TECHNICAL RE

النشرة التقنية - الشرق الأوسط

USA: \$16.50, United Kingdom: £10

ANNUAL CONSTRUCTION REVIEW 2015

TEMPLATE for SUCCESS

THE GROUNDWORK FOR THE NEXT GENERATION OF BUILDING DESIGN

GCC Construction Review

Developments and investment opportunities across the region

Staying

The latest solutions from the Middle East's burgeoning HSE industry

www.technicalreview.me

Years

1984 - 2015 **Serving Middle East Business**

Construction Equipment Health & Safety On-site Power

IDES CONSTRUCTION



with

WEICHAI POWER GENERATION ENGINES.

Engines Power range



WP2.1 (15-25 kVA), WP4.3 (38-50kVA)



226B-3 (30-50kVA), WP4 (63-100kVA), WP6 (125-150kVA)



WP10 (175-250kVA), WP12 (313kVA), WP13 (375kVA)



M26 (450-1000kVA), M33 (650-1250kVA)







WEICHAI

Visit us today at: www.weichai.com

Weichai Middle East FZE

Block no.LA04, Near Round about 08, Jebel Ali Free Zone, Dubai, UAE. PO Box 18698

(00971) 56 1388375 (00971) 50 6753916 zhonglei@weichai.com amitdeshpande@weichai.com liuhb@weichai.com



IF YOU CAN DRAG A MOUSE, YOU CAN SIZE A GENERATOR.



POWER SOLUTIONS CENTER

GENERATORS | ATS | SIZING | SPECS | ADDITIONAL TOOLS

Introducing **POWER SOLUTIONS CENTER** from Kohler. An intuitive spec and sizing program that does the work for you — including drag-and-drop load management, automatic one-line diagrams and accurate specs. Congratulations, your job just got a lot easier.

DOWNLOAD IT FOR FREE TODAY AT **KOHLERPOWER.COM** powersystems.emea@kohler.com



+966-11-4779111



EDITOR'S NOTE

THE MIDDLE EAST's construction industry appears to be on the up once again, leading to a raft of new projects, equipment launches and companies looking to provide building solutions and services to demanding clients throughout the region.

With that in mind, this year's Annual Construction Review issue features stories on the latest industry developments, leading with our regular analysis of developments in the GCC's construction sector (p10). We also shine the spotlight on the latest equipment launches from the region's leading manufacturers (p16) and focus on the Middle East's fast-growing health and safety industry (p20).

Elsewhere, we look at on-site power (p24). construction chemicals (p28) and design software (p30), while our Annual Construction Buyers' Guide (p54) features big-name brands and suppliers working throughout the Middle East.

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

IN THIS ISSUE...

BUSINESS & MANAGEMENT

Market News

Saudi Arabia to invest in aviation infrastructure. Qatari firm wins SEZ deal, Kuwait government offers boost to country's construction sector

ANALYSIS

GCC Construction Review

The latest developments within the GCC's construction industry, focusing on the latest deals, project announcements and investment opportunities

CONSTRUCTION

Construction Equipment

Equipment news from a selection of big name brands, including Bobcat, Caterpillar and JCB 20

Health & Safety

Solutions and developments from the region's fastgrowing health and safety sector

On-site Power

A look at the power equipment and service options available for Middle East project sites

Design Software

Autodesk's Naji Attallah discusses the use of design technology in the construction of new buildings

INTERVIEW

Middle East Electricity

Informa's Anita Mathews discusses what's in store at the 2016 edition of the region's leading power event

TESTING & DIAGNOSTICS

Cable Solutions

10

16

24

The concluding part of our series on cable testing and diagnostics solutions for medium-voltage cables

INNOVATIONS

Equipment and Services

The latest equipment and service solutions for industrial applications

ANNUAL BUYERS' GUIDE

Construction Equipment and Services 54

Our comprehensive guide to the leading names within the region's construction sector

ARABIC

News

Analysis

8







Managing Editor: Ben Watts - Email: trme@alaincharles.com

Editorial and Design team: Bob Adams, Prashanth AP, Hiriyti Bairu, Sindhuja Balaji, Andrew Croft, Thomas Davies, Ranganath GS, Valerie Hart, Tom Michael, Rhonita Patnaik, Prasad Shankarappa, Zsa Tebbit, Lee Telot and Louise Waters

Publisher: Nick Fordham

Publishing Director: Pallavi Pandey

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: Priyanka Chakraborty, Nikitha Jain, Nathanielle Kumar, Donatella Moranelli and Sophia White Email: production@alaincharles.com

Subscriptions: circulation@alaincharles.com

Chairman: Derek Fordham

Country India Nigeria UK

Representative Ying Mathieson Tanmay Mishra Bola Olowo Steve Thomas

Telephone (86)10 8472 1899 (91) 80 65684483 (234) 8034349299 (44) 20 7834 7676 Michael Tomashefsky (1) 203 226 2882

(86) 10 8472 1900 (91) 80 40600791

(44) 20 79730076 (1) 203 226 7447

ving.mathieson@alaincharles.com tanmav.mishra@alaincharles.com hola olowo@alaincharles.com stephen.thomas@alaincharles.com 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, Dubai

Printed in: August 2015

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 Tel: +44 20 7834 7676, Fax: +44 20 7973 0076 Middle East Regional Office: Alain Charles Middle East FZ-LLC Office 215, Loft 2a, Dubai Media City, Dubai, UAB Tel: +971 4 448 9260, Fax: +971 4 448 9261





MULTI VIII

Evolving Expertise into Reliability Excellence

- Energy Efficiency Ratio up to 16.5
- All Inverter Compressors
- Flexible Design
- Improved Air Quality with AHU Integration
- Smart Phone Monitoring
- Easy Installation and Maintenance

MULTI V









MULTI V.



The all new Multi V IV is the culmination of every innovation made over the years of Multi V series.

















MULTI V, IV



Hotel











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. Bassam Yasin, Tel: +971 508110995 email: yasin@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 Babtain Air Conditioning & Refrigeration Co., Mr. Zakaria Farhat, Tel: +965 66770066, email: zakaria@albabtaingroup.com.kw; Oman: Oman Gulf Entreprise, 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. Elkhan Sadikhov, Tel: +994 502163363, email: elkhan.sadikhov@nbc.com; Al-Cond Maxiwell Group, Mr. Vagif Alexperov, Tel: +994 502162092, email: maxiwellbaku@inbox.ru; Armenia/Georgia: ARAY Gulf, Mr. Vilson Melkijanyan, Tel: +374 93077755, email: vilson@aray.an; Yemen: Modern House Exhibition, Mr. Khaled Jabr, Tel: +967 711720202, email: mail@mhe-yemen.com; Pakistan: /ceberg Industries (Lucky Goldstar), Mr. Imran Jamil Khan, Tel: +923 212 776100, email: ceo@icebergindustries.net

Briefly

Jafza to build sustainable building for US energy company

DUBAI'S JEBEL ALI Free Zone (Jafza) is building a multi-storey facility for C&J Energy Services in the free zone.

The ground-breaking ceremony was initiated jointly by Jafza chief operations officer Talal Al Hashimi and C&J Energy Services vice-president for MENA Jeremy Alston, in the presence of the company's finance director Angus Fraser and a number of senior Jafza officials.

The 50,000 sqm facility in Jafza will include a 10,000 sqm sustainable multi-storey complex, which will serve as C&J's regional headquarters. The facility will also house a state-of-the-art maintenance, repair and operation (MRO) set-up. In addition, the facility will also be LEED-compliant and delivered to the US energy services company by Q1 2016.

Jafza officials said they have commenced work on the new facility in Jafza South.

Jeremy Alston remarked, "C&J Energy Services is committed to developing a strong regional presence in the GCC and wider Middle East.

"The development of our new regional facility with JAFZA is a clear statement of this commitment and we are excited to be working on this sustainable and cutting-edge building."

Talal Al Hashimi commented, "C&J Energy Services is one of the largest well construction, well completions and well services companies in North America.

