8-3.35MVA. Open or canopied, single or 3-phase, 50 or 60Hz frequency, plus various voltage options; the JCB range of generators gives you a lot of options to meet your exact power requirements complete with support.

Agents:

Bahrain-Gulf Equipment & Technology WLL
Egypt-International Projects & Consulting Co.- IPC
Iraq-Al-Ghodiwa for Trading Agencies Co. Ltd.
Jordan-Yazoure Group
Kuwait-Riham General Trading and Contracting Co. WLL
Libya-The White Alnoras
Oman-Muscat Overseas
Saudi Arabia-RGTS
Turkey-SIF
UAE-Galadari

Jeremias Middle East

PO Box 75873
Tiffany Tower, Jumeirah Lake Towers,
JLT, Dubai, United Arab Emirates
Tel: +971 50 9596119
Web: www.jeremias-me.com
E-mail: info@jeremias-me.com

Jeremias is one of the world's leading manufacturers of high pressure, high temperature stainless steel flue and chimney systems for the exhaust of gases and ventilation. Jeremias product range includes 60 different CE certified systems covering all kind of domestic, commercial and industrial applications complemented by freestanding industrial steel chimneys up to 3 meter diameter.

JMG Limited

15A Redemption Crescent, Gbagada
Lagos, Nigeria
Tel: +234 70 30005470/18980282
Web: www.jmglimited.com/iraq
E-mail: marketing@jmglimited.com

JMG Limited, official FG Wilson Dealer in Iraq, is a leading member in the generator industry, providing premium products with excellent after-sales support wherever reliable energy is needed.

Agents:

Lebanon - JMG International

John Deere Power Systems

Unité d'Orléans-Saran
La Foulonnerie - BP 11013
Fleury les Aubrais Cedex
45401, France
Tel: +33 23 8826119
Fax: +33 23 8846266
Web: www.johndeere.com
E-mail: jdengine@johndeere.com

- Manufactured Engine: John Deere
- Nos of cyl: 3, 4, 6
- Power range: 36 to 448 kW

Agents:

Egypt - Orascom Trading SAE
Lebanon - Allied Diesel S.A.R.L.
Oman - General Engineering Services Est.
Saudi Arabia - Electrical Work & Maintenance
Turkey - AKSA Servis Ve Yedek Parca AS
United Arab Emirates - GENAVCO
Yemen - Abu Alrejal Trading Corporation

Johnson Controls

13th Floor, API World Tower
Dubai, 31065
United Arab Emirates
Tel: +971 4 3099999
Fax: +971 4 3099694
Web: www.johnsoncontrols.com

Jubaili Bros

Jebel Ali Free Zone, UAE
Tel: +971 4 8832023
Fax: +971 4 8832053
Web: www.jubailibros.com
E-mail: jbdubai@jubailibros.com

Jubaili Bros is one of the leading providers of power solutions in the Middle East, Africa and Asia. With 40 years of experience in the field of power generation, Jubaili Bros is the perfect choice for your power solution needs. Jubaili Bros serves its customers from 9 countries with 27 branches and service centers and alongside a strong dealers network.

Agents:

Kuwait - Jubaili Bros (Kuwait)
Lebanon - Jubaili Bros (Lebanon)
Qatar - Jubaili Bros (Qatar)



Kaeser Kompressoren FZE

PO Box 17485, JAFZ, Dubai
United Arab Emirates
Tel: +971 4 8050000
Fax: +971 4 8050077
Web: www.kaeser.com
E-mail: info.dubai@kaeser.com

Kaeser is a family owned German company, manufacturers of highly efficient industrial and portable air compressors, low pressure blowers, vacuum compressors and all associated air treatment and energy management control systems. Kaeser has over 50 fully owned subsidiaries world-wide as well as a large number of authorised distributors.

Kalpa Elektrikal Pvt Ltd.

PO Box No 4413, 149/25, III Main
Industrial Town, Rajaji Nagar
Bangalore, 560010, India
Tel: +91 80 23405248
Fax: +91 80 23116165
Web: www.kalpaelektrikal.com
E-mail: exim@kalpaelektrikal.com

Kalpa Elektrikal Pvt Ltd., India established in the year 1978, with over 35 years of vast experience in design, manufacturing, testing and supply of LV & MV current transformers, voltage transformers, dry type control & power transformers and line chokes to utilities, switchgear manufacturers, other industries.



Kempston Controls LLC

PO Box 60998, 13th Street Umm
Ramool, Al Zubaidi No. 4
Dubai
United Arab Emirates
Tel: +971 4 2987111
Fax: +971 4 2987113
Web: www.kempstoncontrols.ae
E-mail: sales@kempstoncontrols.ae
Distribution of industrial electrical, electronic and automation components.

KFB Holding Group

PO Box 61891, Exit 14
Al-Rayan Area
Eastern Ring Road
Riyadh
11575
Saudi Arabia
Tel: +966 11 4966667
Fax: +966 11 4917919
Web: www.kfbgroup.com.sa
E-mail: santhosh.kumar@kfbgroup.com.sa
Manufacturing & trading of electrical distribution products & systems, DG sets, UPS, DC power, transformers, automation & rotating machine services.

Kirloskar Oil Engines Ltd.

Laxmanrao Kirloskar Road
Khadki
Pune, 411003
India
Tel: +91 20 25810341
Fax: +91 20 25813208
Web: www.koel.co.in

Kirloskar Group is counted among India's largest multi-products, multi-location diversified engineering conglomerates with annual sales of US \$1.6 billion. Kirloskar Oil Engines Ltd. was incorporated in 1946, and is the flagship company of the Kirloskar Group. Today KOEL is an acknowledged leader in the manufacturing of diesel engines, agricultural pump sets and 'Kirloskar Green' generating sets. Company has state-of-the-art manufacturing units in India that offers world-class products. KOEL has a sizable presence in international markets, with offices in Dubai, South Africa and Kenya and representatives in Nigeria. KOEL also has a strong distribution network throughout the Middle East and Africa.

Agents:

Algeria - Sarl Pro Pompes
Bahrain - M.H. Al Mahroos BSC
Egypt - Egyptian Engineering & Trading Co.
Kuwait - Boodai Trading Co.
Lebanon - HHM Machinery Est.
Morocco - HIB Agricole
Oman - Kala International LLC
Qatar - Boodai Trading Co. Ltd.
Saudi Arabia - Abdullah Hashim Co. Ltd.
United Arab Emirates - Al Shirawi Enterprises LLC

KoCoS Messtechnik AG

Suedring 42, Korbach
34497
Germany
Tel: +49 5631 95960
Fax: +49 5631 959616
Web: www.kocos.com
E-mail: info@kocos.com

KoCoS Messtechnik AG has over 25 years experience in developing and manufacturing measuring and test systems for equipment in electricity supply systems: digital fault recorders, relay test systems, circuit breaker test systems, high-precision ohm meters, power sources, meter test systems and power quality measuring systems - MADE IN GERMANY.

Agents:

Bahrain - KoCoS Middle East

Kohler Power Systems

Kristallaan 1
Zevenbergen, 4761 ZC
Netherlands
Tel: +31 168 331630
Web: www.kohlerpower.com
E-mail: powersystems.emea@kohler.com

For every aspect of your critical load requirements, Kohler has engineered the product: EPA-compliant generator sets from 5 to 3250kW, a full line of automatic transfer switches, customizable paralleling switchgear, controls that can manage a multitude of power systems applications, along with wireless and Web-enabled remote PC power system monitoring.

Agents:

Saudi Arabia - A.Abuanyyan Trading Corporation



KOHLER SDMO

270 Rue de Kererven, Guipavas
29490, France
Tel: +33 2 98414141
Fax: +33 2 98416307
Web: www.sdmo.com/en

KOHLER SDMO is today the 2nd biggest player worldwide in the generating set market. The company designs, manufactures and installs generating sets from 1 to 3300 kVA for its standard range of products, thanks to its high-performance production plant and Research & Development Unit. Based in Brest, France, KOHLER SDMO has three plants extending over more than 31,000 m2 excluding logistics.

Agents:

United Arab Emirates - KOHLER SDMO
MIDDLE EAST

Layer Electronics S.r.l.

S.P. Km 5, 3 C/da S. Cusumano
Trapani, 91100
Italy
Tel: +39 0923 562794
Fax: +39 0923 567880
Web: www.layer.it
E-mail: layer@layer.it

Layer Electronics is an Italian leading company producing industrial AC&DC UPS, frequency converters, stabilizers, solar and wind inverters, charge regulators, cathodic protection power supplies, DC/DC converters and anything else, which you may need. Your Industrial partner since 1967. Made in Italy: All Layer products are designed and manufactured in Trapani - Sicily.

Leroy-Somer Electric Power Generation

Boulevard Marcellin Leroy - CS 10015
Angoulême Cedex 9, 16915
France
Tel: +33 5 45644564
Fax: +33 5 45644504
Web: www.leroy-somer.com/epg
E-mail: contact.epg@leroy-somer.com

Leroy-Somer, a business of the Nidec Group, is the world leader in low and medium voltage alternators. We specialize in high-quality, reliable products that combine long-lasting performance and reduced lifetime costs. We serve all industries and provide a complete range of solutions. Get in touch!

Agents:

United Arab Emirates - Leroy-Somer Electric Power Generation

**LG Electronics Gulf FZE**

36th Floor, Shatha Tower,
Road # 82, Al Sofouh 2nd,
TECOM, Dubai Media City
Dubai
United Arab Emirates
Web: www.lg.com/ae
www.lg.com/ae_ar

LG Electronics Middle East & Africa is the regional headquarters for LG Electronics based in Dubai that oversees operations in 23 countries comprised of 12 subsidiaries, 11 branch offices & 3 manufacturing facilities. LG's world-leading products are an investment for the future that are made up of 4 forward-looking business units - Home Entertainment, Mobile Communications, Home Appliance & Air Solution & Vehicle Components. For more information about LG Electronics, please visit www.LGnewsroom.com.

Agents:

Bahrain - AJM Kooheji and Sons
Kuwait - Al Babbain Air Conditioning & Refrigeration Co.
Oman - ASPIRE
Oman - Oman Gulf Enterprise
Qatar - LG Qatar Office
Qatar - Video Home
United Arab Emirates - Al Yousuf Electronics
United Arab Emirates - District Cooling Company
United Arab Emirates - Fortune International Trading LLC
United Arab Emirates - LG Electronics Gulf FZE
United Arab Emirates - LG Electronics Middle East & Africa
United Arab Emirates - United Entraco Trading Company

**Lijan Insulation Contracting LLC**

PO Box 84801, Dubai
United Arab Emirates
Tel: +971 4 2674966
Fax: +971 4 2675477
Web: www.lijangroup.com
E-mail: lijan@eim.ae

Linz Electric S.p.A

Viale Del Lavoro, 30 - Arcole (Verona)
37040, Italy
Tel: +39 045 7639201
Fax: +39 045 7639202
Web: www.linzelectric.com
E-mail: info@linzelectric.com

Linz Electric S.p.A is an Italian industrial company specialized in the design, production and sale of alternators and rotating welders. Part of the Pedrollo Group of companies, Linz Electric has become one of the major players in the sector in just a few years, thanks to the original innovative solutions in energy transformation.

Lister Petter Ltd.

Unit 13-15, Waterwells Business Park
Quadrant Way, Hardwicke, Gloucester
GL2 2RN
United Kingdom
Tel: +44 1452 229990
Web: www.lister-petter.co.uk
www.lister-petter.com
E-mail: global@lister-petter.co.uk

Since 1867, Lister Petter has not only manufactured diesel engines, generating sets and parts but most importantly it has

continued to live and breathe quality, experience and rugged durability into every product. We do this by simply understanding and responding to customers needs and the particular requirements of different markets.

Agents:

Bahrain - Abbas Bilkeek & Son
Iraq - Nafithat Al-Sharq For General Contracting Company
Jordan - Yazoure Est. Engineering Mechanical
Agricultural
Kuwait - Al-Khonaini Gen. Trading & Contracting Co. WLL
Lebanon - Arison Sarl
Oman - Mohamed & Ahmed Alkhonji Lic
Oman - Moosa Abdul Rahman Hassan & Co. LLC
Palestine - Eng Moustafa Mourtaga & Sons Co.
Qatar - Al-Kholafi Trading Co.
United Arab Emirates - Al Masood - Power Engineering Division
United Arab Emirates - M.A.H.Y. Khooory & Co.
Yemen - Bahaj-Yemen

Lloyd Dynamo Werke GmbH

Hastedter Osterdeich 250, Bremen
28207
Germany
Tel: +49 421 45890
Fax: +49 421 4589260
Web: www.ldw.de
E-mail: sales@ldw.de

Newest technologies in combination with over 90 years of experience - that's the successful foundation on which the extraordinary quality of LDW's machines and drives is based. We do not manufacture standard machinery. Instead we develop specific solutions for asynchronous, synchronous and direct-current motors and generators for your individual needs.

Agents:

Bahrain - Electrical Machines Industries
Bahrain - Electrical Machines Industries (Saudi Arabia)
United Arab Emirates - Salwo Trading Ltd.
(Bahrain, Qatar, Saudi Arabia)
United Arab Emirates - TRIZAC Abu Dhabi Oilfield Supply and Services
United Arab Emirates - TRIZAC Abu Dhabi Oilfield Supply and Services (Oman)

LOVAG

C/o ETICS International
20-22 rue de Commerce, Brussels
1000
Belgium
Tel: +49 151 11628718
Web: www.lovag.net
E-mail: office@lovag.net

LOVAG (Low Voltage Agreement Group) consist of 7 European third party certification bodies, issuing LOVAG Certificates and LOVAG Mark Licences for LV industrial equipment, in compliance to IEC and EN-standard.

- ACAE, Italy
- ALPHA at VDE, Germany
- APPLUS+ Laboratories, Spain
- ASEFA, France
- IMQ, Italy
- Interlek Semko AB, Sweden
- SGS Cebec, Belgium

Agents:

United Arab Emirates - SGS Gulf Ltd.

Lovato Electric S.p.A.

Via Don Mazza, 12 Gorle (BG)
24020
Italy
Tel: +39 035 4282111
Fax: +39 035 4282400
Web: www.lovatoelectric.com
E-mail: info@lovatoelectric.com

Lovato Electric, Italian solid tradition with almost 90 years of on-going activity, is the leader in industrial controls, diesel gen-set, energy management product manufacturing

field for industry. The presence of Lovato Electric in the most important world markets is the result of the company's constant international strategy, which is now exporting its products in over 100 countries.

**Lucy Middle East FZE**

PO Box 17335, Jebel Ali, Dubai
United Arab Emirates
Tel: +971 4 8129999
Fax: +971 4 8129900
Web: www.lucyelectric.com
E-mail: salesme@lucyelectric.com

Experts in secondary distribution networks, working at the forefront of network automation. Our extensive project experience in some of the world's most innovative electricity markets, give us an in-depth understanding of the latest Smart Grid developments. From end-to-end automation systems to low-voltage monitoring.

Luvata Söderköping AB

Industrigatan 2B
Söderköping
61481, Sweden
Tel: +46 12119100
Fax: +46 12110101
Web: www.luvata.com
E-mail: luvata.soderkoping@luvata.com

Luvata is a world leader in metal solutions manufacturing and related engineering services. Luvata's solutions are used in industries such as renewable energy, power generation, automotive, medicine, air-conditioning, industrial refrigeration and consumer products. The continued success of the company is attributed to its longevity, technological excellence and strategy of building partnership with customers such as Siemens, Toyota, CERN and DWD International.

Mahindra Powerol - Mahindra & Mahindra Ltd.

Fes, Gate No 02
Akurli Road
Kandivali East, Mumbai
400101
India
Tel: +91 220 67483051
Web: www.mahindrapowerol.com
E-mail: shelke.krunal@mahindra.com

Mahindra group, US 16.2 bn dollar empire, tractor & multi-utility vehicles major in India forayed into the field of Power Generation in 2002. Today, Mahindra engines with the brand name Mahindra Powerol are powering over 270,000 Diesel generating sets in India & in global markets ranging from 5kVA to 500kVA. It offers several advantages like: fuel efficiency, minimal vibration and low noise levels apart from diesel generators, Powerol also deals in industrial engines across India & home inverters in selected markets. Mahindra Powerol products are presently available in over 20 Countries across Africa, Middle East & Asia.

Agents:

Bahrain - Al Thawadi Electrical & Mechanical Est.
Oman - Bin Salim Enterprises LLC
Qatar - Mannai Trading Co. WLL
Saudi Arabia - Intermodal Services of S.A. Trading & Contracting
United Arab Emirates - Al Rawahy Establishment LLC

**MAN Diesel & Turbo SE**

Stadbachstr 1
Augsburg
86153
Germany
Tel: +49 821 3220
Fax: +49 821 3223382
Web: www.mandieselturbo.com
E-mail: info-de@mandieselturbo.com

MAN Diesel & Turbo SE is the world's leading provider of large-bore diesel engines and turbomachinery for marine and stationary applications. It designs two-stroke and four-stroke engines, gas and steam turbines as well as compressors. The product range is rounded off by turbochargers, propellers, gas engines and chemical reactors. Customers receive worldwide after-sales services marketed under the MAN PrimeServ brand.

Agents:

Jordan - MAN Diesel & Turbo Jordan LLC
Saudi Arabia - MAN Diesel & Turbo Saudi Arabia LLC
United Arab Emirates - MAN Diesel & Turbo Middle East LLC

Mantrac Group

PO Box 1054
Km.28
Alex-Cairo Desert Road
Egypt
Tel: +20 3 4541000
Fax: +20 3 4481042
Web: www.mantracgroup.com
E-mail: info@mantracgroup.com

Mantrac Group is the authorized Caterpillar dealer, distributing and supporting Caterpillar construction machines, power systems and material-handling equipment in nine countries spread over three continents. With decades of experience as CAT suppliers, Mantrac provides customers with comprehensive solutions backed by technical know-how, experience and in-depth knowledge of their local markets.

Agents:

Egypt - Mantrac Egypt Ltd.
Iraq - Iratrac
United Arab Emirates - UNA Trading FZE

**Manumag SL**

Pgno. Las Norias
c/ Antonio Barriendos s/n
Muel
50450
Spain
Tel: +34 976 140606
Fax: +34 976 140607
Web: www.manumag.com
E-mail: export@manumag.com

Manumag is a Spanish factory that produces a vast range of low voltage transformers since 1979. Its products are distributed worldwide. The main target is to produce high quality at a competitive price.

Water & energy, for securing the future.



Irrigation techniques and water management
Generating sets & motor driven pumps
Internal transport and process in packing plants

www.we4growth.com / contact@we4growth.com

4 companies - 250 employees - 67 countries - 50M € of annual turnover

Rue des écoles - 47600 Calignac (Agen) - France - T: +33 (0)5 53 65 30 40



Experience



Reliability



Flexibility



Speed



Research & Development



Synergy



After-sales



Quality



www.ortea.com

DIGITAL VOLTAGE
STABILISERS

POWER
TRANSFORMERS

POWER FACTOR
CORRECTION
SYSTEMS

Marechal Electric

5 Avenue de Presles, Saint-Maurice
Cedex, 94417, France
Tel: +33 1 45116000
Fax: +33 1 45116060
Web: www.marechal.com/en
E-mail: contact@marechal.com

For over 60 years Marechal has been known for the safety, reliability and flexibility of its connector technology. We continue to innovate and offer the products to meet the highest requirements for heavy duty applications, ship to shore connections and ex. environments.

Agents:

United Arab Emirates - Technor Middle East DMCC

Marelli Motori S.p.A.

Via Sabbionara 1, Arzignano, Vicenza
36071, Italy
Tel: +39 0444 479711
Fax: +39 0444 479888
Web: www.marellimotori.com
E-mail: sales@marellimotori.com

Marelli Motori is a global leading designer and manufacturer of generators and electric motors. Our products are suitable for a variety of applications: power generation, industrial manufacturing, oil & gas, renewable energies (hydro), cogeneration and UPS, marine and navy.

**Mecc Alte UK Ltd.**

6 Lands End Way, Oakham, Rutland
LE15 6RF, United Kingdom
Tel: +44 1572 771160
Fax: +44 1572 771161
Web: www.meccalte.com
E-mail: steve.ohara@meccalte.co.uk

Mecc Alte is proud to be the largest independent producer of synchronous alternators. Quite simply, we manufacture alternators through 'made for manufacturing' product designs from 1kVA through to 5000kVA. Operating in the electromechanical sector, we produce many types of special rotating machines, to cover a highly diverse range of applications. We've been totally independent since 1947 and that means we don't have to keep looking over our shoulder. We're free to do what we think is best for our customers.... every hour of every day..

**Megger Ltd.**

Millennium Tower
Office No.142, Bldg. No.205
Road 2803, King Mohammed IV
Avenue, Block No.428 Seef Area
Bahrain
Tel: +973 17740620
Web: www.megger.com/me
E-mail: mesales@megger.com

The Megger product range includes some of the latest developments in electrical safety testing, cable fault location, protection testing, circuit breaker testing, earth transformer and battery testing, power quality analysis and insulation diagnostics. For over 100 years, Megger has been helping electrical utilities to operate safely, efficiently and reliably.

Metal Deploye Resistor

1 Route de Semur, Montbard
21500, France
Tel: +33 3 80895858
Web: www.mdresistor.com
E-mail: info@mdresistor.com

With a know-how developed since 1938 and a continuous approach of quality, innovation and customer satisfaction, Metal Deploye Resistor is a foremost industrial power resistors manufacturer: Neutral earthing resistors, Filter resistors, Load bank resistors, Braking resistors. MD Resistor offers both standard and custom designed resistors for any application.

Mets Energy

PO Box 113/7354
Choueifat - Bchamoun Crossroad
Beirut, 1103 2170, Lebanon
Tel: +961 5 801401
Fax: +961 5 801337
Web: www.metsenergy.com
E-mail: info@metsenergy.com,
sales@metsenergy.com

**MHPS Dongfang Boiler Co., Ltd**

No. 1267, Chenggong Road
Jiaxing City, Zhejiang Province
China
Tel: +86 573 82625133
Fax: +86 573 82625130
Web: www.mhdb.com.cn
E-mail: songyanjun@mhdb.com.cn

MHDB is a sino-foreign joint venture established by DBC, MHPS and ITC. MHDB offers Heat Recovery Steam Generator (HRSG) with advanced technology. As a professional HRSG supplier with designing and manufacturing, MHDB is the unique HRSG base of DBC/DEC, as well as the manufacturing base of MHPS.

Middle East Specialized Cables

PO Box 585
Second Industrial Area Phase 3
Riyadh, 11383
Saudi Arabia
Tel: +966 1 2650555
Fax: +966 1 2650614
Web: www.mescables.com
E-mail: sales@mescables.com

Agents:

Bahrain - Al Mosawi Trading and Electrical Contracting Co.
Kuwait - Reem Al Kuwait
Oman - Sami Abdul Aziz Jaffer Co.
Qatar - KBF Trading and Contracting Co.
United Arab Emirates - General Trading Group

**Mohammad Al-Ojaimi Contracting Est.**

PO Box 1259
Dammam
31431
Saudi Arabia
Tel: +966 13 8221800
Fax: +966 13 8223228
Web: www.alojaimi.com
E-mail: info@alojaimi.com

**Mosdorfer GmbH**

Mosdorfergasse 1, Weiz, 8160, Austria
Tel: +43 3172 25050
Fax: +43 3172 250529
Web: www.mosdorfer.com
E-mail: office@mosdorfer.com

Mosdorfer specializes in fittings and damping systems for high-voltage overhead transmission lines. More than 1,000 projects worldwide with numerous references in the Middle East are obvious sign of international competence as global supplier. The product portfolio includes string fittings, fittings for OPGW, OPPC, ADSS, damping systems, insulators, end fittings as well as fittings for high temperature conductors.

Motorenfabrik Hatz GmbH & Co. KG

Ernst-Hatz Strasse 16, Ruhstorf a.d. Rott
94099, Germany
Tel: +49 8531 3190
Fax: +49 8531 319418
Web: www.hatz-diesel.com
E-mail: marketing@hatz-diesel.de

Hatz is a specialist for industrial diesel engines with up to 56kW of power and systems based on combustion engines like generating sets and pumps. Hatz develops and produces generating sets with an output of 2 to several hundred kVA including smart-grid systems and other customized power solutions.

Agents:

Bahrain - Gulf Equipment & Technology
Egypt - Market Leaders
Jordan - Al Ghanem Trading & Contracting Co.
Oman - Inma Co. Oman LLC
Qatar - Inma Co. Qatar LLC
Saudi Arabia - Electrical Work & Maintenance (Motorenfabrik)
United Arab Emirates - Inma Gulf Development & Construction LLC (Hatz)

MOTORTECH GmbH

Hogrevestr. 21-23, Celle, 29223, Germany
Tel: +49 5141 93990
Fax: +49 5141 939999
Web: www.motortech.de
E-mail: motortech@motortech.de

MOTORTECH develops and manufactures ignition components, air fuel ratio controllers engine management systems and other accessories for stationery gas engines.

MTU Friedrichshafen GmbH

Maybachplatz 1, Friedrichshafen
88040, Germany
Tel: +49 7541 900
Fax: +49 7541 905000
Web: www.mtu-online.com
E-mail: info@mtu-online.com

National Instruments

11500 N Mopac Expwy, Austin
Texas, 78759-3504, USA
Tel: +1 512 6830100
Fax: +1 512 6835794
Web: www.ni.com

National Instruments is a provider of automated test, control and monitoring equipment and graphical system design with a broad focus on the energy, oil and gas, and condition monitoring sectors. NI has established its presence in Arabia in 2004 along with offices in Lebanon, Egypt, Saudi Arabia and Turkey.

Agents:

Lebanon - National Instruments Lebanon SARL

Netcontrol

Unit 4E
Bramhall Moor Technology Park
Pepper Road, Hazel Grove, SK7 5BW
United Kingdom
Tel: +44 161 4842600
Fax: +44 161 4842601
Web: www.netcontrol.com
E-mail: mk-group@netcontrol.com

Netcontrol provides energy network automation solutions for utility communication, distribution automation, substation automation, and control centres. Netcontrol has a strong portfolio of products and services for the electricity transmission and distribution sector, power companies and energy intensive industry.

Agents:

United Arab Emirates - Autochim Systems Abu Dhabi

New CTA S.r.l.

Vico II della Quercia, 4, Napoli
80134, Italy
Tel: +39 081 7100925
Fax: +39 081 7100897
Web: www.newcta.com
E-mail: newcta@newcta.com

New CTA is an Italian company that designs and manufactures low-voltage transformers since 1986. Our production consists of transformers, auto-transformers, ballast, cast resin for different fields: industrial, civil, photovoltaic, lift, naval, medical, panel, starting motor. We have obtained quality certification ISO 9001: 2008 and we also have Saudi Aramco Registration Number.

Novoflex Marketing Pvt. Ltd.

'Raikva' - 5th Floor, Unit-6
3A, Ram Mohan Mullick Garden Lane
Kolkata, 700010, India
Tel: +91 33 23720088
Web: www.novoflex.in
E-mail: sales@novoflex.co.in,
novoflexcal@vsnl.net

Novoflex is an ISO 9001:2008 certified growth oriented, state-of-the-art company known for its quality products, engineering expertise and manufacturing capabilities. Novoflex has a wide variety of products ranging from cable binding, securing and fixing systems, cable identification systems. Products are primarily designed to make assembly more efficient and cost effective by reducing labor and promoting easy interchangeability for maintenance and repair.

**OMICRON Electronics Middle East**

Almoayyed Tower, 39th Floor
Office 3901/3902, Bldg 2504
Road 2832, Block 0428
Seef District, Manama, Bahrain
Tel: +973 1711 6400
Fax: +973 1711 6401
Web: www.omicronenergy.com
E-mail: diane.kibart@omicronenergy.com

OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. The application of OMICRON products allows users to confidently assess the condition of their primary and secondary equipment. Offered services include consulting, commissioning, testing, diagnosis and training making the product range complete.

One Electrical Ltd.

Bankfield Road, Tyldesley
Manchester, M29 8QH
United Kingdom
Tel: +44 161 7032201
Fax: +44 161 7039939
Web: www.oneelectrical.com
E-mail: sales@oneelectrical.com

Established for over 15 years, One Electrical Ltd are a UK based premium brand of electrical wiring accessories & lighting. The brand is a well known name across the global industry and more recent growth can be put down to the specialisation in LED lighting and a huge growth in export demand.

Agents:

United Arab Emirates - MSS Electrical LLC

Oriental Copper Co. Ltd.

27th Fl. Bangkok Insurance
Y.W.C.A. Building
25 South Sathon Road
Thungmahamek, Sathon
Bangkok, 10120, Thailand
Tel: +66 2 6975100
Fax: +66 2 6975199
Web: www.orientalcopper.com
E-mail: sale@orientalcopper.com

**ORTEA S.p.A.**

Via dei Chiosi
21 Cavenago di Brianza (MB)
20873, Italy
Tel: +39 02 95917800
Fax: +39 02 95917801
Web: www.ortea.it
E-mail: ortea@ortea.com

Founded in 1969, ORTEA is now a leading company in manufacturing and engineering voltage stabilisers, magnetic components, automatic power factor correction systems and electrical equipments. Beside standard production, ORTEA is able to be extremely flexible in developing and manufacturing special equipment according to user's specifications.

Panasonic Marketing Middle East and Africa FZE

PO Box 17985
Jebel Ali Free Zone South
United Arab Emirates
Tel: +971 4 8862142
Fax: +971 4 8865155
Web: www.panasonic.ae
E-mail: customercare@ae.panasonic.com

Panasonic Marketing Middle East and Africa FZE (PMAAF) is the regional headquarters, handling all functions related to sales and marketing, supply chain and customer service solutions and advertising. The vision of PMAAF is to be the No 1 Customer-centric Company and No 1 Customer-preferred brand in the Middle East and Africa region.

Agents:

United Arab Emirates - Advance Est. For Lighting & Electricals

**Perkins Engines Co. Ltd.**

Frank Perkins Way, Peterborough
Cambridgeshire, PE1 5FQ
United Kingdom
Tel: +44 1733 583000
Fax: +44 1733 582240
Web: www.perkins.com

One of the world's leading supplier of off-highway diesel and gas engines in the 4 - 2000kW market, Perkins key strength is its ability to tailor engines to meet customer's precise requirements, which is why its power solutions are trusted by over 1000 leading manufactures around the world.

Agents:

United Arab Emirates - Power Systems Gulf LLC

Phenix Technologies Inc.

75, Speicher Drive, Accident
Maryland, 21520, USA
Tel: +1 301 7468118
Fax: +1 301 8955570
Web: www.phenixtech.com
E-mail: info@phenixtech.com

Phenix Technologies is a manufacturer and global supplier of ultramodern high voltage, high current, high power test systems and components for testing cables, circuit breakers, generators, GIS/switchgear, insulation materials, motors, reclosers, transformers, utility worker's rubber goods/protective gear including mobile field test sets, plus 40 years' experience, and ISO9001 quality certification.