"This facility will lay the foundation for C&J to become a leading player in the Middle East region. We are confident that their new facility in Jafza will help them in establishing an impressive presence in the region at the fastest pace. We remain fully committed to provide all the support they need to make their operations in the Free Zone seamless," he added.

The project forms part of Jafza's Customised Development Solution offering that specifically addresses a customer's industry needs and their business model-related requirements.

Saudi Arabia set to upgrade domestic aviation infrastructure

SAUDI ARABIA'S GENERAL Authority of Civil Aviation spent US\$1.2bn on the expansion of the Prince Mohammed Bin Abdul Aziz International Airport in Medina. The first phase of the new terminal opened in July 2015.

Following the inauguration of the terminal, Frost & Sullivan analysts stated that the expansion could pave the way for growth in Medina's economy, improve commercial trade to more than US\$107mn and generate nearly 20,000 jobs.

The Medina airport expansion is one among several initiatives being undertaken by the Saudi Arabian government to upgrade its aviation industry. Through infrastructure development, privatisation and market liberalisation, the Kingdom of Saudi Arabia is keen to further sophisticate the sector.

The newly-opened three-level terminal spans more than 156,940 sqm with 16 aircraft stands and boarding bridges. In addition to facilitating easy travel for Hajj and Umrah pilgrims, civil aviation authorities are looking to position the new airport as a hub for economic activity too. Frost & Sullivan has estimated that there are nearly 11mn tourists annually in the country, of which 5.7mn are aviation passengers. Air traffic is likely to grow at a CAGR of 27.2 per cent over the next decade. In view of this, the airport expansion project assumes special significance, analysts said.

Meanwhile, the Medina airport will be operated as a private enterprise. The country has been moving towards aviation privatisation – the sale of Saudia Airlines was the first of several such steps.



"Besides improving efficiency, privatisation ensures that airport management will have a more focused business outlook that could contribute to the economy of the country. Growth is also more likely in the privatisation setup with airports looking to non-aeronautical revenue sources as well," said Frost & Sullivan senior consultant for business and financial services

Additionally, the Medina airport could also pave the way for the Medina Aerotropolis – an urban area where all business and economic activities are centered around the airport, added the consultancy. Through such measures, the country hopes to make a noticeable impact in the aviation industry. In the near future, Saudi Arabia's aviation sector looks poised for growth, fuelled by enhanced infrastructure, economic conditions, an increase in population with a higher disposable income and an open capital market, Frost & Sullivan's analysts noted.

Qatari firms wins US\$466mn deal to build economic zone

QATAR'S URBACON TRADING & Contracting has won a contract for US\$466mn to design and build a special economic zone (SEZ) in Ras Bufontas in Qatar.

The SEZ will be located near Hamad International Airport (HIA) and will cover an area of 4.1 sqm. It will be a warehousing and logistics hub and the smallest of three economic zones being planned. The other two sites will be in Al Karana and Um Alhoul, UrbaCon stated.

The SEZ will be developed near Hamad International Airport

Moataz Al-Khayyat, CEO of UrbaCon, revealed that the contract would be carried out as a joint venture (JV) between UrbaCon and Spanish company Sacyr.

He said, "It is another successful step by UrbaCon, which proves our ability to lead big construction projects in cooperation with world construction companies such as Sacyr."

Manateq, an organisation that has been established by the Qatari government to

develop economic zones in the country, has awarded both the companies the construction contract.

The project will be completed in phases, with the first sector aiming for a March 2017 finish, added UrbaCon.

Prior to this, UrbaCon has been involved in a number of substantially-sized projects, including the Mall of Qatar. Other projects include the Banana Island Resort, the Sheraton Doha Hotel and Convention Centre and the Lekhwiya Stadium at Al Duhail.





TO BE STRONG, VERSATILE AND RELIABLE



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:











Briefly

Renault Trucks expands operations in Iraq

RENAULT TRUCKS MIDDLE East and Sunflower General Trading Company have entered an exclusive partnership to position the latter as the exclusive distributor of Renault trucks in Iraq. The deal, however, excludes the Kurdistan Region of Iraq, Renault Middle East officials said. Through the deal, the truck manufacturer will consolidate efforts to expand operations throughout Iraq's heavy industry sector.

The new 1,000 sqm service centre and workshop in Baghdad, under construction, will open for business in Q1 2016, said Renault officials. The facility will service existing Renault Trucks customers based in Iraq as well as new Renault Truck vehicles imported by Sunflower.

The service centre will assist Renault Trucks and Sunflower General Trading Company, to service and facilitate a growing aftersales market as well as the existing 2,500 Renault Trucks vehicles in central and southern Irag.

Garmco to build US\$55mn cast house in Bahrain

BAHRAINI ALUMINIUM ROLLING mill, Garmco, has signed a letter of intent with the industrial engineering firm Fives to build a US\$55mn cast house at Garmco's Bahrain-based facilities.

The re-melt project is an EPC turnkey project, which will enable Garmoo to develop its metal recycling capability and lower the cost of metal casting. The project is expected to run for about 21 months starting September 2015. Stage 1 is being managed by Garmco and a local supplier, and involves the construction of a scrap storage area and segregation unit.

Garmco chairman Mahmood Al Soufi said, "This facility will have a number of advantages for us. It will bolster Garmco's position as one of the most sizable employers in Bahrain, and will generate significant cost savings.

"The project, along with a couple of others, forms an integrated part of a three-year strategy and will contribute to the profitability and growth of the company."

Once completed, the new project will enable Garmco to produce 120,000 tonnes of aluminium slabs.

Kuwait seeks to boost construction industry

KUWAIT'S INFRASTRUCTURE SECTOR is expected to grow 20 per cent in 2015, said investment bank Alpen Capital's GCC Construction Industry report. Projects aimed at greater GCC integration and economic diversification are serving as key growth drivers, cited the report. The GCC plans to boost investment in the construction sector by showcasing the region as a tourist and investment destination, helping to increase the industry's value from US\$91.5bn to US\$126.2bn in the three years to 2016, it added.

There is a lot of buzz in the country's construction sector. Based on analysis done on the 100 largest construction contracts in the GCC in 2014, Kuwait stood third after Saudi Arabia and the UAE based on value of projects in the pipeline. In Kuwait, certain major projects are also well poised to attain completion - in June 2015, Cairo-based Arab Contractors said the 142 km-long Al Jahra road project connecting the industrial area of Shuwaikh to Kuwait City was on track to be completed in 2016. The US\$855.7mn project is one of a number of planned infrastructure upgrades. along with the US\$2.6bn Sheikh Jaber Causeway, which will link Kuwait to Silk City; and the US\$7bn Kuwait City Metro, scheduled for completion in 2018 and 2019, respectively.

The report also pointed out the increase in demand for public housing, which is likely to drive long-term residential construction growth. Kuwait's Public Authority for Housing and Welfare announced plans to build 174,000 housing units by 2020. Private contractors can capitalise on several major developments such as the Mutlah Residential Project, Al Subiyah Residential City and Sabah Al Ahmad township. The Kuwaiti government also plans to employ a public-private



Kuwait is keen to enhance its presence in the construction s

partnership model to deliver public housing, including 11,000 units under the Sabah Al Ahmad project, which will house up to 100,000 people upon completion.

Despite the construction sector looking rather promising, experts have cited several reasons as potential blocks. Rising cost of materials accompanied by falling oil prices could very well curtail the country's infrastructure budget, said the Alpen Capital report. According to the country's National Assembly's Budget and Final Account Committee Adnan Abdulsamad, consolidated revenues at state-owned Kuwait Petroleum Corporation (KPC) are expected to fall by 36 per cent year-on-year in the financial year 2015-16.

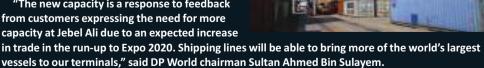
In addition, construction materials are also expensive. The region generally faces a shortage of basic building materials such as limestone, gabbro. cement and steel. Alpen Capital stated that Kuwait's GCC construction index rose 57.5 per cent to 156.4 per cent in the decade to 2013. Raw materials, meanwhile, are expected to rise four to five per cent, exacerbated by supply bottlenecks.