Agents:

United Arab Emirates - ARABCAL

Phoenix Contact Middle East FZ LLC

PO Box 345002
Dubai International Academic City
Office No. 301, 3rd Floor, Block No.10
Dubai, United Arab Emirates
Tel: +971 4 4370324
Fax: +971 4 4370323
Web: www.phoenixcontact.ae
E-mail: info-me@phoenixcontact.com

Phoenix Contact, founded in 1923, is a leading manufacturer of electrical connection, electronics interface and industrial automation technology with headquarters in Germany. Our worldwide distribution is effected via a global network of 50 own subsidiaries and approximately 30 representations in Europe and Overseas.

For agents and suppliers please check our website for more details:
www.phoenixcontact.ae/channel_partners

Plumettaz SA

Route de la Gribannaz 7, Bex
1880, Switzerland
Tel: +41 24 4630606
Fax: +41 24 4630607
Web: www.plumettaz.com

Pollmann Elektrotechnik GmbH

Mittelweg 98, Oelde, 59302
Germany
Tel: +49 2522 93210
Fax: +49 2522 1000
Web: www.pollmann-elektrotechnik.de
E-mail: info@pollmann-elektrotechnik.de

Pollmann Elektrotechnik is specialised in busbars for low-voltage switchboards. Furthermore we produce main terminals,

connectors, earthing material and fixing devices. We are able to manufacture within our product range nearly every special type according to our customers' needs and their various applications.

**Power Engineering (I) Pvt. Ltd.**

58/A, Tuem Industrial Estate
Tuem, Pernem, Goa, 403512, India
Tel: +91 832 7161000
Web: www.paikane.com
E-mail: exports@paikane.com

Pai Kane is one of the leading manufacturers of diesel & gas generators from 10 - 2500 kVA, LT & HT Panels, CSS, Transformers, UPS, Voltage Stabilisers. Paikane's dealer network is spread across 63 countries and is powered by Yanmar, Deutz, Volvo Penta, MAN, Escorts, Volvo Eicher including spare parts.

Agents:

United Arab Emirates - Power Engineering (I) Pvt. Ltd. Marketing Office - Sharjah

Power Testing Ltd.

33 Hanbury Road
Widford Industrial Estate
Chelmsford, Essex, CM1 3AE
United Kingdom
Tel: +44 1245 266800
Fax: +44 1245 265229
Web: www.powertesting.co.uk
E-mail: info@powertesting.co.uk

Founded in 1966, PTL specialize in LV and MV commercial industry, offering solutions to testing, maintenance, installation and reactive works.

It is our aim to offer our excellent service to new clients in the UAE and Middle East assisting in their economic growth and ensuring safety of supplies.

Agents:

United Arab Emirates - Power Testing LLC

Powersource Projects Ltd.

PowerPro House
Capital Park Industrial Estate
Combe Lane, Wormley, Surrey
GU8 5TJ, United Kingdom
Tel: +44 1428 684980
Fax: +44 1428 687799
Web: www.power-source-pro.co.uk
E-mail: sales@power-source-pro.co.uk

Well established UK exporter specialising in the production of our own PowerPro Diesel Generators using Perkins Engines, Stamford/Meccalte alternators and Deep Sea controllers. In house aftersales support offering genuine parts for multiple manufacturers in addition to our own PowerPro units with global shipping and support. PowerPro - Power, Delivered.

Powertech Switchgear Industries FZE

PO Box 2335, Ajman Freezone
Ajman, United Arab Emirates
Tel: +971 6 7472274
Fax: +971 6 7472551
Web: www.powertechswitchgear.com
E-mail: info@ptswhgear.com

Powertech Switchgear Industries FZE is a panel builder for ABB ArTu-K Systems and authorized value provider for ABB VFDs in UAE. Our panels are fully type tested by ASTA/LOVAG and have ADDC and AADC approvals up to 3200A and SEWA approval up to 2500A. We also fulfil DEWA, FEWA and KAHRAMAA regulations.

Agents:

United Arab Emirates - Powertech Electrical
Distribution Boards Manufacturing LLC

PR Middle East FZE

PO Box 262478
1706 JAFZA View 18
Jebel Ali Free Zone - South 1
Dubai, United Arab Emirates
Tel: +971 4 8865275
Fax: +971 4 8865276
Web: www.pramac.com
www.lifter.it
E-mail: info.ae@pramac.com

Pramac develops and manufactures a wide range of power generation equipment from 1 kVA to 3.360 kVA with Perkins, Volvo, MTU, Deutz, Cummins, Doosan, FPT, Iveco and Yanmar Engines and materials handling equipment. Pramac uses its global network to supply these products to markets throughout the world.

Rittal Middle East FZE

PO Box 17599, Dubai
United Arab Emirates
Tel: +971 4 3416855
Fax: +971 4 3416856
Web: www.rittal-middle-east.com
E-mail: info@rittal-middle-east.com

Founded in 1999, Rittal Middle East FZE - a subsidiary of Rittal GmbH & Co. KG. composing an active team with over 30 professionals addressing the Middle East market, with headquarters based in Herborn, Germany. Rittal Middle East is one of the recognized innovative suppliers for the industrial and electrical sectors as well as a key player in the networking infrastructure & datacentre arena. A perfectly coordinated platform with a vast product range covering industrial/electrical enclosures, system climate control and power distribution suitable for oil & gas, energy, industries, construction etc. Ri4Power Form 2-4: New structured solution for reliable low-voltage switchgear system compatible with international players (breakers), type tested to 5500A as per the worldwide standard, IEC60439-1 and IEC61439-1/2.

Rollo Power Solutions

Unit 18 Garanor Way
Portbury, Bristol, BS20 7XE
United Kingdom
Tel: +44 1275 377800
Fax: +44 1275 377877
Web: www.rollopowersolutions.co.uk
E-mail: bristol@rollopowersolutions.co.uk

Rollo Power Solutions are a one stop shop for parts - supplying genuine OEM parts for all makes and models of engines and generators, including engine components, filters, oils, coolants, batteries and other essential maintenance parts. Many lines are available for immediate dispatch and all come with standard OEM warranty.

Rolls-Royce PLC

The Icen Centre
Warwick Technology Park
Warwick
CV34 6DA
United Kingdom
Tel: +44 1926 307700
Fax: +44 1926 307987
Web: www.rolls-royce.com

Rolls-Royce is a leading supplier of low emission, high efficient aeroderivative gas turbine power generation packages from 3.8 - 66mw and Bergen reciprocating engines up to 9.4mw. All products are supported by a world class service organisation.

Rotork PLC

Brassmill Lane, Bath, BA1 3JQ, UK
Tel: +44 1225 733200
Fax: +44 1225 333467
Web: www.rotork.com
E-mail: information@rotork.com

Rotork is the world's leading manufacturer of electric, pneumatic & hydraulic valve actuators and control systems, valve gearboxes, valve accessories and precision control instruments supported by the Rotork worldwide service network.

Agents:

United Arab Emirates - Rotork Middle East FZE

Rove Electric

PO Box 33647, Dubai
United Arab Emirates
Tel: +971 4 2679123
Fax: +971 4 2679285
Web: www.roveelectric.com
E-mail: info@roveelectric.com

S.I.C.E.S. S.r.l.

Via Molinello 8B
Jerago Con Orago (VA), 21040, Italy
Tel: +39 0331 212941
Fax: +39 0331 216102
Web: www.sices.eu
E-mail: sales@sices.eu

SICES S.r.l. is an Italian company with more than 35 years of experience in the field of design, supply and start-up of electronic control panels & electronic controllers for generator sets equipped with diesel, gas or vegetable oil engines. SICES provides the ideal control module for AMF, parallel and cogeneration gen sets.

SAB, Standard Aggregatebau Evers GmbH & Co. KG

Oststrasse 11, Norderstedt
22844, Germany
Tel: +49 40 52250110
Fax: +49 40 522501144
Web: www.generatingset.com
E-mail: info@generatingset.com

Reputable German manufacturer of diesel-driven generating sets from 50 to 8000 kVA in stationary, transportable or mobile executions for standby, peak load or base load applications world-wide. Main competencies are planning, designing, manufacturing, installation and servicing of global plant constructions under consideration of individual customer and project requirements.

Saft SA

12 Rue Sadi Carnot, Bagnolet
93170, France
Tel: +33 1 49931918
Fax: +33 1 49931950
Web: www.saftbatteries.com
E-mail: webmaster@saftbatteries.com

SAFT manufactures nickel-based stationary battery systems to provide reliable power. From original pocket plate to our new lithium-ion batteries, we provide low maintenance and effective energy storage to assure security of supply and total autonomy in several applications.

Agents:

Iran - Dooman Co. Ltd.
United Arab Emirates - Al Hamra

Sakr Power Systems S.A.L

Halat - Kartaba Road, Lebanon
Tel: +961 9 442000
Fax: +961 9 445444
Web: www.sakr.com
E-mail: lebanon@sakr.com
sales@sakr.com

Founded in 1972 in Lebanon, Sakr Power Group is a group of companies specialized in power generation, with a scope of services covering the manufacturing, sales and rental of power generating sets and related electrical equipment, and the implementation of turnkey power projects. We are present around the world through our branches and our distributors.

Agents:

United Arab Emirates - Sakr Power Generation FZE

Scania CV AB

Vagnmakarvägen 1
Södertälje
15187
Sweden
Tel: +46 8 55381000
Fax: +46 8 55381037
Web: www.scania.com

Agents:

Bahrain - National Establishment of Technical & Trade Services (NETS)
Iraq - Qanadeel Al Rafidain Auto Trading Company Ltd.
Kuwait - ICTCO Industrial Construction & Trading Co. WLL
Oman - SATA LLC
Saudi Arabia - General Contracting Company - Olayan
Saudi Arabia - Mohammed A Al-Faddaghi & Partners
United Arab Emirates - Al Shirawi Enterprises LLC
United Arab Emirates - Bin Brook Motors & Equipment LLC

Sergi France

PO Box 90
186 Avenue du Général de Gaulle
Achères, 78260
France
Tel: +33 1 39224840
Fax: +33 1 39221111
Web: www.sergi-france.com
E-mail: marketing@sergi-france.com

Sergi France was created in 1955 to design and manufacture oil-filled transformer fire extinguishing systems. Since then, the company has specialised in the transformer fire protection business by developing the Transformer Protector (TP). During a transformer short circuit, the TP is activated within milliseconds by the first dynamic pressure peak of the shock wave, before static pressure increases thus avoiding transformer explosions.

Agents:

Iran - UBUN Best Parts Engineering Company Ltd.
Oman - National Factory for Security and Safety Equipment LLC
Qatar - KBF Trading & Contracting Co.
United Arab Emirates - Ageco International FZE
United Arab Emirates - FALCOR

SES SMART Energy Solutions FZCO

PO Box 18089
South 1, Jebel Ali Free Zone
Dubai
United Arab Emirates
Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

SES is leading power provider serving temporary and medium term energy needs across the Middle East, Africa and South East Asia region. SES offers fast turnkey power rental solutions to help our customers maximise on productivity and profitability, while minimizing on downtime and resources with highest safety standards.

Agents:

Iraq - SES SMART Energy Solutions
Oman - SES SMART Energy Solutions
Qatar - SES SMART Energy Solutions
Saudi Arabia - SES SMART Energy Solutions
Yemen - SES SMART Energy Solutions

Shawcor

Boschstraße 17, Rheinbach
53359, Germany
Tel: +49 22 2690470
Fax: +49 22 269047340
Web: www.shawcor.com
E-mail: info-de@dsgcanusa.com

Sicame Group

1 Avenue Basile Lachaud
Arnac Pompadour, 19230, France
Tel: +33 5 55738900
Fax: +33 5 55985379
Web: www.sicame.com
E-mail: info@sicame.com

An Industrial Group, a reference in its business sector, and based upon strong team spirit and social values providing products for safe distribution of electrical energy to people worldwide. Sicame is specialised in products and services related to transmission and distribution of electrical energy as well as safety and industrial applications.

Agents:

United Arab Emirates - Sicame Dubai

SIEMENS

Barrio de Oikia, 44
ZUMAIA - Guipúzcoa, 20759, Spain
Tel: +34 943 865200
Fax: +34 943 865210
Web: www.siemens.com
E-mail: support.energy@siemens.com

Engine, Gensets, Energy Solutions, Design supply and manufacturing for Cogeneration, Generation, Bioenergy from Landfill, Sewage, Biodigestion and Biomass Marine Sectors.

Silicon Power Systems

Bhavati Society, Haydari Chowk
Nr. Rajkot Milk Dairy, Rajkot
360003, India
Tel: +91 281 2387053
Web: www.spsindia.biz
E-mail: sales@spsindia.biz

SPS is world leading manufacturer of AVR (Alternator Voltage Regulator) and battery charger for all types, Brushless, Brush, PMG and synchronising generators from 1kVA to 3000kVA with capabilities to design customised AVR for our clients. Battery Charges are of 12/24 volts.

Specialist Services

PO Box 2752
Jebel Ali Industrial Area #2, Dubai
United Arab Emirates
Tel: +971 4 8164500
Fax: +971 4 8164501
Web: www.specserve.com
E-mail: sales@specserve.com

Specialist Services is a global supplier of modular buildings and packaging solutions for people and equipment in Oil & Gas and Utility industries. Our electrical power skids range from basic off the shelf design for sound attenuation containers to full EPIC transformer and switchgear packages including VSD/VFD shelter, gensets etc.

Super Impex

305 Adhyaru Industrial Estate
Sun Mill Compound, Lower Parel
Mumbai, 400013, India
Tel: +91 22 61485400
Fax: +91 22 66341933
Web: www.superimpex.com
E-mail: info@superimpex.com

ISO, UL approved exporter of electrical accessories, earthing and lightning protection, cable glands accessories, flexible conduit and

fittings, cable lugs, bimetallic lugs, grounding rods, cable accessories, panel board and switchgear accessories, overhead line accessories, bimetallic lugs, cable terminals, pole mounted cutout, fuses, pvc conduit fittings

**TECNALIA**

Parque Científico y Tecnológico de Bizkaia
c/Geldo s/n Edificio 700
Derio (Bizkaia)
48160
Spain
Tel: +34 946430850
Web: www.tecnalia.com
E-mail: serviciostecnologicos@tecnalia.com

TECNALIA is a private research institute and third-party testing laboratory working in the fields of energy, construction, industry, transport, ICTs and health. With 1400 employees and 110 M turnover, we are one of the top-5 private institutes in Europe. TECNALIA Electrical Laboratories are widely recognized by the utilities in the Middle East

**Teksan Generator**

Yenidogan Mh. Edebalı Cd. No: 12
Sancaktepe, Istanbul
34791
Turkey
Tel: +90 216 4448576
Fax: +90 216 3126909
Web: www.teksanjenenerator.com
E-mail: deniz.ar@teksanjenenerator.com.tr

Teksan, a registered supplier for top ENR companies, is a leading engineering company that manufactures power solutions such as diesel, natural-biogas gensets, lighting towers, portable gensets, cogeneration/trigeneration and hybrid power systems for Telco, heavy construction and infrastructure projects, industrial plants, retail chains, banks, hospitals, residences in more than 120 countries.

Agents:

Iraq - KM Company
Qatar - Qatari Canadian for Energy & Electrical Industries
Saudi Arabia - Abdul Latif Jameel Machinery
United Arab Emirates - Emirates Specialized Trading
Yemen - Alahslasi Corp. for Int'l trade

Thomas & Betts / A member of the ABB Group

PO Box 54567
Office 724, GWA West Wing
Dubai Airport Free Zone
Dubai
United Arab Emirates
Tel: +971 4 6091635
Fax: +971 4 6091636
Web: www.tnb.com
E-mail: enquiry@tnb.com

At Thomas & Betts, our focus is on improving your business performance by providing practical, reliable electrical products and services that solve everyday problems in the areas of wire & cable management, cable protection, power connection & control and safety technology.