Construction on new terminal at Jebel Ali Port commences

DUBAI'S DP WORLD has begun construction work on the new container terminal in Dubai's Jebel Ali Port.

Phase 1 of Terminal 4 will cost US\$1.6bn and allow for 3.1mn twenty foot equivalent (TEUs) by 2018, taking the total capacity of the port to 22.1mn TEUs. The complex will be equipped with 110 cranes, with a total quay length of about 11,000 metres, said DP World officials.

"The new capacity is a response to feedback from customers expressing the need for more capacity at Jebel Ali due to an expected increase



Jebel Ali Port will be expanded to

cater to increasing demand

Meanwhile, the company said there was an increase of 4.1 per cent in its container volumes the worldover. The Dubai-based company handled 30.6mn TEUs with growth largely driven by its terminals in Europe and the UAE. In addition, Jebel Ali was named the most productive port of 2014 by the Journal of Commerce (JOC)'s Port Productivity Data report. Nearly two million TEUs of capacity at the semi-automated Terminal 3 will be increased in the second half of 2015.





Give your living an EcoPro Comfort



EcoPro Fibre cement board in different application ways ceiling, wall lining or Partition, gives the total thermal comfort form heat & cold condition. Why wait to have this installed.



Flexible



Fits any Edge, Corner



Heat & Fire Resistant



High Impact



Moisture



Territte Penistari



Cool Comfortable

Toll Free: 1800 233 1707

SAHYADRI INDUSTRIES LTD.

Regd Off: Swastik House, 39/D, Gultekdi, J. N. Marg, Pune - 411 037, Maharashtra. INDIA T: +91 20 2644 4625/26/27, 26452064 F: +91 20 2644 4624, 2645 8888 E: info@silworld.in W: www.silworld.in, www.ecopro.co.in CIN No :- L26956PN1994PLC078941 Contact for Dubai:

Cell: 00971 509 202 407 Email: leslie@silworld.in

Contact for Saudi Arabia:

Cell: 00966 503 707 160 Email: ehesangureshi@silworld.in









Building stronger foundations for growth

As the member states of the GCC look to diversify their economies at a time of lower oil prices, business is beginning to pick up for the region's construction industry.

ESPITE GLOBAL OIL prices sharply declining since mid-2014, the global construction industry has demonstrated strong signs of recovery, with surges in property development and infrastructure investment outweighing the decline in oil and gas projects. This conclusion derives from an international study of construction costs conducted by global programme managers Turner & Townsend, one of many firms experiencing an upturn in profits from its activities in the Middle East region, after announcing its own global revenue increased by 45 per cent in 2014-2015. Its Middle East team has grown by 30 per cent to around 300 people across its four offices in the region since 2010 and regional revenue from its Middle East construction consultancy grew 45 per cent to US\$40.44mn.

While the company's *International Construction Market Survey* 2015, which analyses input costs – such as labour and materials – and charts the average construction cost per square metre for

"The construction industry in the UAE is slowly getting back to its previous form" commercial and residential projects in a number of markets around the world, did not cite any cities in the Middle East as "hot" markets, it did state that the global construction industry was beginning to show strong signs of recovery in what it termed a "largely positive" picture.

Turner & Townsend CEO Vincent Clancy remarked, "It's a changing landscape, with some markets seeing significant increases in activity, while others, which were booming, have fallen back.

"Many countries have significant plans to invest in infrastructure, and several cities are poised for further growth led by overseas investors. But, for many, it remains an uneven climb back to the levels of activity enjoyed before 2008."

One clear and positive sign for construction markets in the Middle East, particularly those in the Gulf Cooperation Council (GCC), is the rise in demand being experienced by construction machinery rental firms. On a global scale, demand for construction machinery has been forecast by US-based industry research firm The Freedonia Group, to advance 3.9 per cent per year through to 2019 to US\$218bn. While annual growth has decelerated somewhat from the high levels experienced during the period between 2009-2014 (9.3 per cent), its *World Construction Equipment* study forecast annual growth of five per cent throughout Africa and Middle East outpacing global demand over the same period.

STRONG ON BUSINESS SUITABLE FOR VARIOUS CONSTRUCTION APPLICATIONS





RANGE K

GVW: UP TO 40 Tons (6x4) and UP TO 48 Tons (8x4) Available in different axle configurations.



It's no surprise that the Middle East is among the markets outperforming the global standard – especially in the GCC where the big project announcements, while fewer than during the boom period of the previous decade, remain a constant feature on the news pages of industry publications throughout the region.

Around the GCC

In Saudi Arabia the construction market is picking up, and international construction trade events, such as bauma, have been targeting the country in greater numbers.

The building sector in Saudi Arabia is among the country's fastest-growing sectors and the high level of state investment in expanding the transport infrastructure, says bauma, will ensure above-average growth for the sector.

"Provisional figures for 2014 in the construction industry put growth here at around 6.7 per cent in real terms," event organiser Messe München reveals.

A recent report from Research and Markets, Saudi Arabia Construction Equipment Rental Market Forecast and Opportunities, 2020, found that the construction equipment rental market in Saudi Arabia was forecast to grow at a CAGR of more than 12 per cent during 2014-20.

"Growing preference for equipment rentals rather than purchases, increasing infrastructure spending and easy availability of construction equipment on rent are the major factors propelling the construction equipment rental market in Saudi Arabia," the report's authors comment. The report found that the crane rental segment dominates Saudi Arabia's construction equipment rental market, followed by excavator rental and wheel loader rental segments, with regions in the south-west and north-central collectively accounting for the majority of the country's construction equipment rental market in 2014.

"Robust growth in the construction sector is fuelling the demand for construction equipment in Gulf countries," the report states. "Saudi Arabia is the largest construction market in the GCC region...growth in construction activities is being underpinned by increasing focus of private and public participants to diversify into non-oil sectors."

With close to 300 major infrastructure projects in the planning or execution stages throughout Saudi Arabia, the market is clearly providing equipment rental firms and suppliers with plenty to be positive about, and is continue to drive foreign and local investment in the Kingdom's construction industry.

In Kuwait, meanwhile, US\$188bn of construction projects are believed to be currently at the planning or construction stages, with the country's construction sector set for significant growth, according to the organisers of the upcoming Big 5 Kuwait exhibition.

Ashley Roberts, event director of The Big 5 Kuwait, says, "Kuwait has earmarked US\$7.2bn from its annual budget for 2015-2016 for the construction sector and accelerated the sector's growth."

The Kuwaiti state is planning to develop a host of new rail links and road upgrades, as well as seaports and airports.

Qatar's spending on infrastructure is expected to reach about US\$150bn over the next decade



Construction continues in Qatar ahead of the 2022 FIFA World Cup, despite the corruption scandal that has engulfed world football's governing body (Photo: Sophie James / Shutterstock.com)

The Kuwait government has plans to build hundreds of thousands of government-funded residential units by 2020, in order to help the construction sector continue growing, as well as tackle challenges presented by a reduction in oil revenues and rising raw materials cost.

Research firm BMI, revealed in its latest report that Bahrain would experience construction sector growth of 3.6 per cent up to 2018, thanks to government-led investment in infrastructure and social housing. The report found that Bahrain's government has plans for infrastructure projects worth US\$4.4bn, of which US\$2.2bn has been allocated between 2015-17 towards housing construction, and the rest to be channelled towards the water and power sectors.