Top Screw Metal Corp.

No.78, Lane 415, Sec. 2
Tay Ho Road, Ku Yi Li, Chang Hwa
50085, Taiwan
Tel: +886 4 7237159
Fax: +886 4 7246640
Web: www.topscrew.com.tw
E-mail: cherry_chou@topscrew.com.tw

Top Screw has always been a pioneer in the development of fasteners, such as plus nut, blind rivet nuts, clinching parts, self tapping threaded insert, customized fasteners in Taiwan. For more than 30 years, Top Screw has always believed and practiced "PRACTICALITY, RESPONSIVENESS and UNLIMITED IMPROVEMENT" offering quality and cost effective fasteners supporting customers in global market.

Transfer Multisort Elektronik

Sp. Z o.o.
PO Box 2071, ul. Ustronna 41
Łódź, 93350, Poland
Tel: +48 42 2925299
Fax: +48 42 6455470
Web: www.tme.eu
E-mail: mena@tme24.com

TME is a leading European distributor of electronic components available globally. Our family company has been serving its customers for over 27 years. TME's offer corresponds with various customers' needs from independent client supply to shops, manufacturers and services. TME's advantages: quick deliveries, reasonable prices and high stock levels.

Tripp Lite

1111 West 35th Street, Chicago
IL, 60609, USA
Tel: +1 733 8691111
Fax: +1 773 8691329
Web: www.tripplite.com
E-mail: international@tripplite.com

Over 90 years of manufacturing excellence. Tripp Lite is a leading manufacturer of products that power, connect and protect computers and other electronics. Founded in 1922, it is best known for its uninterruptible power supply (UPS) systems and ISOBAR®. Surge Suppressors (with over 18 million sold).

Agents:

United Arab Emirates - Tripp Lite Middle East

Udeyraj Electricals Pvt. Ltd.

212-A, Hind Saurashtra Indl. Est.
85-86, M.V. Road, Marol Naka
Mumbai, 400059, India
Tel: +91 22 66916181/2
Fax: +91 22 66942787
Web: www.udeyraj.com
E-mail: info@udeyraj.com

We are manufacturers cum exporters of testing equipments like hipots, oil BDV, TTR meters, primary current injectors, relay testers, IR testers, contact resistance testers, CTPT testers, tan delta testers etc.

UL

PO Box 345831
Nucleotide Laboratory Complex
Dubai Science Park, Al Barsha
Dubai, United Arab Emirates
Tel: +971 52 6414011
Web: www.ul.com
E-mail: jomy.joseph@ul.com
UL is a premier global independent safety

science company that has championed progress for 120 years. Its more than 10,000 professionals are guided by the UL mission to promote safe working and living environments for all people. UL uses research and standards to continually advance and meet ever-evolving safety needs. We partner with businesses, manufacturers, trade associations and international regulatory authorities to bring solutions to a more complex global supply chain. For more information about our certification, testing, inspection, advisory and education services, visit www.ul.com



Valdiniox

B° El Campo S/N - CP 39192
San Miguel de Meruelo
Cantabria
Spain
Tel: +34 942677135
Web: www.valdinox.com
E-mail: export@valdinox.com

VALDINOX is among the most experienced basket cable trays manufacturers in Europe, and a worldwide-recognised manufacturer for the EASYCONNECT basket cable trays system, patented in 2013.

EASYCONNECT is the unique integrated self-connecting system that has proven to be the most reliable, resistant and versatile ever, saving time and money, and extending lifespan of cable installations.

Visa S.p.A.

Via 1° Maggio 55
Fontanelle (TV)
31043
Italy
Tel: +39 04 225091
Fax: +39 04 22509350
Web: www.visa.it
E-mail: visa@visa.it

Visa S.p.A. is one of the world's leading gensets supplier, based in Italy, designing and manufacturing diesel gensets, from 9 to 3000 kVA, in standard or customized versions to meet your every need in a large variety of applications (telecommunications, construction and engineering industry, hospitals, data centers, etc.). With its network currently present in more than 80 countries in the world, it provides versatile, high-tech energy solutions which can be tailored to all situations, guaranteeing a highly operational flexibility and qualitative standards for which it has become a leader in the market for more than 50 years.



Volvo Penta

Gothenburg
40508
Sweden
Tel: +46 31 235460
Fax: +46 31 508187
Web: www.volvopenta.com
E-mail: info.volvopenta@volvo.com

Volvo Penta, with approximately 4,000 dealers in over 130 countries, is a world-leading and global manufacturer of engines and complete power systems for boats, vessels and industrial applications. The engine program

comprises diesel and gasoline engines with power outputs of between 10 and 900 hp. Volvo Penta is part of the Volvo Group, one of the world's leading manufacturers of heavy trucks, buses and construction equipment.

For dealer information, please visit the Dealer Locator at www.volvopenta.com

WAGO Middle East FZC

PO Box 120665
SAIF Zone, Q4-282
Sharjah
United Arab Emirates
Tel: +971 6 5579920
Fax: +971 6 5579921
Web: www.wago.ae
E-mail: info.uae@wago.com

WAGO is a family owned company headquartered in Minden, Germany that has been operating in the market independently for three generations and has become an international trend setting provider of electrical connection and automation technology. WAGO is the world leader in spring clamp technology having a workforce of 5600 around the globe.

Wahab Electric Supply Co. of Saudi Arabia Ltd.

PO Box 2389
First Industrial City Dammam
Dammam
31451
Saudi Arabia
Tel: +966 2 6512394
Fax: +966 2 6512664
Web: www.wescosa.com
E-mail: wescosa@wescosa.com



We4Growth

Rue Des Ecoles
Calignac
47600
France
Tel: +33 5 53658040
Fax: +33 5 53658873
Web: www.we4growth.com
E-mail: contact@we4growth.com

We4Growth is four companies to offer your activity the best growth. With more than 20 years of experience, We4Growth develops highly innovative and performing irrigation techniques and water management, generating sets and motor driven pumps and integral solutions for internal transport and process in packing plants.

Weichai Middle East FZE

PO Box 18698
Warehouse No. LA04
Near Round About 8, Jebel Ali Free Zone
Dubai
United Arab Emirates
Tel: +971 4 8810650
Fax: +971 4 8810651
Web: www.weichai.com
E-mail: amitdeshpande@weichai.com
zhonglei@weichai.com

We are a world class manufacturer of Diesel and Gas engines branded Deutz, Weichai, Baudouin & MAN used for Automotive, Industrial and Marine applications. We also produce Generator Sets rated from 10kW to 12000kW. Our products are supported with spare parts and warranty by Global Weichai Service network.

Agents:

Bahrain - National Establishment of Technical & Trade Services
Saudi Arabia - Advance Machinery EST.
United Arab Emirates - SunPower Gen FZCO

Whitelegg Machines Ltd.

19 Crompton Way, Manor Royal
Crawley, West Sussex
RH10 9QR
United Kingdom
Tel: +44 1293 526230
Fax: +44 1293 538910
Web: www.whitelegg.com
E-mail: info@whitelegg.com

XBK-KABEL Xaver Bechtold GmbH

Unterdorf 101
Rottweil
78628
Germany
Tel: +49 741 2540
Fax: +49 741 254112
Web: www.xbk-kabel.de
E-mail: info@xbk-kabel.de

XBK-KABEL your best connection since 1926, we have been manufacturing cable products of the highest quality standards. Our range of products: Power cables, Installation cables, PVC-sheathed cables, Industrial control cables, Rubber insulated industrial cables, Telecommunication lines, Silicone cables, Halogen free cables, Solar cables, Cables for wind farms, Special cables.

Yamuna Cable Accessories Pvt. Ltd.

3/101 Kaushalaya Park
Hauz Khas
New Delhi
110016
India
Tel: +91 11 43577777
Fax: +91 11 43577778
Web: www.yamunadensons.com
E-mail: enquiry@yamunadensons.com

Established in 1973, Yamuna Cable Accessories Pvt. Ltd. (YCAPL) is a leading designing/manufacturing/supplier for Power Cable jointing accessories and associated power distribution goods, through its 4 global plants and channel partners through 35 countries under "Densons" brand. Offering complete range in Resin Cast, Heat Shrink, Cold Shrink and Pre Moulded power cable jointing accessories upto 66 kV and Plug in and Elbow/Straight/T connectors for GIS and RMU's application. All products are qualified and type tested under qualifying standards in NABL approved labs such as CESI, CPRI, KEMA, etc. The companies strong R&D wing in house manufacturing of all key inputs, and strict qualification compliance inputs ensures high quality materials and solutions, batch on batch, year on year.

Agents:

United Arab Emirates - Al Yamuna Densons FZE

Zahid Tractors

PO Box 8928
Jeddah
21492
Saudi Arabia
Tel: +966 12 6671156
Fax: +966 12 6690727
Web: www.zahid.com
E-mail: info@zahid.com

Section Three: Agents/Subsidiaries

ALGERIA**Sarl Pro Pompes**

Rue Belssdi Aek
Khemis Milian
W.Ain-Defla, 44226
Tel: +213 27 664961
Fax: +213 27 664734
E-mail: sarlpropompes@
hotmail.fr

BAHRAIN**Abbas Bilkeek & Son**

PO Box 308
Sh. Salman Avenue
Manama
Tel: +973 17401555
Fax: +973 17401333
Web: www.bilkeek.com
E-mail: bilkeek@bilkeek.com.bh

AJM Kooheji and Sons

PO Box 74, Manama
Tel: +973 3 9944644
E-mail: sanjeevawasthi@
ajmkooheji.com

Al Mosawi Trading and Electrical Contracting Co.

PO Box 5373, Manama, 302
Tel: +973 17270000
Fax: +973 17261503
E-mail: almosawi@
batelco.com.bh

Al Thawadi Electrical & Mechanical Est.

PO Box 28372, East Riffa
Tel: +973 17 700114
Fax: +973 17 700998
Web: www.althawadigroup.com
E-mail: althawadisales@
batelco.com.bh

Electrical Machines Industries

PO Box 5696
Manama
Tel: +973 1 7830710
Fax: +973 1 7830709
E-mail: emib@batelco.com.bh

Gulf Equipment & Technology WLL

Bldg. 2555, Ave. 80
Al Estiglal Highway
Nuwaidrat, 646
Web: www.al-alawi.com
Email: get@al-alawi.com

KoCoS Middle East

PO Box 65453
Flat 36, Bldg 1046
Road 3019
Zinj, 330
Tel: +973 17 300768
Fax: +973 17 300768
Web: www.kocos.com
E-mail: info@me.kocos.com

M.H. Al Mahroos BSC

PO Box 65
Manama
Tel: +973 17408090
Fax: +973 17404323
Web: www.almahroos.com
E-mail: ajit@almahroos.com

National Establishment of Technical & Trade Services (NETS)

Lulu Road
Manama
Tel: +973 17 256882
Fax: +973 17 273849

National Establishment of Technical & Trade Services

PO Box 644, Building 128
Lulu Road (336)
Block 314
Manama
Tel: +973 17270783
Fax: +973 17273849
Web: www.engineer.bh
E-mail: fahad@engineer.bh

EGYPT**Eaton**

Building No.289
Apartment 4B 4th Floor
New Cairo 90th Street behind C
Tel: +20 12 23165911
E-mail: dinamahmoud@
eaton.com

Egyptian Engineering & Trading Co.

45, Champillion Street
Cairo
Tel: +20 2 25755229/2 5757636
Fax: +20 2 25755887/2
25787926
E-mail: eetco@link.net

International Projects & Consulting Co. - IPC

9 Mohammad Adly Kafafy St.
Heliopolis, 11361
Web: www.ipcmachinery.com/
IPC Machinery/Welcome
Email: samir.wahib@
ipcmachinery.com

Mantrac Egypt Ltd.

30 Lebanon St.
El Mohandesin
Cairo
Tel: +20 2 33004000
Fax: +20 2 33039648
Web: www.mantracegypt.com
E-mail: hmounir@
mantracegypt.com

Market Leaders

14 El Makrizi Str.
Manchiet El Bakry, Cairo, 11331
Tel: +20 22 4530763/4530917
Fax: +20 22 2587616
E-mail: mleaders2000@
yahoo.com

Orascom Trading SAE

120, 26th July Street
Agouza, Cairo
Tel: +20 2 334 52510
Fax: +20 2 334 73191
Web: www.orascom.com
E-mail: marianm@orascom.com

IRAN**Dooman Co. Ltd.**

6 Mahnaz Street
Vali-E-Asr Avenue
Tehran
1966784896
Tel: +98 21 26215216/17/18
Fax: +98 21 26215444
E-mail: info@doomanpower.com

UBUN Best Parts Engineering Company Ltd.

PO Box 41635-3534
Bardia Building
Takhti Str.
Rasht
Tel: +981 317 222144
Fax: +981 317 220471

IRAQ**Al-Ghodwa for Trading Agencies Co. Ltd.**

Baghdad, Karada, Arasat Al-Hindia
Dist. 929, St. 19, Bld. 81
Al-Ghodwa Group Bld.
Tel: +964 7901 918356
Web: www.alghodwagroup.com
Email: sales@alghodwagroup.com

Iratrac

Dist 923, St. 29, Bldg 76
University St. Jaderia, Baghdad
Tel: +964 1 7783783
Fax: +964 1 7786714
Web: www.iratrac.com
E-mail: idawood@iratrac.iq

KM Company

Karkuk Street
Opposite of Science College, Erbil
Tel: +964 750 4454027
E-mail: kq_teksan@yahoo.com

Nafithat Al-Sharq For General Contracting Company

Al Wahda Quarter
District No 904 No 56
Hse #1/16, Baghdad
Tel: +964 781 1111196
Fax: +964 770 0008000
E-mail: ahmedk@
orientgroupiraq.com

Qanadeel Al Rafidain Auto Trading Company Ltd.

Makhmour, 100m Intersection
Makhmour Road, Erbil
Tel: +964 7 508168888
Web: www.scania-iraq.com

SES SMART Energy Solutions

Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

JORDAN**Al Ghanem Trading & Contracting Co.**

PO Box 7109
Amman Commercial Complex
Omaya Street Al Abdali
Amman, 11118
Tel: +962 6 4395155
Fax: +962 6 4395663
Web: www.alghanemgroup.com
E-mail: m.naji@
alghanemgroup.com

Eaton

PO Box 211382, Khalda Main Street
Esbesuti Complex 2nd Floor
Amman, 11121
Tel: +962 6 5371429
Fax: +962 6 5515749
Web: www.eaton.eu
E-mail: ahmadalnour@eaton.com

MAN Diesel & Turbo Jordan LLC

Aqaba International Industrial
Estate, Aqaba, 77110
Tel: +962 3 2058444
E-mail: powersalesregion-
mena@mandieselturbo.com

Yazoure Group

PO Box 12067
Yazoure Centre Building
Madaba Street, Amman, 11141
Web: http://yazoure-est.com
Email: kramadan@yazoure-est.com

KUWAIT**Al Babtain Air Conditioning & Refrigeration Co.**

Al Ardiyah (Industrial area)
Block 2, Plot 172
Tel: +965 2 4347988-130/1
822666
E-mail: imad.rhayel@
albabtaingroup.com.kw

Al-Khonaini Gen. Trading & Contracting Co. WLL

PO Box 593, Safat, 13006
Tel: +965 4831955
Fax: +965 4842986
Web: www.alkhonaini.net
E-mail: akackw@qualitynet.net

Boodai Trading Co.