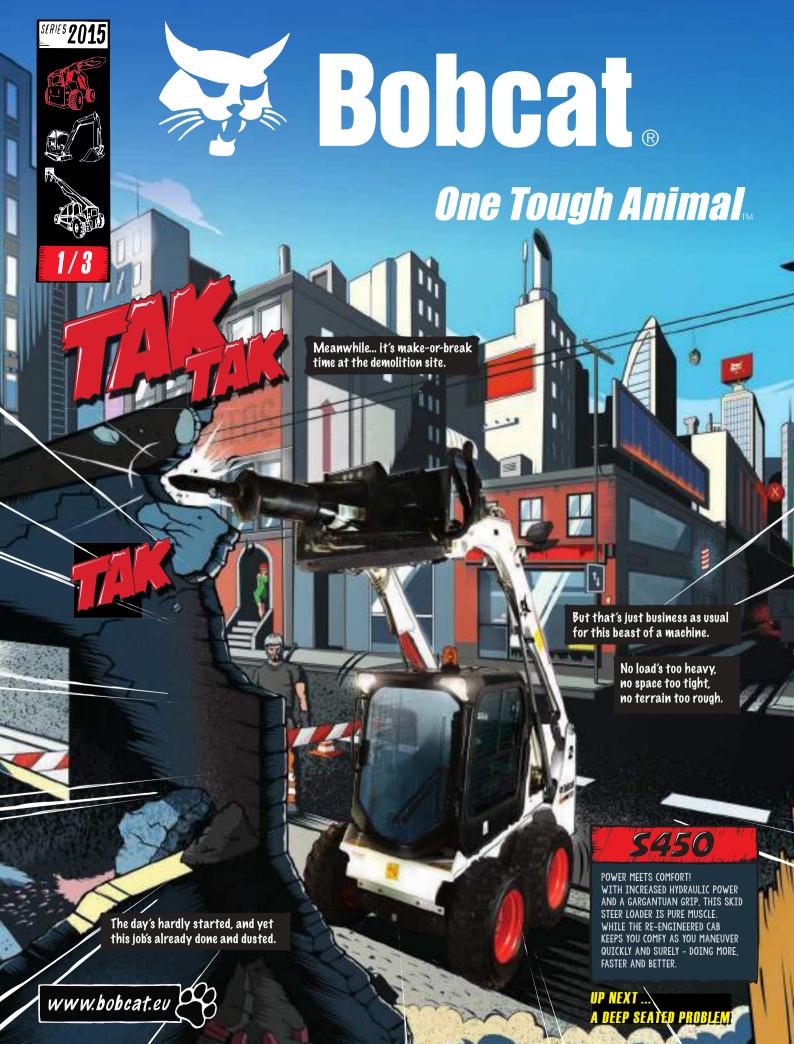
Large-scale industrial projects on their way in Bahrain include the US\$4.8bn expansion and modernisation of the state-run Bapco refinery, a US\$2.2bn production line at Alba, a US\$1.2bn expansion project by Gulf Petrochemical Industries Company, and plans to expand Bahrain International Airport. Technical studies are also under way for the long-discussed US\$5bn second causeway linking the country with Saudi Arabia.

Fast growth in Qatar

In another report from BMI, Qatar is named as "the fastest-growing construction and infrastructure market in the GCC region". The research firm's 10-year forecast found that Qatar's construction industry was experiencing an annual average real growth rate of 10.2 per cent, which will no doubt be elevated as the 2022 FIFA World Cup edges closer.

BMI's Country Risk team says it believes that Qatar's economic activity will continue to expand at a strong pace throughout 2015, driven primarily by growth in the non-oil sector, and supported by a fast-growing population, large government spending commitments, and continued progress on infrastructure projects.

Ahead of the 2022 FIFA World Cup and in line with the country's 2030 Vision development plan, Qatar's spending on infrastructure is expected to reach about US\$150bn over the next decade, with US\$4.1bn budgeted up to 2015 on electricity and water projects,



US\$20bn investment for road construction, US\$40bn for railways and US\$8bn on a deep-water seaport.

BMI's Infrastructure Key Projects Database recorded US\$67bn of transport projects at the planning stage or under construction, while the expansion of the recently-opened Hamad International Airport is also planned.

"We note growth will accelerate in the run-up to 2022, but will falter in the aftermath of the World Cup – although Qatar's Vision 2030 should keep growth positive," remarks BMI.

In Oman, the infrastructure sector is bearing witness to a huge expansion worth US\$78bn, according to IQPC Middle East. IQPC says

that the majority of this investment is allocated to transport infrastructure, with a number of road projects, bridge structures, tunnel construction and national railway network developments to be constructed over the next five years.

In Q2 2015, Drake & Scull Engineering subsidiary Drake & Scull Engineering Oman won a series of major contracts worth a total of AED350mn (US\$95.3mn), which included the delivery of MEP works on the Oman Convention and Exhibition Centre in Seeb, two hotels in Saraya Bandar Jissah near Muscat, and an airport hangar-related facility. These project awards demonstrate the lengths to which Oman's government is going to support and invest in different industries, and all of which is fuelling growth in the country's construction sector.

Ahmad Al Naser, managing director of Drake & Scull Engineering LLC, remarks, "Oman's real estate sector is making steady advances with the announcement of several new and upcoming projects."

After Saudi Arabia, the second-largest Gulf market for construction projects is the UAE, where last year Ventures Middle East revealed in its *GCC Building Construction and Interiors* report, that US\$21.28bn worth of projects in the UAE were due for completion by the end of last year. Since that report was released, the drop in oil prices appears to have had little affect on continued planning and construction throughout the emirates.

Major investment in tourism-related projects, infrastructure and non-residential building segments has continued, and with Dubai's plans for Expo 2020 showing no sign of abating, the market looks set to carry on performing well.

Kanishka Singh, an associate in the construction and infrastructure team at Al Tamimi & Co. told *Technical Review*, "The construction industry in the UAE is slowly getting back to its previous form. If you look at the UAE government's budget, construction is one of the foremost sectors.

"Expo 2020 has created a lot of hype, there are plans to lay new lines and the current metro line is also being extended, while residential apartments and new hotels are being constructed," he notes. "People in the industry are looking forward to 2020, and the authorities are focused on executing Expo 2020's goals and ensuring the related work is carried out without any issue."

The slowdown, it would appear, is finally over for the GCC's construction sector, and, with the investment and commitment to upcoming projects continuing largely unabated, companies should see increased profit margins and growing workforces across the region. If oil prices remain low, but stable, the collective will throughout the GCC to diversify economic activity should ensure a steady stream of business for an industry that has endured sluggish growth in recent years.



The Power behind the Power









Transmission Lines using Monopole



Street Lighting



Telecom Tower for DMRC, Delhi



Automatic Submerged Arc Welding Machine Lincoln, Bode, UK Make



Press Brake LVD, Belgium Make



Radio Remote Controlled Galvanizing Plant Gimeco, Italy Make

Where there's power, there's Bajaj Electricals. The company provides end-to-end solutions for a world of Infrastructure and Illumination requirements. From transmission line towers to street lighting, public utilities, sports stadiums, rural electrification, airports, road signages and more.

Aptly described as the power behind the power, Bajaj Electricals has a full fledged in-house setup for design, development and engineering. The company is equipped with a state-of-the-art manufacturing facility which is ISO:9001, ISO:14001 and OSHAS 18001 certified, with CNC controlled cutting, bending, welding and radio remote controlled galvanizing machines. Bajaj Electricals wishes to make tomorrow shine on.

For Enquiries:

Office No. 209, X2 Towers, Jumeirah Lake Towers, Dubai, UAE Export@bajajelectricals.com | Contact No.: 00971-508690488

Head Office:





Equipment tailored to fit

Over the last six months, many of the major brands of construction machinery have released new pieces of equipment designed specifically for use in the Middle East.

HE MIDDLE EAST remains an important region for international construction companies. Despite the recent fall in oil prices, building schemes continue largely unabated – at least in the GCC states – although the emphasis has shifted from headline-grabbing showcase pieces to more practical infrastructure and industrial projects.

Business research group BMI predicted that the majority of such projects would continue over the coming years, as countries in the Gulf continue to diversify their economies.

Combined with the relative slowdown in construction in the more mature markets of Europe and North America over recent years, this means the region looks set to remain a key market for manufacturers of construction equipment. They have been positioning themselves to take full advantage of the opportunities as they present themselves.

"Within EMEA, the Middle East is becoming more important – especially Saudi Arabia and the UAE"

Bobcat

"The Middle East is one of the most important regions for Doosan," states Gaby Rhayem, regional director Middle East and North Africa at Doosan Infracore Construction Equipment, which owns Bobcat. "Within the EMEA (Europe-Middle East-Africa) region, and especially considering the downturn in the European market, the Middle East is becoming more important due to the many construction projects, especially in countries like Saudi Arabia and the UAE, which are leading the way."

Bobcat has introduced a number of new machines in the region recently, including a new range of telescopic handlers and the S450



Experience the Progress.

























www.liebherr.com info.lex@liebherr.com www.facebook.com/LiebherrConstruction



skid-steer loader, which replaces the famous S130 – a model Rhayem calls a "legend" in the Middle East.

The compact S450 has a 10 per cent larger cab than its predecessor, which is fully pressurised to minimise sand and dust entry, and comes with optional air conditioning – a first for a loader of this size.

Other key features on the machine include improved hydraulic performance – achieved by increasing the system pressure and changing the hydraulic components and hose and tube line routings – as well as a new tailgate design, an integrated rear bumper and enhanced serviceability.

"Many elements in the machines are designed for the hot temperature and the humidity, like the cooling and hydraulic systems," says Rhayem, adding that all models released in the Middle East are designed for, and tested in, the region prior to release.

Volvo Construction Equipment (CE)

"The popularity of value brands – lower spec machines for a little bit less demanding work, for a lower price – in the emerging markets has been growing tremendously in recent years," says Volvo CE's Tomas Kuta, president of the EMEA region. "Value brands today consist of about 80 per cent of the total volume of machines sold around the world, so it's a big chunk."

With this in mind, in June, the company unveiled its new range of wheel loaders – the G series – which were designed specifically for use in the emerging markets of the Middle East and Africa.

The three new models, the L60Gz, L90Gz and L120Gz, have the





same transmission, axels and engine used in Volvo's other wheel loaders, such as the F series, but with certain other aspects of the specification made optional in order to minimise the base cost.

Volvo say the G-series machines also feature load-sensing hydraulics, Z-bar linkage for greater breakout force, and a well-matched powertrain, meaning they are tailored to increase productivity in the most demanding conditions.

Caterpillar

An ability to operate in 'extreme conditions' is a common hallmark of construction machinery designed for the Middle East.

Caterpillar released its new D8R crawler dozer in March 2015, which the company says is adept at operating in the region's disparate mixture of terrains and temperatures.

It has an elevated-sprocket undercarriage for maximum ground contact and greater traction on uneven terrain, an advanced modular cooling system for optimum engine cooling capacity and increased airflow, and improved cab pressurisation to keep out sand.

The company also unveiled its latest range of articulated trucks; the C series. Caterpiller say the machines have a variety of new and improved features including new transmissions with expanded electronic control, automatic traction and retarder control, hill assist and waiting brake systems, as well as engines that meet US EPA Tier 4 Final/EU Stage IV emission standards.

JCB

Emissions are an increasingly important issue for vehicles destined for the Middle East market, with many countries across the region pushing through legislation to bring their laws into line with the more regulated markets.

Dubai, for example, is currently assessing plans for the introduction of Euro IV standards in the near future.

It is against this backdrop that JCB launched its 1CX-T – the tracked version of its 1CX backhoe loader, with a Tier 3-compliant 49hp engine and a power management system that controls transmission output, maximising pushing power while minimising fuel consumption. JCB says the new model also has 14 per cent greater bucket capacity than the 1CX, and 320mm tracks for a lower ground pressure than the wheeled model, allowing the machine to work on loose ground.

The company also recently released the JS370 crawler excavator – a machine it says was designed for the Middle East and launched after "extensive testing and validation…carried out with customers in the region to ensure the machine can perform in the most demanding climates".

Replacing the JS360, this newest model has a six-cylinder 210kW diesel engine and comes equipped with higher capacity cooling packs and a variable speed fan to ensure optimum temperature.

EFFICIENCY ISABIT CLOSER TO SHORE THAN YOU THINK



Built Tough. Engineered To Last.

Engineered for superior performance, Sullivan-Palatek offers the industry's widest range of industrial air compressors from to 5-450 HP, pressures to 200 ps. Designed and built in the USA, we make sure to provide you the power and reliability needed to get any job done on time. For more information: Call or visit us online for details.

SULLIVAN
PALATEK
PALATESSORS
POWER UNDER PRESSURE

Lighting the way to safer construction

Andrew Kimitri, CEO of Fhoss Technology, discusses the development of high-visibility clothing and the role the it is playing in making construction sites safer throughout the Middle East.

HE BOOM BEING experienced by the construction industry in many parts of the Middle East has seen an increase in issues surrounding standard high-visibility clothing, as many firms ask how the industry can benefit from wearable technology for personal protection and keep their workers safe¹.

In 2014 it was reported that as much as US\$114bn worth of construction project contract awards were made, which is good news all-round for businesses operating in the region, as well as for GDP as a whole. However, the increase in construction projects has inevitably brought about a series of knock-on effects.

A few of the issues faced by the construction industry have been well documented in the media, with construction workers suffering the ill effects of working in the region's soaring daytime temperatures. The UAE's response to ban labour work between the hours of midday and 3pm during summer months seems a sensible approach.

For companies that choose to avoid the midday sun and allow work to take place during the hours of darkness, or indeed any company that has employees who frequently work in areas of low light, there is an option that could transform the way they protect their staff.

Evolution of the high-vis jacket

Since the appearance of high-visibility clothing back in the 1960s, the yellow jacket has slowly evolved and with the introduction of European and international standards, the overall design and effectiveness of the high-vis vest has improved over the years.

The main issue with the traditional highvis vest, however, is that it requires an additional light source or 'ambient light', for the garment to light up. This can be problematic in many areas of construction spaces where such light is not always



available. Given that the high-vis vest has been around for so long, its functionality has remained relatively unchanged, and it is clear that the vest needs to evolve so that workers in outdoor spaces – especially those who work in the hours of darkness – can be seen at all times.

Thinking creatively about construction site lighting

Powered light safety wear is a new technology that allows garments to light up without the need for an additional light source. The technology works through the presence of a battery-operated electroluminescent core, which actively emits light. This, combined with prismatic high-visibility reflective tape, provides a garment that, when worn in complete darkness, can be seen up to 1.5 miles (2.41 km) away (Source: Network Rail, UK).

Some of the major players in highways, construction, aviation and railway in the UK, including the London Underground, Network Rail and Balfour Beatty, have already bought into the technology.

In 2014, Garry Pratt, senior project manager at Transport for London and his team carried out extensive trials of Fhoss products on the Jubilee Line of the London Underground.

"The results and overall feedback have been outstanding and users have commented on how safe they feel when wearing the garments," comments Pratt. "Not only do the men on the ground stand out more, but they are able to spot their colleagues from a good distance away."

In recent months, Fhoss has been working with companies in the Middle East to develop a product suitable specifically for workers in hot and humid temperatures. Made from breathable mesh fabric, the Fhoss FiLumin is a lightweight and self-illuminating safety vest that keeps workers lit up in all weather conditions, as well as in areas of total darkness.

It is clear that investing in up-to-date, high-visibility workwear is something that companies in the region should be taking very seriously.

I feel very strongly that the future of high-visibility clothing in the construction industry worldwide has to lie in powered light safety wear and it is my personal goal that by 2025 this technology will be commonplace at construction sites across the Middle East.

¹http://www.bruceshaw.com/ knowledgecentre/chapters/middle-east









Cables, Wires & Accessories

- Power & Infrastructure Cables
- Flexible Control & Data Cables
- High Flex Cables for Drag Chains
- Instrumentation Cables
- Rubber & Mining Cables
- · Cable Glands & Conduits

HELUKABEL Middle East, Dubai

Waseem Ashgar · info@helukabel.ae PH: +971 4 8879594 · FX: +971 4 8879266

Cable Expertise

- · 30,000+ Products in Stock
- · 30+ Years in the Industry
- 50 Global Warehouse Locations
- 6 Manufacturing Sites
- Custom & Specialty Cables
- Dedicated Customer Support

HELUKABEL® Headquarters, Germany

Andreas Klotz · info@helukabel.de PH: +49 7150 9209392 · FX: +49 7150 9209 5392

Four Pillars of Electricity Management



When it comes to electricity, our range of Protection, Power, Distribution and Control devices ensure that there is all round efficiency in electricity management, be it Residential, Industrial or Utility application, our time tested products are ever efficient and safe.