PO Box 1287, Safat
Tel: +965 248 43986/248 41314
Fax: +965 248 18294/248
48368
Web: www.boodaitrading.com
E-mail: psharma@boodai.com

Eaton Electric

Shayma Tower
Mezzanine Floor
Omar Bin Al Khattab Street
Sharq
Tel: +965 2 2253606/7
Fax: +965 2 2253608
Web: www.eaton.com
E-mail: oswind@silva@eaton.com

ICTCO Industrial Construction & Trading Co. WLL

Beirut Street
Hashem Complex
First Floor, Office No. 1
Hawally, 32057
Tel: +965 2668624/294913
Fax: +965 2668619
Web: www.ictcogrup.com

Jubaili Bros (Kuwait)

Kuwait Free Trade Zone
Tel: +965 24610356/24318547
Web: www.JubailiBros.com
E-mail: jbkwait@jubailibros.com

Reem Al Kuwait

PO Box 4387, Al Safat, 13044
Tel: +965 22460148
Fax: +965 22401787
E-mail: reemalkw@qualitynet.net

Riham General Trading and Contracting Co. WLL

Po Box 29329, Safat, 13154
Web: http://jcbkuwait.com/

LEBANON**Allied Diesel S.A.R.L.**

PO Box 90-1232
Nahr El Mot Roumlet Road
Allied Building
Beirut
Tel: +961 1 877285
Fax: +961 1 887583
Web: www.allieddiesel.com
E-mail: alidsl@dm.net.lb

Arison Sarl

Itani Brothers Building
PO Box No.13/582
El Solh Avenue
Beirut
Tel: +961 1 864824
Fax: +961 3 287936
Web: www.arison.com.lb
E-mail: ahmad@arison.com.lb

Black Box SARL

Acar Building - ARZ Street
LB - Saifi, Beirut
Tel: +961 1 443773
Fax: +961 1 445795
Web: www.blackboxcontrol.com
E-mail: mark@
blackboxcontrol.com

Eaton

PO Box 11-503
Beirut Regus Sildere 614
Azariah Building, Azariah St.
Block 03, 5th Floor, Beirut
21431
Tel: +961 1 964559
Fax: +961 1 964501
Web: www.eaton.com/middleeast
E-mail: josephkorkmaz@
eaton.com

HMH Machinery Est.

Deir, Zahrán
Nabatieh Main Road
Tel: +961 7 530730
Fax: +961 7 530930
Web: www.hmh-machines.com
E-mail: info@
hmhmachinery.com

JMG International

Gemayeh Nahr Ibrahim Street
Saifi Tower 8th floor
Beirut
Tel: +961 1 445667
Web: www.jmglimited.com/iraq
E-mail: adib@jmglimited.com

Jubaili Bros (Lebanon)

Sidon
Tel: +961 7 730871
Fax: +961 7 720813
Web: www.JubailiBros.com
E-mail: jblebanon@
jubailibros.com

National Instruments Lebanon SARL

Berytech Beirut
Digital District, 5th Floor
Bechara El Khoury Avenue
Bachoura Sector
Beirut
Tel: +961 1 646111
Fax: +961 1 646999
Web: www.arabia.ni.com
E-mail: ni.arabia@ni.com

LIBYA**The White Alnoras**

Swani Road
Tripoli
Tel: +218 215625090
Web: www.alnoras.com.ly
Email: y.azzouzi@alnoras.com.ly

MOROCCO**HIB Agricole**

28-29 Zone Industrielle
Kenitra, 14000
Tel: +212 53 7367379
Fax: +212 53 7372391
Web: www.hibagricole.ma
E-mail: achat@hibagricole.ma

OMAN**ASPIRE**

PO Box 533
Sultanate of Oman
100
Tel: +968 2 4525622/99713034
E-mail: rajesh.khanna@
aspireoman.com

Bin Salim Enterprises LLC

PO Box 808, Al Rawahy Building
Muscat, 100
Tel: +968 24563078
Fax: +968 24561193
Web: www.binsalim.com
E-mail: michael@binsalim.com

General Engineering Services Est.

PO Box 2690, Ruwi, 112
Tel: +968 2 4490755
Fax: +968 5 03327
Web: www.genserv-oman.com
E-mail: genserv@omantel.net.om

Inma Co. Oman LLC

Nizwa Salalah Road
Al Mawaleh South, Al Seeb
Tel: +968 24552455
Fax: +968 24552555
E-mail: inmaco@omantel.net.om

Kala International LLC

PO Box 3613, Ruwi, Muscat, 112
Tel: +96 824694278
Fax: +96 824603599
Web: www.kalabiz.com
E-mail: kalainternational@kalabiz.com

Mohamed & Ahmed Alkhonji Lic

PO Box 73, Muscat, 100
Tel: +968 24795007
Fax: +968 24795958
Web: www.alkhonji.com
E-mail: knonji1@omantel.net.om

Moosa Abdul Rahman Hassan & Co. LLC

PO Box 4, Muscat, 100
Tel: +968 24591261
Fax: +968 24505441
Web: www.moosagroup.com
E-mail: moosahvy@omantel.net.om

Muscat Overseas

Building No 155/157 Way No 5003, Al Maridh Street, Azaiba
Web: www.muscatoverseasjcb.com
Email: moimmetco@muscatoverseas.com

National Factory for Security and Safety Equipement LLC

PO Box 129
Road 19, Rusayl Industrial Est
PC: 124, Al Rusayl
Tel: +968 2 4505176
Fax: +968 2 4505189

Oman Gulf Enterprise

PO Box 421, Al Harthy Complex
Sultanate of Oman, 118
Tel: +968 9 7474505/2 4797308
E-mail: narenderk@otegroup.com

Sami Abdul Aziz Jaffer Co.

PO Box 210, Muscat, 100
Tel: +968 2 4783387
Fax: +968 2 4708671
Web: www.saajaaj.com
E-mail: saajaaj@saajaaj.com

SATA LLC

Al Umran Street, Ghala, Muscat
Tel: +968 24502515
Fax: +968 24502268

SES SMART Energy Solutions

Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

PALESTINE**Eng Moustafa Mourtaga & Sons Co.**

PO Box 259, El Kamalia Street, Gasa
Tel: +970 82818002
Fax: +970 82818001
E-mail: admortaga@yahoo.com

QATAR**Al-Kholafi Trading Co.**

PO Box 301
Al Aziziya Round About, Salwa
Doha
Tel: +974 4416010
Fax: +974 44516020
Web: www.alkholaiifi.com
E-mail: kholaiifi@qatar.net.qa

Boodai Trading Co. Ltd.

PO Box 4569, Doha
Tel: +974 44601304/44601317
Fax: +974 44606922
Web: www.boodaitrading.com
E-mail: muhammad@btcqtr.com

Eaton - Qatar

PO Box 1993, Doha
Tel: +974 4654792
Fax: +974 4654792
Web: www.eaton.com/middleeast
E-mail: razvancotofana@eaton.com

Inma Co. Qatar LLC

Showroom No. 5
Al Awqaf Commercial Complex
Al Mirqaf Area, Salwa Main Road
Doha
Tel: +974 44430088
Fax: +974 44430099
E-mail: inmaco@qatar.net.qa

Jubaili Bros (Qatar)

Doha
Tel: +974 44160121
Fax: +974 44162257
Web: www.jubailibros.com
E-mail: jbbqatar@jubailibros.com

KBF Trading & Contracting Co.

PO Box 22015, Doha
Tel: +974 55 558365
Fax: +974 44 366900

KBF Trading and Contracting Co.

PO Box 22015, Doha
Tel: +974 4 4366955
Fax: +974 4 4366900
E-mail: kbfc@qatar.net.qa

LG Qatar Office

PO Box 10480
Jaidah Square Building
Airport Road, Doha
Tel: +974 6 6817241
E-mail: gilbert.koussa@lge.com

Mannai Trading Co. WLL

PO Box 76
Industrial Supplies & Building
Materials (ISBM), Doha
Tel: +974 4 4076000
Fax: +974 4 4076398
Web: www.mannai.com
E-mail: ramanna.rai@mannai.com.qa

Qatari Canadian for Energy & Electrical Industries

Aspire Park South, Al Furosiya St
Family Shopping Complex Bldg
1st Flr, Office 6#
Tel: +974 44813602
Fax: +974 44813599
Web: www.qce-qatar.com
E-mail: shukri@apsgroup-power.com

SES SMART Energy Solutions

Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

Video Home

PO Box 4668, Jumbo Electronics
Bldg No.13, Zone No.47,
Street No. 902, Near Parachute
Signal, Airport-Wakra Road, Doha
Tel: +974 50 190206/44011788
E-mail: adharsh@jumboqatar.com

SAUDI ARABIA**A.Abunayyan Trading Corporation**

PO Box 321
Abunayyan Group Building King
Abdulaziz Street Intersection
with Mecca Road, Riyadh, 11411
Web: www.abunayyantrading.com

Abdul Latif Jameel Machinery

Haramain Rd. Al Nakhil District
Opp. Jeddah Kingdom of Saud
Tel: +966 1 22853764
Fax: +966 1 26791777
Web: www.aljhe.com
E-mail: khanfas@alj.com

Abdullah Hashim Co. Ltd.

PO Box No 44, Jeddah, 21411
Tel: +966 2 6472200
Fax: +966 2 6486968
Web: www.ahcl-machinery.com
E-mail: azizr@ahcl.com.sa

Advance Machinery EST.

PO Box 262165, S-10810
Jebel Ali Free Zone South, Dubai
Tel: +966 3 8946434
Fax: +966 3 8946206
Web: www.advancemachinery.com.sa
E-mail: ameho@advancemachinery.com.sa

AlKhorayef

PO Box 281808
Riyadh, 11392
Tel: +966 1 4955452
Fax: +966 1 4955452
Web: www.alkhorayef.com
E-mail: ehussien@alkhorayef.com

Black Box KSA

PO Box 10438
91 Prince Hazloul Bin Abd
El Aziz Street
King Fahd District
Riyadh, 11432
Tel: +966 1 2107737
Fax: +966 1 2106930
Web: www.blackboxcontrol.com
E-mail: salesksa@blackboxcontrol.com

Eaton Corporation - SAU

PO Box 19651
Saad Trading and Commercial Ce
1st Floor Office 9
Olaya Main Street
Riyadh, 11445
Tel: +966 1 4602275/4602066
Fax: +966 1 4602291
Web: www.eaton.com/middleeast
E-mail: adibnuruddin@eaton.com

Electrical Work & Maintenance

PO Box 7240
Jeddah
21462
Tel: +966 2 6916655
Fax: +966 2 6911116
Web: www.ewm.com

Electrical Work & Maintenance

PO Box 7240
Madinah Road Kilo 9 Jeddah,
21462
Tel: +966 2 6916655
Fax: +966 2 6911116
Web: www.ewmcom.com
E-mail: commercial@ewmcom.com

General Contracting Company - Olayan

PO Box 356
King Abdul Aziz Road
Al-Khobar, 31952
Tel: +966 13 8820888
Fax: +966 13 8828560

Intermodal Services of S.A. Trading & Contracting

PO Box 23317
Khalid Bin Al Walid Street
Jeddah
Tel: +966 2 6144364
Fax: +966 2 6515191
Web: www.intermodaltrade.com
E-mail: rohan@intermodals.com

M/s Inanra Co. Ltd.

PO Box 8326
Riyadh, 11482
Tel: +966 1 4791902
Fax: +966 1 4721948
Web: www.inara.com
E-mail: amustapha@inara.com

MAN Diesel & Turbo Saudi Arabia LLC

King Abdulaziz St., Al Jomaih Bldg.
Riyadh, 11411
Tel: +966 11 4720353
E-mail: powersalesregion-mena@mandieselturbo.com

Mohammed A Al-Faddaghi & Partners

2554 Al Kharj Rd, Al Manakh
Riyadh, 31952
Tel: +966 1 4953000
Fax: +966 1 4954000
Web: www.alfaddaghi.com

RGTS

The Kingdom Centre Tower
24th Floor – Olaya Street, Riyadh
Web: http://rgtsgroup.com
Email: tareq.harbi@rgtsgroup.com

SES SMART Energy Solutions

Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

TURKEY**AKSA Servis Ve Yedek Parca AS**

Basin Ekspres Yolu
Cemal Ulusoy Caddesi No. 33
Yenibosna
Istanbul
34630
Tel: +90 212 4713434
Fax: +90 212 6962029
Web: www.aksaservis.com.tr
E-mail: omers@aksaservis.com.tr

SIF

Fatih Mahallesi Katip Celebi Cad.
ISTANBUL
No: 49/1 Orhanlı - Tuzla
Istanbul
4956
Web: www.sif-jcb.com.tr
Email: cuneyt.divris@sif.com.tr

UNITED ARAB EMIRATES**A. N. Wallis & Co. Ltd.**

Dubai Airport Free Zone
Dubai, 6WA 225
Tel: +971 4 2369924
Fax: +971 4 2368589
Web: www.an-wallis.com
E-mail: info@an-wallis.com

Advance Est. For Lighting & Electricals

Off No. M09, Al Yousifi Bldg.
3B, Southren Park Street
Opp. Al Majaz Park
Off Jamal Abdul Nasser Street
Sharjah
Tel: +971 6 5509260
Fax: +971 6 5509263
Web: www.advest-uae.com
E-mail: office@advest-uae.com

AEG Power Solutions - Dubai

Dubai Airport Free Zone
Office 5EA 225, Dubai
Tel: +971 4 6091290
Fax: +971 4 6091291
Web: www.aegps.com
E-mail: sales.me@aegps.com

Ageco International FZE

PO Box 341192
Dubai Silicon Oasis FZE
Light Industrial Unit 4
Office A4, Dubai
Tel: +971 4 3261500
Fax: +971 4 3267714

AJ Power Ltd.