MCB



MCCB





Fuses



Feeder Pillars





ACB

Contactor

For more information, please contact:

E-mail: international@indoasian.com Website: www.indoasian.com



Briefly

3M in US\$2.5bn Capital Safety acquisition deal

US MULTINATIONAL 3M has agreed a deal to acquire safety equipment provider Capital Safety.

Under the terms of the agreement, 3M will buy the company from KKR & Co in a deal worth US\$2.5bn, making it the largest acquisition in 3M's 113-year history.

Global demand for safety equipment has been steadily rising, fuelled by increasingly stringent worker-protection regulations in emerging market countries, which has contributed to 10 per cent annual growth in Capital's sales over the last four years.

The acquisition of the Minnesota-based company, which specialises in safety equipment for industries such as construction, mining, oil and gas, utilities and transportation is due to be completed in Q3 2015.

"Personal safety is a large and strategically important growth business in the 3M portfolio," said 3M CEO Inge G Thulin. "The acquisition of Capital Safety bolsters our personal safety platform and will build on our fundamental strengths in technology, manufacturing, global capabilities and brand."

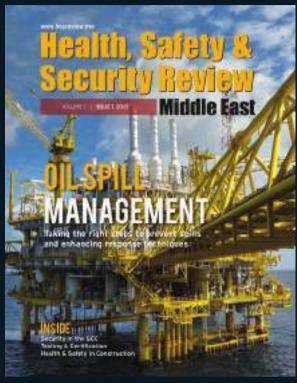
Capital Safety produces harnesses, lanyards, self-retracting lifelines and engineered systems sold under the DBI-SALA and PROTECTA brands.

Alain Charles Publishing launches new health and safety title for the Middle East

THE COMPANY BEHIND Technical Review Middle East is set to launch a new title targeting the Middle East's burgeoning market for products and services from across the health, safety and security sectors.

Alain Charles Publishing's latest publication, Health, Safety and Security Review Middle East, will be printed four times a year and will feature the latest news and developments from across each of these fast-growth sectors. Each issue will include exclusive interviews with leading industry players and opinion pieces from world-class safety and security practitioners. The publication is being supported by a website, which has already been launched, featuring the latest news, product launches and a comprehensive guide to industry trade shows.

"With the global personal protective equipment market expected to be worth US\$55.5bn by 2020, and with the huge amount of innovative safety devices and products that are helping keep



The first issue of Health, Safety and Security Middle East will go to press in August 2015, while www.hssreview.me was launched in June 2015

workers throughout the Middle East safe, the time is right for us to launch this new industry platform," said Derek Fordham, chairman of Alain Charles Publishing.

"Bringing security to the fore is also a great idea, as this market is ever-growing thanks to the broad scope of products available, as well as the large amount of investment being pumped into developing the latest security technologies."

To find out more about the publication, or to stay abreast of all developments from across the health, safety and security sectors throughout the Middle East, visit www.hssreview.me.

Training centre for industrial workers enhanced in Kurdistan Region of Iraq

STIRLING GROUP HAS opened new training facilities in the Kurdistan Region of Iraq for workers from the construction and energy sectors.

The group has expanded an existing facility in Erbil and will now be able to offer a range of new courses, such as fire team member and leader, working at height and rescue, and confined space entry and rescue. Other courses now on offer include lifting and hoisting, forklift, incident management, and H2S and self-contained breathing apparatus.

The decision to launch the enhanced facility follows an increase in market demand for practical and advanced training, health, safety and environmental (HSE) services, according to Sterling.

Highlights at the Stirling Group Training



The Stirling Group Training Centre features a fourstorey training rig that mirrors environments found in the construction and oil sectors (Photo: Elena11)

Centre include a four-storey training rig with internal structures, which has been designed to mirror the environments that oil and

construction workers face in day-to-day operations. The centre also features the latest training equipment, including Haagen virtual fire training technology.

Angus Neil, managing director of Stirling Group, said, "This is the latest step in the development of our training base in the Kurdistan Region of Iraq to ensure we continue to offer the very best training facilities in the region. The hands-on, simulated approach goes well beyond traditional classroom training."

Stirling now has plans to establish similar training centres in Slemani and Duhok, as it looks to support competence development for the oil and gas and construction industries across the Middle East.

COMMITTED TO THE LONG HAUL

Terex® Trucks off-highway articulated and rigid trucks

Terex Trucks has been designing and manufacturing off-highway trucks since 1950, delivering to customers all over the globe.

Fully supported by a solid distributor network, Terex Trucks is committed to the long haul, providing a range of tough and reliable trucks that deliver the lowest cost per tonne in the most extreme environments.

- Full range of articulated and rigid off-highway trucks
- ▶ Backed up by a Terex Trucks distributor network
- ▶ Focused team dedicated to developing and supporting Terex Trucks







Keeping the power switched on

Most contractors have a genset available to supply standby or permanent power. Around the world safe and reliable diesel is the favoured engine technology on construction sites, but voltage problems can often be traced to the output end.

aINTAINING AN ENGINE generating set is normally a two-stage process. First comes making sure the prime mover actually starts immediately and runs up to speed / working temperature smoothly. This is a routine process based on checking the condition of the battery, the actuation of system controls, the status of all warning lights and alarms, and the fuel supply including the injectors themselves.

It is also a case of ensuring that there is an adequate volume of diesel in the tank, both the oil switch and governor handle have

been turned on, and that both air and exhaust systems are clear. All of which are routine procedures for any diesel mechanic on the road or on a construction project.

With any industrial-scale engine generator, however, there are further checks to carry out at the output end where the brushless alternator (if fitted) is located, invariably driven by a rotating mechanical shaft (PTO). Subsidiary on/off controls are likely to be installed at this end and need to be checked for status.

The most likely cause of inadequate volts being supplied following start-up is a

damaged solid-state capacitor or old-style condenser, which can be readily changed on the spot.

If inadequate or nil power output is still indicated, then the second probable cause is a short circuit within the rectifier assembly, which can be checked with a hand-held multimeter. The next step is to ensure a good connection is being maintained between this key component and the coil itself, another task for that handy little measuring device. With all this done, adequate power should be available when the engine is up to speed.

The voltage available, however, may still be below specification, in which case the engine controls and/or governor may not be working properly – a job for an engine mechanic rather than an on-site electrical technician. Low-output voltage may also be due to short-circuiting of the rotor reels or the stator within the alternator itself; after routine checking of performance these key components may themselves need to be changed. Well-organised construction sites have original-supplier approved (OEM) spares in store; the genset is just as important as the other plant employed.

Other reasons for voltage drop may include slipping of the power take-off shaft, another task for the diesel specialist first as this can lead to overheating of the damage-prone alternator assembly, about which the electricians are not going to be happy. Overheating may also be due to a short circuit existing within the rotor or stator assemblies; again these should be changed with OEM supplies if necessary. With some of the obscurer nameplates found on gensets in the region, these may be difficult to source.

With the alternative brush-type alternator, power output problems can be due to wearing out or even mis-fitting (pole reversal) of this critical carbon component. Over-high voltage is rarely encountered because of the automatic operation of the machine's own regulation system; low-



Genset operators
throughout the Gulf
have access to
specialised suppliers
of both original
equipment and
after-sales services

voltage indications are likely to be due to problems within the AVR system itself (most likely as this device is susceptible to burn-out and other malfunction), the rotor or stator, all of which should be checked and, if necessary, changed.