PO Box 211860
33rd Floor, BB1 Tower
Mazaya Business Avenue
Jumeirah Lake Towers, Dubai
Tel: +971 43637757 Etx. 165
Web: www.ajpower.net
E-mail: imccly@ajpower.net

Al Hamra

8 Floor, Red Crescent Building
Al Nahyan Camp
Muroor Street, Abu Dhabi
Tel: +971 2 6271501
Fax: +971 2 6269894
E-mail: energy@alhamragroup.com
g.grillo@alhamragroup.com

Al Masaood - Power Engineering Division

PO Box 322, Office No. 703
Al Masaood Tower
Najda Street, Abu Dhabi
Tel: +971 2 6729197
Fax: +971 2 6770836
Web: www.masaood.com
E-mail: gensets@masaood.com

Al Rawahy Establishment LLC

PO Box 14405
Dubai
Tel: +971 4 8829570
Fax: +971 4 8829571
Web: www.alrawahydubai.com
E-mail: j.fernandes@alrawahydubai.com

Al Shirawi Enterprises LLC

PO Box 282679, Dubai
Tel: +971 4 3388776
Fax: +971 4 3389559
Web: www.alshirawi.com
E-mail: charan@ase.ae

Al Shirawi Enterprises LLC

Scania Showroom
Sheikh Zayed Road
Dubai
Tel: +971 4 3718585
Fax: +971 4 3389559
Web: www.alshirawienterprises.com

Al Yamuna Densons FZE

PO Box 14577
Warehouse #1
Shed No.9 Technology Park
Ras Al Khaimah
Tel: +971 7 2233013/50
9100369
Web: www.alyamunadensons.ae
E-mail: enquiry@alyamunadensons.ae

Al Yousuf Electronics

PO Box 25, Sh.Zayed Road,
Al Ghouz, Dubai
Tel: 971 50 4576170
E-mail: pmoitra@alouslyof.com

Alfanar Electric LLC

Al Qusais Industrial Area 5
Amman Street, Dubai
Tel: +971 4 2677500/222
Fax: +971 4 2678197
Web: www.alfanar.com
E-mail: raed.alnaib@alfanar.com

ARABCAL

PO Box 24650, Sharjah
Tel: +971 6 5345747
Fax: +971 6 5345727
Web: www.arabcal.com
E-mail: cs@arabcal.com

Autochim Systems Abu Dhabi

PO Box 26166, Abu Dhabi
Tel: +971 2 6265774
Fax: +971 2 6265778
Web: www.autochimsystems.com
E-mail: asme@autochimsystems.com

Bauer GT

PO Box 390667
Business Center
Dubai World Central, Dubai
Tel: +971 55 8478893
Web: www.bauergt.com
E-mail: lcasares@bauergt.com

Bin Brook Motors & Equipment LLC

PO Box 879, Scania Showroom
Umm-Al-Nar, Abu Dhabi
Tel: +971 2 5584888
Fax: +971 2 5582090
Web: www.binbrook.com
E-mail: info@binbrook.com

Caterpillar SAREL Branch

Jebel Ali Free Zone,
South 3, Dubai

COELMO S.P.A. (DMCC BRANCH)

PO Box 39311, Office 909
1 Lake Plaza, Jumeira Lake
Town Cluster T, Dubai
Tel: +971 4 3695548
Fax: +971 4 3695549
Web: www.coelmo.it
E-mail: jacopo.monsurro@coelmo.it

Cummins Generator Technologies (Middle East)

PO Box 17636
Jebel Ali Free Zone, Dubai
Tel: +971 4 8830461
Fax: +971 4 8860518
Web: stamford-avk.com
E-mail: nahi.thebian@cummins.com

District Cooling Company

PO Box 52094, Office No.7
3rd Floor, Oasis Centre
Sheikh Zayed Road, Dubai
Tel: 971 50 6584832
E-mail: ahmed@districtcoolingcompany.com

Emirates Specialized Trading

PO Box 51720
Emirates Specialized Trading
Agencies LLC
Lulu Tower, Khalifa Street
Abu Dhabi
Tel: +971 2 6771181
Fax: +971 2 6771306
Web: www.est.ae
E-mail: kj@est.ae

FALCOR

PO Box 48576
Abu Dhabi
Tel: +971 2 6342555
Fax: +971 2 6348562

Fortune International Trading LLC

PO Box 25818, Sharjah
Tel: 971 50 4813570
E-mail: fortintl@emirates.net.ae

Fronius Middle East FZE

PO Box 263241, JAFZA One
Jebel Ali, Dubai
Tel: +971 4 8811600
Web: www.fronius.ae
E-mail: Contact.middleeast@fronius.com

Galadari

PO Box 41417
Al Quoz Industrial Area 1
Web: www.jcbuae.com
Email: khaled.gtthe@galadargroup.com

GENAVCO

ZA Abeel Road, PO Box 5563
Dubai
Tel: +971 4 3961000
Fax: +971 4 3961308
Web: www.genavco.com
E-mail: equipment@genavco.com

General Trading Group

PO Box 1219, Al-Ain
Tel: +971 3 7824440
Fax: +971 3 7825220
E-mail: alaasgrp@eim.ae

Hanwha Techwin Co. Ltd. Dubai Branch

Room 805, 8th Floor
Arenco Tower
Media City
Dubai
Tel: +971 4 4478610
Fax: +971 4 4478666
Web: www.hanwhatechwin.com

HELUKABEL Middle East DWC LLC

PO Box 644332
Office 103, Building E
Business Park
Dubai World-
Central, Dubai
Tel: +971 4 8879594
Fax: +971 4 8879266
Web: www.helukabel.ae
E-mail: waseem.ashqar@helukabel.ae

HIMOinsa Middle East

PO Box 18515
Jafza 16 - Office No. 505
Jebel Ali Free Zone
Dubai
Tel: +971 4 8873315
Fax: +971 4 8873318

IGEL Electric Dubai

Dubai Creek Tower
Office No 22-B
Tel: +971 4 2945605
Fax: +971 4 294560
Web: www.igelelectric.de/en
E-mail: verttrieb@igelelectric.de

Inma Gulf Development & Construction LLC

PO Box 4560
Al Ramoul Industrial Area
Area 215
Street 17
Bldg. 34
Dubai
Tel: +971 4 2857272
Fax: +971 4 2857512
Web: www.inmagulf.com
E-mail: inmauae@inmagulf.com

KDU Worldwide Technical Services FZC

PO Box 9567
Q3-016
Sharjah International Airport
Sharjah
Tel: +971 6 5575481
Fax: +971 6 5578582
Web: www.kduworld.com
E-mail: sharjah@kduworld.com

KOHLER SDMO MIDDLE EAST

Dubai Internet City
Building EIB01
Floor 3 - Office 310
Dubai
Tel: +971 4 4587080
Fax: +971 4 4586985
Web: www.sdmo.com/en
E-mail: jerome.quere@sdmo.com

Leroy-Somer Electric Power Generation

PO Box 17034
Jebel Ali Free zone, Dubai
Tel: +971 4 8118276
Web: www.leroy-somer.com
E-mail: nawar.shubber@lg.lnidec.com

LG Electronics Gulf FZE

PO Box 61445
Shatha Tower
Office No.3403
34th Floor
Road No.82, TECOM
Al Sofouh 2nd, Media City
Tel: +971 4 2799509; 971 56
9921785
Web: www.lg.com/ae
www.lg.com/ae_ar
E-mail: arun7.kumar@lge.com

LG Electronics Middle East and Africa

PO Box 61445, Shatha Tower,
Office No.3403, 34th Floor,
Road No.82, TECOM
Al Sofouh 2nd, Media City
Tel: +971 56 6837425
Web: www.lg.com/ae
www.lg.com/ae_ar
E-mail: dharmesh.sawant@lge.com

M.A.H.Y. Khoory & Co.

PO Box 41
Dubai
Tel: +971 4 2666300
Fax: +971 4 2661642
Web: www.mahykhooory.com
E-mail: sales@mahykhooory.com

MAN Diesel & Turbo Middle East LLC

Maritime Business Center
9 Floor
Dubai Maritime City
Dubai
Tel: +971 4 4237733
E-mail: powersalesregion-mena@mandieselturbo.com

MSS Electrical LLC

PO Box 83608, Dubai
Tel: +971 4 2691775
Fax: +971 4 2659767
E-mail: dubai@oneelectrical.com

Natheer Technical Services

PO Box 85186
Plot No. 246-198, B561
Industrial Area No. 3, Al Ghusais
Tel: +971 4 2674450
Fax: +971 4 2674451
E-mail: natheer@emirates.net.ae

Power Engineering (I) Pvt. Ltd. Marketing Office - Sharjah

Q4 - 107 Sharjah Airport
International Free Zone, Sharjah
Tel: +971 50 2615644
Web: www.paikane.com
E-mail: exports@paikane.com

Power Systems Gulf LLC

PO Box 290, Dubai
Tel: +971 4 8863555
Web: www.psgulf.com

Power Testing LLC

PO Box 36796
Al Ghaith Tower, 8th Floor
Office number 841
Hamdan Str., Abu Dhabi
Tel: +971 2 5089105

Powertech Electrical Distribution Boards Manufacturing LLC

Al Qusais Industrial Area, Dubai
Tel: +971 4 2676886
Fax: +971 4 2676456
Web: www.powertechswitchgear.com
E-mail: peddubai@eim.ae

Rotork Middle East FZE

PO Box 262903, RA 08 LC07
Jebel Ali Free Zone
Tel: +971 4 8876408
Fax: +971 4 8876403
Web: www.rotork.com
E-mail: rme.sales@rotork.com

Sakr Power Generation FZE

Jebel Ali Free Zone, Dubai
Tel: +971 4 8862010
Fax: +971 4 8862011
Web: www.sakr.com
E-mail: uae@sakr.com

Salwo Trading Ltd. (Bahrain/Qatar/Saudi Arabia)

PO Box 17372, Blue Shed Area
Jebel Ali Free Zone (North), Dubai
Tel: +971 4 8810591
Fax: +971 4 8810593
E-mail: wspies@emirates.net.ae

SGS Gulf Ltd.

PO Box 18556, Jebel Ali Free Zone
South, Office S3A1SR01, Dubai
Tel: +971 4 8809393/249/248
Fax: +971 4 8809008
Web: www.sgs.com
E-mail: sithara.hatim@sgs.com
raj.arun@sgs.com

Sicame Dubai

Office 311, Building 3
Dubai Internet City
Tel: +971 4 5148505
E-mail: nmadani@sicamegroup.com

SunPower Gen FZCO

PO Box 262165, S-10810
Jebel Ali Free Zone South, Dubai
Tel: +971 4 8861800
Fax: +971 4 8862801
Web: www.sunpower.ae
E-mail: powersolutions@sunpower.ae

Technor Middle East DMCC

PO Box 392054
Unit 2101, Fortune Executive
Towers, Plot No. T1
Jumeriah Lakes Towers, Dubai
Tel: +971 4 3621418
Fax: +971 4 3621419
E-mail: mail@technor.ae

Tripp Lite Middle East

PO Box 18030
LOB #5, Ground Floor #19
Jebel Ali Free Zone
Tel: +971 4 8871633
Fax: +971 4 8871494
Web: www.triplite.com

TRIZAC Abu Dhabi Oilfield Supply and Services

PO Box 4434, Abu Dhabi
Tel: +971 2 6330552
Fax: +971 2 6330557
Web: www.trizac.ae
E-mail: ahmadq@trizac.ae

TRIZAC Abu Dhabi Oilfield Supply and Services (Oman)

PO Box 4434
Abu Dhabi
Tel: +971 2 6330552
Fax: +971 2 6330557
Web: www.trizac.ae
E-mail: ahmadq@trizac.ae

UNA Trading FZE

PO Box 18747
Plot S 60525
Jebel Ali Free Zone South
Dubai
Tel: +971 4 48074065
Web: www.mantracpowersystems.com
E-mail: mkhalifa@mantracgroup.com

United Entraco Trading Company

PO Box 14792
Al Ain
Tel: 971 50 8110995/3 7665699
E-mail: yasin@uct.ae

YEMEN**Abu Alrejal Trading Corporation**

PO Box 17024
Zubeiry Street
Sana'a
Tel: +967 1 272519
Fax: +967 1 279025
Web: www.abualrejal.com
E-mail: abualrejal@y.net.ye

Alahlasi Corp. for Int'l trade

PO Box 20525
Al-Zubeiri St. Industrial Complex
Behind the Ministry of Youth
Sana'a
Republic of Yemen
Tel: +967 1 408193
Fax: +967 1 403135
Web: www.alahlasi.com
E-mail: mofadal.ghalib@alahlasi.com

Bahaj-Yemen

PO Box 55811
Gamal St. Taiz
Tel: +967 4251245
Fax: +967 4251246
Web: www.bahaj-yemen.com
E-mail: ali@bahaj-yemen.com

SES SMART Energy Solutions

Tel: +971 4 8862066
Fax: +971 4 8862067
Web: www.sesrent.com
E-mail: sales@sesrent.com

MHDB wins IRAQ AL-RUMAILAH Power Plant HRSG Contract

Website: <http://www.mhdb.com.cn>

E-mail: songyanjun@mhdb.com.cn

Tel: +86-573-82625133

Add: No.1267, Chenggong Road, Jiaxing City, Zhejiang Province, China.

MHPS Dongfang Boiler Co., Ltd. (MHDB) has signed a contract with supplying of five Heat Recovery Steam Generators (HRSG), triple pressure (HP, IP and LP) with reheater, natural circulation, horizontal type, for the IRAQ AL-RUMAILAH Power Plant. Three HRSGs, three Gas turbines and one steam turbine are combined into a combined cycle unit (3+3+1), and the other combined cycle unit (2+2+1) consists two HRSGs, two Gas turbines and one steam turbine. The IRAQ AL-RUMAILAH Power Plant is owned and operating by (MOE), KAR Company(KAR Electrical Power Production Trading FZE) shall convert the existing simple cycle power plant (5*SGT5-4000F) to a combined cycle power plant. "EPC contractor" is SINOHYDRO Corporation Limited. "Executor" is POWERCHINA Nuclear engineering company, and execute the EPC contract on behalf of the EPC contractor.

MHDB is a sino-foreign joint venture established by Dongfang Boiler Group Co., Ltd. (DBC, share 50%), Mitsubishi-Hitachi Power System, Ltd (MHPS, share 45%) and Itochu Corporation (ITC, share 5%) in 1996, located in Jiaxing City, Zhejiang Province, China. MHDB specializing in managing marketing, design and manufacture of power plant boilers and environmental protection equipment. And offer Heat Recovery Steam Generator (HRSG) and auxiliary equipment, environmental protection products with advanced technology and superior services in China, also exports excellent gas-turbine HRSGs and power plant boiler components.

As a professional HRSG supplier with designing and manufacturing, MHDB introduced a full set of HRSG technology from MHPS. Being the unique HRSG base of DBC/DEC, as well as the manufacturing base of MHPS, MHDB have always focused on the development of green energy and environmental protection in the world.



Until May-2017, MHDB has signed 70 units of gas-turbine HRSG in total, 49 units of which are 9F & above class.

In 2003, MHDB signed contract for the first 9F class gas turbine HRSG island in China -- Beijing Jingfeng Thermal Power Plant HRSG.①

In 2008, MHDB was awarded 9F class HRSG project first exported from China to Minsk, Belarus.②

In 2010, MHDB won the bid for the first improved F class gas turbine HRSG

in China -- Huaneng Beijing Gaobeidian project.③

In 2012, MHDB has signed the bid of CNOOC phase-Ⅲ HRSG, as well as won the phase-Ⅱ HRSG before.④

In 2016, MHDB was successively awarded Thaton HRSG Project, Myanmar. And signed the purchase order with MHPS on subcontracting manufacture for JAWA-2 HRSG project, Indonesia.



كفاءة الطاقة والتحول إلى ناقلات الطاقة النظيفة النهائية (وتشمل التدفئة المركزية والكهرباء الخالية من الكربون) إلى خفض استهلاك الوقود الأحفوري لأغراض التدفئة والتبريد بمقدار النصف بحلول عام 2060 مقارنة بيومنا هذا.

دعم الابتكار

يتعين توفير الدعم للابتكار في جميع المراحل، بداية من البحوث الأولى وحتى مرحلة العرض والتعميم الكامل. فهناك حاجة للابتكارات التدريجية والجذرية من أجل التحول إلى نظام الطاقة الجديد. هذا وتلعب الحكومات دوراً كبيراً في ضمان توفير الدعم المستقر طويل الأجل في جميع مراحل الابتكار، بداية من البحوث الأساسية والتطبيقية وحتى مراحل التطوير والعرض والتعميم. ويجب أن تُراعى الفرص المتاحة للابتكار والتحديات التي تواجهها على المدى القريب والبعيد عند تخصيص الموارد للتقنيات المختلفة، كما يجب أن يعكس ذلك مستوى التطور التكنولوجي.

في مايو 2017 وقعت بلدية دبي مذكرة تفاهم مع شركة إعمار ومجموعة دبي للعقارات من أجل تركيب مصابيح دبي في منشآتها، وهي مصابيح «إل إي دي» الأكثر ترشيداً للطاقة في العالم. ويعتبر مصباح دبي هو ثمرة التعاون والشراكة الفريدة على مستوى البحوث بين شركة فيليبس للإضاءة وبلدية دبي من أجل تطوير مصباح «إل إي دي» 200 لومن/وات.

وقد أشار المهندس حسين ناصر لوتاه، مدير عام بلدية دبي، إلى أن مصباح دبي يمثل رؤية إبداعية ومستدامة وشاملة هي الأولى من نوعها في المنطقة. «سيكون لذلك تأثيرات اقتصادية وبيئية ملموسة تتحقق من خلال الوعي المجتمعي. وسيعتمد هذا الوعي على الاستدامة والمحافظة على الموارد، مع المحافظة على غط الحياة، ومن ثم تقليل حجم انبعاثات الكربون».

هذا وتستعد كل من بلدية دبي وشركة فيليبس للإضاءة لتوفير مليوني مصباح دبي للاستخدام السكني والتجاري في عموم أنحاء المدينة في 2017، ومن المتوقع زيادة هذا العدد إلى 10 ملايين مصباح بحلول 2021.

التي تعمل على خفض انبعاثات الكربون، وزيادة استهلاك الطاقة في الاستخدامات النهائية، تجلب بعض التحديات وتوفر فرصاً جديدة. فالتوجهات الحالية تؤدي إلى زيادة حصة الكهرباء في الطلب النهائي على الطاقة عبر جميع قطاعات الاستخدام النهائي من 18 في المائة في يومنا هذا إلى 26 في المائة في سيناريو التكنولوجيا المرجعي بحلول 2060، وهي أكبر زيادة نسبية بين جميع سُبل نقل الطاقة.

كما يمكن أن يحدث التحول إلى الكهرباء في الاستخدامات النهائية نقلة من الاعتماد المباشر على أنواع الوقود الأحفوري إلى الطاقة الخالية من الكربون. وفي سيناريو 2DS وB2DS، تصبح الكهرباء أكبر ناقل نهائي للطاقة، وهي في ذلك تفوق النفط بقدر قليل. وتبرز هذه النقطة - على وجه الخصوص - في مجال النقل والمواصلات، إذ تصبح الكهرباء مصدر الوقود الرئيسي لوسائل النقل البري في سيناريو B2DS.

وتعتبر الطاقة الخالية من الكربون هي الداعم الرئيسي للتحول إلى الطاقة النظيفة. فبحسب سيناريو 2DS، يمكن أن يتخلص قطاع الطاقة العالمي تماماً من انبعاثات غاز ثاني أكسيد الكربون بحلول عام 2060. ويتطلب ذلك تعميم استخدام مجموعة التقنيات بشكل أكبر، على أن تبلغ نسبة توليد الكهرباء من مصادر الطاقة المتجددة 74 في المائة (إثنان في المائة منها من الطاقة الحيوية المستدامة مع تكنولوجيا BECCS [CCS])، و15 في المائة من الوقود النووي، و7 في المائة من منشآت توليد الطاقة التي تستخدم الوقود الأحفوري بتكنولوجيا CCS، على أن تذهب باقي النسبة لتوليد الكهرباء من الغاز الطبيعي.

التدفئة والتبريد

هناك إمكانية كبيرة لتوفير استهلاك الطاقة في تطبيقات التدفئة والتبريد، والتي تظل غير مستغلة إلى حد بعيد. واليوم يبلغ استهلاك تطبيقات التدفئة والتبريد في المباني والمنشآت الصناعية ما يقرب من 40 في المائة من استهلاك الطاقة الكلي. فضلاً عن ذلك يعتمد ما يقرب من 65 في المائة من هذا الطلب على مصادر الوقود الأحفوري. ويمكن أن تؤدي



يتناول سيناريو B2DS إلى أي مدى يمكن توظيف تقنيات الطاقة النظيفة طبقاً للحدود العملية، وما يساير تطلعات الدول الأكثر طموحاً في اتفاقية باريس للمناخ.

تنسيق العمل ومزيج من التقنيات

لاشك أن التحول إلى استخدام الكهرباء آخداً في التوسع بين المستخدمين النهائيين، غير أن أنظمة القدرة



مصادر متنوعة للطاقة ستوفر أنظمة طاقة رخيصة وآمنة ومستدامة

السياسي المستدام. ويضع كل من سيناريو الدرجتين (2DS)، وسيناريو أكثر من درجتين (B2DS) مساراً سريعاً للحد من انبعاثات الكربون يتماشى مع أهداف السياسة الدولية. وقد استمر 2DS بوصفه سيناريو المناخ الرئيسي في سلسلة إصدارات آفاق تكنولوجيا الطاقة لعدة سنوات، ويشجع استخدامه من قبل صناعات السياسات وأصحاب المصالح في قطاع الأعمال لتقييم أثر إستراتيجياتهم على المناخ. وللمرة الأولى،

تُثار الأمن في مجال الطاقة، والحصول على المزايا البيئية والاقتصادية الناتجة عن تحويل أنظمة الطاقة. كما يرى التقرير أن التحدي الأكبر أمام صناعات سياسات الطاقة، هو التخلي عن الأنظمة المنعزلة، وتبني رؤية أخرى تتيح دمج الأنظمة.

أهمية المنهج المتكامل

مستقبل الطاقة المستدامة

يحدث تفاعل بين تقنيات الطاقة، ومن ثم يتعين تطويرها واستخدامها معاً على نطاق واسع. وسوف تتميز أنظمة الطاقة الآمنة والمستدامة وميسورة التكلفة، بتنوع أكبر لمصادر الطاقة، وتعتمد كثيراً على التوليد الموزع. وبالتالي يجب دمجها وإدارتها على نحو أفضل من منظور الأنظمة. إذ أن ذلك يرفع من مستوى الكفاءة ويقلل تكاليف النظام، كما يتطلب نطاقاً أوسع من التقنيات وأنواع الوقود. وتعد الأنظمة الكهربائية المتكاملة والمرتبطة، عاملاً أساسياً لإحداث التحول في قطاع الطاقة. وذلك لأن زيادة التحول إلى استخدام الكهرباء توفر الفرص لتعزيز مرونة أنظمة الكهرباء وكفاءتها وأدائها البيئي. وفي 2016، ارتفعت نسبة استخدام سعة التخزين الجديدة - وأغلبها تقنيات خاصة بالبطاريات - إلى أكثر من 50 في المائة. ويمكن أن يساعد التطبيق واسع الانتشار للتقنيات الرقمية، على التعجيل بهذا التحول.

الاستجابة المُحسنة للطلب

تتيح أنظمة الطاقة الذكية اتخاذ تدابير الاستجابة للطلب. وهناك تقنيات مثل البنية التحتية المتطورة للقياس، أو الأجهزة الذكية، أو العدادات الذكية ثنائية الاتجاه. وهي تتيح إدارة الطلب، وتحفز المستهلكين على أداء دور نشط في أنظمة الطاقة. وبالإمكان أن تسهم هذه المنهجيات في التشجيع على استخدام الطاقة بكفاءة أكبر، وتساعد في إدارة الأحمال وتحقيق مرونة الأنظمة.

جهود أكثر طموحاً للحد

من انبعاثات الكربون

تتطلب مساعي خفض انبعاثات الكربون إلى مستويات أقل، تكريس المزيد من الجهود والالتزام

للاغاية يسير على المسار الصحيح، وهذا يضع المزيد من الضغوط على الآخرين. ويجدر بالذكر أن الإسراع من وتيرة التقدم التكنولوجي من شأنها المساعدة على دعم الاقتصادات، وتعزيز أمن الطاقة، فضلاً عن تحسين استدامة الطاقة».

ويراعي سيناريو الحالة الأساسية بإصدار آفاق تكنولوجيا الطاقة، والمعروف باسم سيناريو التكنولوجيا المرجعي (RTS)، الالتزامات الحالية في مجال الطاقة والمناخ، بما في ذلك تلك الصادرة بموجب اتفاق باريس. وهناك سيناريو آخر، باسم 2DS، يعرض السبيل للحد من ارتفاع الاحتباس الحراري بمقدار 2 درجة مئوية، ويكشف عن أن قطاع الطاقة العالمي بوسعه القضاء على انبعاثات ثاني أكسيد الكربون تماماً بحلول العام 2060.

وهناك سيناريو ثانٍ للحد من انبعاثات الكربون يستكشف التقنيات المتاحة، وتلك التي يجري ابتكارها، والتي يمكن إدماجها في قطاع الطاقة في مسار يتجاوز سيناريو 2DS. وهو يوضح كيف يمكن أن يصبح قطاع الطاقة محايداً للكربون بحلول 2060 إذا تم دعم التكنولوجيا الإبداعية إلى أقصى الحدود. وحتى نصل إلى هذه الغاية، يجب أن تتضافر جهود جميع أصحاب المصالح، علاوة على أن هذا يتطلب مستوى غير مسبوق من الإجراءات المتعلقة بالسياسة. وبالنظر إلى قطاعات محددة، يكشف إصدار آفاق تكنولوجيا الطاقة لعام 2017 عن أن البنائيات يمكن أن تؤدي دوراً كبيراً في دعم تحويل نظام الطاقة. فاستخدام أنظمة الإضاءة والتبريد والأجهزة عالية الكفاءة، يمكن أن يوفر ما يقرب من ثلاثة أرباع الطلب العالمي على الطاقة في الوقت الراهن، بدءاً من الآن وحتى 2030، وذلك إذا تم الإسراع في تعميمها. وسوف يتيح ذلك إمداد نظام الطاقة بالكهرباء بشكل أسرع، وعدم إثقال كاهل النظام بمزيد من الأعباء. علماً بأنه في قطاع النقل والمواصلات، يلعب التحول إلى استخدام الكهرباء دوراً بارزاً في خفض انبعاثات الكربون.

ويثبت التقرير أنه بصرف النظر عن المسار المختار، فإن السياسات المنوطة بها دعم الإبداع في مجال تكنولوجيا الطاقة في جميع المراحل، بدءاً من البحث وحتى التطوير الكامل، تكتسب أهمية بالغة لجني



توفير استهلاك الطاقة في تطبيقات التدفئة والتبريد والإضاءة قد يوفر ثلث الاستهلاك العالمي للطاقة

نظام واعد للطاقة

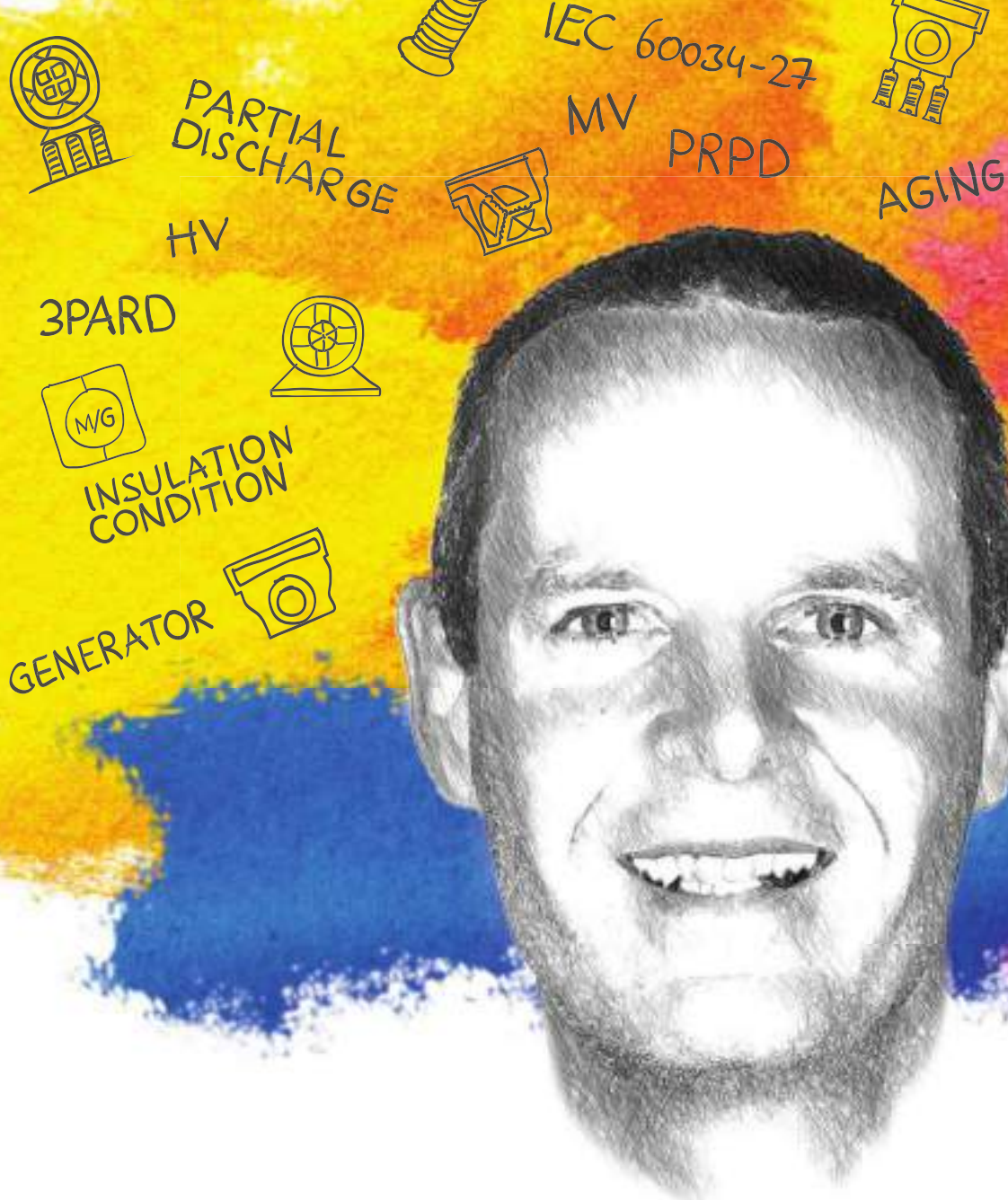
أحدث تقرير صادر عن الوكالة الدولية للطاقة حول تقنيات الطاقة، يقدم في هذا المقال عرضاً موجزاً للدور الذي تلعبه هذه التقنيات، مع التوجهات الأخرى، إلى جانب الإنجازات التقنية خلال العقود الأربعة التالية، والتي من شأنها إعادة تشكيل قطاع الطاقة العالمي.

وتم إحراز تقدم كبير. غير أن العديد من مجالات التكنولوجيا لاتزال تعاني من عدم كفاية الدعم عن طريق السياسة.

من جانبه، قال الدكتور فاتح بيرو، المدير التنفيذي لوكالة الطاقة الدولية: «مع انخفاض التكاليف، سوف نكون بحاجة إلى التركيز المستدام على كافة أنواع تكنولوجيا الطاقة لبلوغ أهداف المناخ بعيدة المدى». وأضاف «البعض يحرز التقدم، بينما عدد قليل

ويتميز بقلة انبعاثات الكربون. ولا تزال السياسات الحكومية غير كافية لتحقيق أهداف المناخ العالمية بعيدة المدى، وفقاً لتحليل وكالة الطاقة الدولية. وتبقى فقط ثلاث تقنيات من مجموع 26 تقنية خاضعة للتقييم «على المسار الصحيح» لتحقيق أهداف المناخ، حسب تقرير «تتبع مستوى تقدم الطاقة النظيفة» بإصدار آفاق تكنولوجيا الطاقة ETP. وقد أنتجت السياسات مؤشرات على التحسن

يلقي إصدار «آفاق تكنولوجيا الطاقة 2017» الضوء على الإجراءات السياسية الحاسمة، ومؤشرات السوق، بوصفها عناصر أساسية لتحقيق التطور التكنولوجي، والاستفادة من زيادة التحول إلى استخدام الكهرباء على مستوى العالم. إذ يتعين ضخ الاستثمارات لتعزيز البنية التحتية وجعلها أكثر ذكاءً، بما في ذلك سعة النقل والتخزين وتقنيات إدارة جانب الطلب، من أجل بناء نظام طاقة متكامل وقوي يتسم بالمرونة والكفاءة،



Andreas Gruszka
Project Leader

Our know-how helps you to prevent machine failure.