Once again, PTO shaft slippage or shortcircuiting of either rotor or stator may be the cause of the overheating, in which case checking of these components should be

TESTING & CERTIFICATION



carried out before the engine is taken apart for corrective maintenance to be applied to the power shaft itself

Genset operators throughout the Gulf have access to specialised suppliers of both original equipment and after-sales services. The national-scale construction / building materials trade exhibitions such as Buildex, the Big 5 series of course and Saudi Build are well supported by the genset industry,

whose sales and service specialists know just how much reliance is placed on their high-tech products to keep MENA projects on the move.

More specialised events may be of interest too; Power-Gen ME (4-6 October this year, Abu Dhabi), Middle East Electricity (1-3 March 2016, Dubai) and Saudi Power (9-11 May 2016 in Riyadh) are all worth checking out. ■

Over Five Golden Decades of Dedicated Service to

or over five decades now one name has facilitated Applied Research in electrical power.

or over five decades now, one name has facilitated Applied Research in electrical power engineering, enabling Testing and Certification of electrical Power Equipment as an Independent Third Party laboratory - CPRI. The Institute is renowned Internationally as a reputed brand and well-recognised for its Quality and Excellence. CPRI is adequately equipped with advanced infrastructure to handle Collaborative Research with Academic Institutions and Training to Utilities/Industry.



CONSULTANCY SERVICES

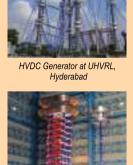
 Smart Grid initiative – Design and Development of Pilot Project for BESCOM • Third party Inspection and supervising work under RGGVY scheme • Diagnostics & Condition Monitoring of Power Equipment • Consultancy in Power System Studies • Power System Protection Audit • Energy Efficiency & Audit Services • Third Party Inspection Services & Vendor Assessment



• Customised Training Programmes • One Year PG course on Testing & Maintenance of Electrical equipment

ACCREDITATIONS

- . Member Short Circuit Testing Liaison (STL)
- . Accredited as per ISO/IEC 17025:2005
- . Corporate Member in DLMS UA, UCA IUG
- ISO 9001:2008 Certification for Research and Consultancy activities



2400kV, 240kJ Impulse Voltage Generator



Accessories up to 400kV

 Center of excellence for undertaking Collaborative and advanced Research in Power Sector • Sponsored Research Projects of relevance to Power Sector • Coordination of National Perspective Plan Projects

State-of-art Test facilities for High Power Short Circuit, Ultra

High Voltage, High Voltage testing of Transformers and

Switchgears, Cables and Capacitors, Transmission Line

Towers, Material characterisation, Seismic Qualification,

Power System Studies, Energy meter testing • Facilities for

testing equipment of 800kV/1200kV rating • Protocol testing

for Power System Automation . Refrigerator and Air-

Conditioner test facility • Pre-Qualification Tests on Cables &



केन्द्रीय विद्युत अनुसंधान संस्थान CENTRAL POWER RESEARCH INSTITUTE (Autonomous Society under Ministry of Power, Govt. of India) Prof. Sir C.V. Raman Road, Sadashivanagar P.O, P.B. No. 8066, Bangalore - 560 080, INDIA Phi: +91-80-2360 2329 Fax: +91-80-2360 1213 E-mail: hegde@cpri.in / kamala@cpri.in / shyamr@cpri.in / manoharnagula@cpri.in Website: www.cpri.in

CPRI UNITS: BHOPAL, HYDERABAD, NOIDA, NAGPUR, KOLKATA, GUWAHAT

Energy-efficient standards driving global air compressors' market

THE GROWING REQUIREMENT to conform to energy-efficiency standards and reduce carbon emissions have been cited as leading trends within the global air compressors market in a report made available by online market research firm ReportsnReports.com.

According to the *Global Air Compressor Market: Forecast and Statistical Analysis 2015-2019* report, developing countries and regional government bodies, predominantly in Europe and North America, have been taking stringent steps to ensure that various types of industrial equipment, such as motors, compressors, pumps and fans, conform to the respective regional regulations. The report also states that vendors within the market have been facing increasing pressure due to high costs associated with compressors. The report considers revenues generated from the sale of positive displacement (PD) compressors and centrifugal compressors, as well as the stationary and portable

segments within the compressors industry, and revealed that the PD compressor segment accounts for the largest share of the market.

For the forecast period of the report, PD compressors are expected to continue leading the sector. The report stated, however, that when demand is continuous and requires time-oriented operational capabilities, centrifugal compressors are preferred by industries requiring high compressed air. While centrifugal air compressors are often costlier than PD variants, they require lower maintenance. The report noted that centrifugal compressors would, over the forecasted period, witness a relatively higher demand from

ATLAS COPCO HAS launched its UD+

industries that require a continuous supply of oil-free compressed air. Among the companies recognised by the report as "key players" in the global air compressors market were Atlas Copco, Ingersoll Rand and Kobe Steel, with other prominent vendors including BOGE, Doosan, Dresser-Rand, Gardner Denver, GE, Hitachi, Kaeser Kompressoren, Kirloskar, Mitsubishi, Siemens and Wuxi Compressor.

The report stated that end-users were moving towards newer technologies such as variable-speed drive (VSD) compressors, oil-free compressors, controllers and other high-quality products that increase efficiency and reduce energy bills.

It added that various government regulations that are set to be proposed would define the course of the gas compressors market in the future, noting that the US Environmental Protection Agency and the Department of Energy have been formulating various guidelines relating to industrial equipment energy efficiency

requirements that include compressors.

The 76-page report, added that the EU had also enacted regulations regarding compressor and vacuum pump safety, in order to make compressor operations safer and to reduce harmful emissions.

The report further stated that government scrutiny regarding the flouting of rules could increase during the forecast period, which would also place strain on the vendors within the gas compressor market.

Energy-efficiency and reducing carbon emissions are trends that have been transforming the global air compressors market, according to a report from ReportsnReports.com (Photo: Vereshchagin Dmitry)

Atlas Copco launches 'two-in-one' air filter

coalescing compressed air filter, combining two filtration processes in one product. According to its manufacturer, the UD+ is "unique" to the market, helping users achieve energy savings and "reliably" clean compressed air. The UD+ is a two-in-one filter, which combines the reliability and performance of wrapped filters with a 40 per cent reduction in pressure drops when compared with pleated filters. "Our compressed air solutions are of the highest quality, so our air treatment solutions should be too," said Paul Clark, business line manager - industrial air at Atlas Copco. "With the UD+, we have launched a compressed air filter innovation that saves space, energy and money without compromising on reliability and air quality."

Traditionally, two inline filters are required to bring oil aerosol and solid particles in the compressed air down to acceptable levels for most applications (ISO 8573-1 Oil class 1 and 2; ISO 8573-1 Solid particle class 1). The UD+ replaces both filters, therefore saving space and reducing pressure drops by 40 per cent. Testing has demonstrated that the UD+ achieves the air quality of two traditional filters, due to the glass fibre filter media package, which is wrapped around the filter. According to Atlas Copco, the technology is more efficient and offers increased reliability over traditional, pleated filters, which are prone to cracking. The UD+'s reliability and performances have been certified according to ISO 12500-1:2007 and ISO 8573-2:2007 standards by TÜV Rheinland, with available models ranging from a capacity of 9 l/s to 8000 l/s.



Atlas Copco's UD+ coalescing compressed air filter combines two filtration processes in one product (Photo: Atlas Copco)





Lowest Life Cycle Costs

With the highest efficiency motors at 97.1% and the latest in extended life materials technology, both the VH and WH range continue to out perform all other 40 bar (g) oil free compressors in the PET industry.

Belliss Morcom

VH compressor

Performance summary

- 420 to 1.500 m³/hour at 40 bar (g)
- 90 to 260 kW direct zero drive loss 'shaftless' motor
- Oil free
- Water cooled
- 3 stages
- Capacity control 0 to 100%
- Variable speed capacity range from 50 100%
- Fully balanced operation

WH compressor

Performance summary

- 1.680 to 3.200 m³/hour at 40 bar (g)
- 280 to 550kW direct zero
- Oil free
- Water cooled
- 3 stages
- Capacity control 0% / 50% / 100%
- Variable speed capacity range from 30 100%
- Fully balanced operation

Chemicals adding eco-friendly incentives

Optimised concrete mix design is just one of a range of sophisticated new possibilities made available by German chemical producer BASF.