My team and I install our on-line partial discharge monitoring systems on rotating machines around the world. Over the years, we have gained valuable knowledge by helping customers implement these systems and analyze PD activity to prevent early machine failure. We put this know-how to work for you, designing the right PD monitoring system for your requirements and helping you to interpret the results.

www.omicronenergy.com/machines





صناعة الفولاذ في حاجة إلى الحماية لضمان الجودة والسلامة في قطاع الإنشاءات

بينما كشفت الدراسة عن أن 79 في المائة من المهنيين العاملين في قطاع الإنشاءات في دول مجلس التعاون الخليجي، يؤيدون فرض ضوابط أكثر صرامة على استيراد منتجات الفولاذ من أسواق معينة. هذا على الرغم من أن السياسات الحكومية، التي تشمل دليل الإمارات للوقاية من الحريق وسلامة الأرواح، تفرض معايير صارمة للمواد المستخدمة في المباني والمنشآت. ويتعاون الاتحاد مع رواد الصناعة لتطوير معايير تتيح له الكشف عن المواد المقلدة والتراخيص المزيفة. كما يشارك الاتحاد في التحقيقات الدولية العابرة للحدود، ويتخذ الإجراءات القانونية بحق الموردين.

الكويت تفتتح مشروع توسعة المطار بتكلفة ٤,٣ مليار دولار أمريكي

الضوئية لتوليد الطاقة الكهربائية من أشعة الشمس، والقادرة على توفير 12 ميغاواط من الطاقة. وتشمل التصميم وجود البنية المعمارية برمتها تحت قبة السطح، بينما تحاط منطقة استلام الحقائق بسلسلة تبريد، إلى جانب مدخل متدرج من الجهة الأرضية بالاتجاه الجنوبي. ويحظى المبنى بإطلالة أمامية أفقية لوحة غناء.

علما بأن عدد الركاب يشهد زيادة بنسبة 10 في المائة سنويا، وقد وصل إلى 12 مليون راكب في 2016. من جانبه، قال الشيخ سلمان صباح السالم الحمود الصباح، رئيس الإدارة العامة للطيران المدني: «من المتوقع أن يتجاوز عدد المسافرين - عام 2027 - 23 مليون مسافر». هذا بينما أكد رئيس مجلس إدارة شركة «ليماك»، نيهات أوزدمير، على تولي شركة الهندسة المعمارية العالمية «فوسترز أند بارتنز»، الحاصلة على جائزة بريتزكر، تصميم المشروع، وأنه ليس مجرد مشروع إنشائي فحسب، بل هو رابط مهم بين الكويت وتركيا له أبعاد اقتصادية واجتماعية سوف تتوطد وتزدهر بفضل هذا المشروع. وتستخدم في هذا المشروع تكنولوجيات حديثة ومتطورة. فقبة المبنى تضم 66 ألف لوح من الخلايا

أعلنت شركة الإنشاءات التركية «ليماك» عن البدء في المشروع المزمع الانتهاء منه خلال ست سنوات لإنشاء محطة للركاب في مطار الكويت الدولي بتكلفة 4,3 مليار دولار أمريكي. وكان الشيخ صباح الأحمد الصباح، أمير الكويت، والرئيس رجب طيب أردوغان، رئيس تركيا، قد وضع حجر الأساس لمشروع إنشاء محطة الركاب الجديدة في مطار الكويت الدولي. ومن المقرر إتمام إنشاء المبنى الجديد بتكلفة 4,3 مليار دولار أمريكي خلال ست سنوات. وهو يرفع القدرة الاستيعابية للمطار إلى 25 مليون راكب سنويا، ويستوعب جميع أنواع الطائرات عبر 51 بوابة وجناح، كما سيكون قادرا على خدمة 21 طائرة إيرباص إيه 380 في نفس الوقت. ويهدف المبنى إلى تلبية احتياجات الركاب المسافرين عبر مطار الكويت الدولي.

مفكرة إجمال الأعمال 2017

سبتمبر / أيلول

- ٢٥ - ٢٧ معرض الخليج للزجاج دبي
- ٢٦ - ٢٧ المعرض والمؤتمر الدولي للطاقة الشمسية - إنترسولار الشرق الأوسط دبي

أكتوبر / تشرين الأول

- ٢ - ٣ معرض التعدين دبي
- ٨ - ٩ المنتدى السنوي الثالث للصحة والسلامة والأمن دبي
- ٢٣ - ٢٦ معرض مشروع العراق إربيل

محطة المسافرين الجديدة
ستكون مدخلا رئيسيا إلى البلاد





إطلاق التكنولوجيا الشمسية الحرارية المتطورة

«مصدر» تعتمد التكنولوجيا الشمسية الحرارية المتطورة

«إمبريال لخدمات الطاقة» و«إمسول إنوفيشنز» و«جرين وان تك» في عملية التجربة والتقييم.

وقال محمد جميل الرمحي، الرئيس التنفيذي لـ «مصدر»، في حفل تدشين اللواقط الشمسية: «تأتي معظم المياه المستهلكة في دول مجلس التعاون الخليجي عبر عملية تحلية مياه البحر. ولذلك أصبحت هناك حاجة ملحة لتأمين حلول أكثر استدامة وأقل استهلاكاً للطاقة، وتعميم استخدامها على نطاق واسع».

ومن المتوقع أن تزود أنظمة التقاط الحرارة الشمسية الثلاثة، حرارة متوسطة تبلغ 95 درجة مئوية، وهي الدرجة المثالية لتحلية المياه. ويهدف المشروع إلى مراقبة أداء التكنولوجيا للوصول إلى فهم أفضل لكيفية تحسين عملية تحلية المياه، فضلاً عن قياس مدى ملاءمتها لاستخدامات أخرى محتملة.

أعلنت شركة أبوظبي لإنتاج الطاقة المتجددة «مصدر»، عن بدء اختبار التكنولوجيا الشمسية الحرارية المتطورة، وذلك كجزء من برنامجها التجريبي لتحلية مياه البحر بجدوى تجارية، وكفاءة أكبر في استهلاك الطاقة. وقد تم تركيب الأنظمة الثلاثة لالتقاط الحرارة الشمسية، بمشاركة شركات متخصصة لكل منها، في موقع «مصدر» لتحلية مياه البحر باستخدام الطاقة المتجددة في غنتوت. وسوف يتولى معهد مصدر للعلوم والتكنولوجيا، التابع لجامعة خليفة للعلوم والتكنولوجيا، مراقبة كفاءة التشغيل والتكلفة لأنظمة الالتقاط، ومدى صلاحيتها للتطبيق على نطاق أوسع.

وهذه الأنظمة المتطورة تكنولوجياً، تعمل على التقاط حرارة الشمس لتعزيز عملية تحلية مياه البحر كبديل عن حرق الغاز الطبيعي. وتشارك شركات

اتحاد مُصنّعي الفولاذ لمكافحة التقليد يواصل مكافحة المنتجات الفولاذية المقلدة

أبرز منتجي الفولاذ في العالم. وهذا الاتحاد يهدف إلى تعزيز التوعية، وتوفير الحلول لمواجهة الظاهرة المتنامية لتقليد المنتجات الفولاذية في المنطقة. وتشير إحصائيات السوق إلى أن الحجم الإجمالي لمنتجات الأنابيب في سوق منطقة الشرق الأوسط وشمال أفريقيا قد بلغ، خلال عام 2016، ما يقرب من 2967176 طناً.

أنها منتجات فولاذية مُقلدة ضمن مرحلة من مراحل العمل في هذا القطاع. وقد تأسس اتحاد مُصنّعي الفولاذ لمكافحة التقليد في العام 2015 ويضم 18 من

كشفت دراسة أجراها اتحاد مُصنّعي الفولاذ لمكافحة التقليد (SAAC) أن أكثر من نصف العاملين في هذا المجال - 53 في المائة - قد أبلغوا عما يُعتقد

المحتويات

القسم العربي

أخبار

- «مصدر» تعتمد التكنولوجيا الشمسية الحرارية المتطورة ٤
- اتحاد مُصنّعي الفولاذ لمكافحة التقليد يواصل مكافحة المنتجات الفولاذية المقلدة ٤
- الكويت تفتتح مشروع توسعة المطار بتكلفة ٤,٣ مليار دولار أمريكي ٥

تحليلات

- نظامٌ واعدٌ للطاقة ٧



ملخص محتويات القسم الانجليزي

التطورات: تطورات السوق.

تحليلات: تحليل الطاقة في مجلس التعاون الخليجي.

مقابلة: هيئة كهرباء ومياه دبي، مجموعة إنفورما الصناعية.

صناعة: الإمداد غير المتقطع للطاقة، المولدات الكهربائية.

فعاليات: المعرض السعودي الدولي للهندسة الكهربائية وتوليد الطاقة وتوزيعها، منتدى يونيولف.

النشرة التقنية abc

TECHNICAL REVIEW MIDDLE EAST الشرق الأوسط
SERVING THE REGION'S BUSINESS SINCE 1984 في خدمة شركات المنطقة منذ ١٩٨٤

المحررة: رونيستا باتناك،
فريق التحرير والتصميم: بوب آدمز، هيريتي بايرو، أندرو كروفت، رانجانا جي إس، برانشانت إيه بي،
زا تيب، سجال بات، ميريام بريكوفكا، جورجيا لويس، راؤول بوتيفيدو، نكي فالسماكس، فاني فينوجوبال، لويز ووترز.

الناشر: نك فوردهام

مديرة النشر: بلاني باندي

مدير مبيعات المجلة: جراهام براون

هاتف: ٩٦١٠ ٤٤٨ (٤) ٩٧١، فاكس: ٩٦١٠ ٤٤٨ (٤) ٩٧١، بريد إلكتروني: graham.brown@alaincharles.com

المكتب الرئيسي:

Alain Charles Publishing Ltd
University House, 11-13 Lower
Grosvenor Place
London SW1W 0EX UK
هاتف: ٢٠٧٨٣٤٧٦٧٦ (+٤٤ (٠) ٢٠٧٨٣٤٧٦٧٦
فاكس: ٢٠٧٩٧٣٠٠٧٦ (+٤٤ (٠) ٢٠٧٩٧٣٠٠٧٦

مكتب الشرق الأوسط الإقليمي:

Alain Charles Middle East FZ - LLC
Office 112, Loft 2B
مدينة دبي للإعلام

دبي - الإمارات العربية المتحدة - صندوق بريد: ٥٠٣٢٠٧

هاتف: ٩٦١٠ ٤٤٨ (٤) ٩٧١

فاكس: ٩٦١٠ ٤٤٨ (٤) ٩٧١

المترجم: عز الدين م. علي، ezeddin@movistar.es

التصميم والإخراج الفني: محمد مسلم التجار، alnajar722@gmail.com

الطباعة: مطبعة الإمارات - دبي

Country	Representative	Telephone	Fax	Email
India	Tanmay Mishra	(91) 80 65684483	(91) 8040600791	tanmaymishra@alaincharles.com
Nigeria	Bola Olowo	(234) 8034349299	-	bola.olowo@alaincharles.com
South Africa	Annabel Marx	(27) 218519017	(27) 466245931	annabel.marx@alaincharles.com
UK	Steve Thomas	(44) 20 7834 7676	(44) 2079730076	stephen.thomas@alaincharles.com
USA	Michael Tomashefsky	(1) 203 226 2882	(1) 203 226 7447	michael.tomashefsky@alaincharles.com

الوكيل البريدي بالولايات المتحدة: النشرة التقنية - الشرق الأوسط
تنشرها ست مرات في العام، لقاء 99 دولاراً أمريكياً، شركة آلان تشارلز للنشر
Alain Charles Publishing, University House, 11-13 Lower Grosvenor Place, London, SW1W 0EX, UK
يتم سداد ثمن المجلات لدى: Rahway, NJ

مدير البريد: أرسل التصحيحات إلى: Alain Charles Publishing Ltd, c/o Mercury
Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001, US
Agent: Pronto Mailers International, 200 Wood Avenue, Middlesex, NJ 08846

الإنتاج: دوناتيللا مورانيلي، ناتانيل كومار، صوفيا هويت، نيكتا جين، برييناكا تشريوتر.
بريد إلكتروني: production@alaincharles.com
الإشتراكات: بريد إلكتروني: circulation@alaincharles.com



رئيس مجلس الإدارة: دريك فوردهام

© Technical Review Middle East ISSN: 0267-5307

ADVERTISER INDEX

Company	Page
2 Garen Industrie	75
Aggreko (Middle East) Ltd	19, 37
Aksa Jenerator Sanayi AS	3
APAR Industries Ltd	70
Caterpillar Inc - Energy	7
COELMO Spa	61
CompAir	30
Dwyer Instruments Ltd	38
Energy Exemplar Pty Ltd	31
FG Wilson Engineering Ltd	11
Galva Coat for Galvanizing & Lighting Poles	65
Grieve Corporation	70
Himoinsa, S.L.	23
IIR Exhibitions (MEE 2018, Electricx 2017, Power Nigeria 2017)	47, 53, 57
Inmarco FZC	40
Inmesol SL	29
JCB Power Products Ltd	33
Kaesar Kompressoren FZE	91
Kempston Controls LLC	13

Company	Page
LG Electronics Gulf FZE	2
Lijan Insulation Contracting LLC	62
Lucy Switchgear EMS Ltd	27
Man Diesel & Turbo	9
Manumag SL	45
Mecc Alte UK Ltd	67
Megger Limited	17
MHPS Dongfang Boiler Co. Ltd	83
Mohammad Al-Ojaimi Contracting Est.	25
Omicon Electronics Middle East	73, 87
Ortea S.p.A.	75
Perkins Engines Company Limited	15
Power Engineering (India) Pvt Ltd	43
Ranco Group	21
SDMO Industries	39
Societe Internationale des Moteurs Baudouin	35
Teksan Jenerator Elektrik Sanayi ve Ticaret AS	63
Top Screw Metal Corp.	65
Volvo Penta, AB (VPEN)	5

CSD / CSDX series

Tomorrow's technology, today: IE4 motors

KAESER KOMPRESSOREN is the only compressed air systems provider to equip its rotary screw compressors with **IE4 Super-Premium-Efficiency** drive motors as standard. This assures enhanced efficiency with lower energy costs.



New:
In CSD and CSDX

KAESER KOMPRESSOREN – More compressed air for less energy

Kaeser Kompressoren FZE

P.O. Box 17485 – Jebel Ali Free Zone – Dubai – United Arab Emirates – Tel: +971 4 805 0000 – Fax: +971 4 805 0077
E-Mail: info.dubai@kaeser.com – www.kaeser.com

TECHNICAL REVIEW MIDDLE EAST

SERVING THE REGION'S BUSINESS SINCE 1984

النشرة التقنية

UK £10, USA \$18.50

في خدمة شركات المنطقة منذ ١٩٨٤

الشرق الأوسط

نظام واعد للطاقة

وضعت بلدية دبي،
نصب عينيها،
أهدافاً طموحاً
من أجل
تحسين كفاءة
استخدام الطاقة
في الإمارة، وذلك
من أجل تحقيق
تحسن بنسبة ٣٠
في المائة مع حلول
عام ٢٠٣٠.

التقرير السنوي للطاقة ٢٠١٧