AVING LAUNCHED A family of 'Master Builders Solutions', the Construction Chemicals division of BASF has maintained that the world's building industries account for around one-half of total energy and resources consumption. Just how these are measured for comparison is not quite clear, but the company says they can be significantly reduced "if you just add the right chemistry".

As just one example, the German chemical giant's new 'Green Sense' concrete technology has been specifically developed to improve the economic performance – including energy demand – of new structures, through resource-efficient production and processing techniques. These improve performance characteristics such as resilience, workability and durability, as well as acceptance by environmentalists. All of this is achieved by optimising and ecoanalysing the concrete mix itself, including the use of hyperplasticizers such as BASF's own MasterGlenium.

As a result of using the mix, savings of around 15,800 tons of CO_2 equivalent have been claimed, as well as significant reductions in fine dust emissions and more than 25,000MWh in total, during the erection of the new One World Trade Center building in New York. All of these savings have been compared with using conventional mix design.

The package was first used in Europe in a seven-storey project at BASF's own new headquarters. With a total area of 35,000 sq ft, this has provided 1,400-plus work places in conformity with the 'Gold' certification standard of the German Sustainable Building Council (DGNB).



By incorporating the right chemicals into the latest building techniques, the construction industry could save significant amounts of energy and money (Photo: zhu difeng)

This LEED-equivalent award demands the highest performance through all stages of a building's life, including construction, daily use and ultimate dismantlement.

More than 2,000 cu/m of concrete were processed in the casting of the structure's foundation slab itself, using a mix design that was optimised using the company's Green Sense eco-friendly efficiency-analysis techniques.

"We have aligned our concrete admixtures with the raw materials used by the concrete manufacturer, thereby achieving savings of around 30 per cent in CO_2 equivalents compared with a conventional concrete mix design," said Dr. Sven Asmus, the executive responsible for concrete admixtures.

Green Sense concrete technology has been developed to improve the economic performance of new structures

BASF points out that another benefit is the substantial reduction in installation-related noise at the busy city-centre site. This was because two special admixtures, including MasterGlenium, were incorporated into the flowability and the self-compacting properties of the mix were improved significantly, making it largely unnecessary to use vibration after the pour. This would be a feature much appreciated by sleep-deprived residents in the Gulf's urban areas, where 24-hour working is now the norm.

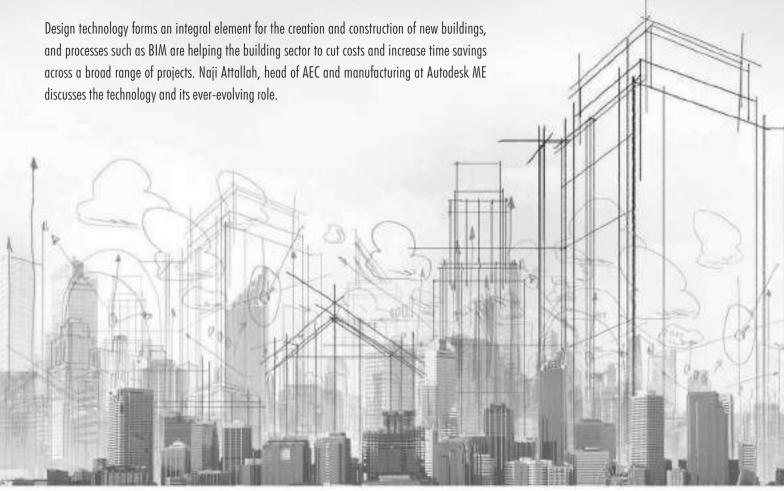
At all stages clear documentation and complete transparency of the entire construction process are required if the Gold standard of sustainability is to be achieved in Germany itself. BASF's own 'Life Cycle Analyzer' software can be used to enable concrete suppliers and placement operators to improve their process efficiency in terms of raw materials selection and energy consumption, as well as the quality of the final poured product.

The company says the combination of market know-how, research competence and consultancy expertise makes its Green Sense concrete technology "an elaborated, field-proven concept for sustainable construction".

Now available is a new range of branded products that have been designed to make the construction process more mindful of the environment generally, resulting in sustainable buildings that are more durable and efficient throughout their life cycle, and less taxing on the earth's physical resources too, says the company.



Design on demand



TECHNOLOGY is expected to play a key role in how we are going to plan, design, build and operate infrastructure. It is critical that we adopt next generation technology, as the money available today is not enough to meet the challenge using traditional methods and tools. If we don't become more efficient, the roads and bridges we drive on are going to fall apart, along with a host of massive infrastructure failures. Technology today helps us increase productivity, have more accurate material take-offs, avoid clashes and reduce site rework.

Computer-aided design (CAD) is commonly used in all developments, large and small scale. Autodesk AutoCAD is one of the defacto standards for detailed design. Increasingly enhanced, discipline-specific CAD, such as AutoCAD Civil3D or Autodesk Revit are being adopted. These provide design engineers with technology enhancements that enable cost and time savings, as well as more accurate and rapidly changeable designs by offering dynamic, intelligent 3D CAD models.

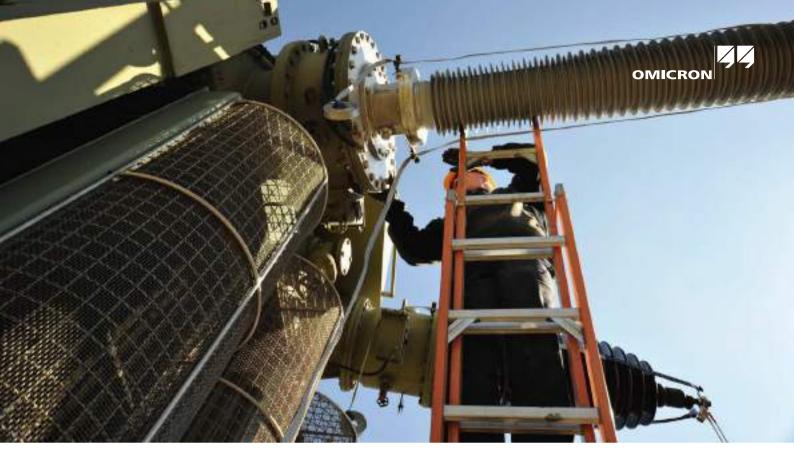
The use of CAD for any project greatly helps to enhance the creative abilities of an individual or design team—allowing to fully visualise and communicate their ideas.

A place in history

In 1982, Autodesk made a major leap forward from the birth of the personal computer, the IBM PC, with the release of AutoCAD. Being technology pioneers of this time, the company has been dubbed as the disruptor in the Era of Documentation. The challenge Autodesk addressed was to move

2D drawings onto a computer and the release of AutoCAD helped them lead the way. The company made another bold step forward during the Era of Optimisation, by creating 3D models and using them to visualise and optimise a design before a prototype was even built.

Today, industry analysts have pointed out that we are entering a new era, the Era of Connection. This new era throws the spotlight on building applications and solutions that not only connect a community of people to a 3D model, but also connects them to the new means of production, the new means of consumption, and supports the new definition of what a product is. This era of connection is made possible thanks primarily to the emergence of the cloud, a natural hub of collaboration that brings with it incredible agility.



Extend the service life of your bushings and transformers

You will always know the condition of the insulation in your bushings and power transformers with the MONTRANO online monitoring system from OMICRON. This is important because insulation degradation is a major cause of failure and costly outages.

MONTRANO continuously checks common insulation fault indicators, such as capacitance, dissipation/power factor, partial discharges and transient overvoltages. When they exceed acceptable limits, the system sends an alert and shows you in which bushing or transformer likely faults are developing.

MONTRANO software lets you quickly see trends anytime and anywhere, using the convenient web interface. The data helps you to quickly decide if maintenance is needed to keep your bushings and transformers healthy for a longer service life.







Training programmes

While foreign Building information modeling (BIM) resources will continue to play a key role throughout the Middle East, a lack of local BIM resources would not be a major issue to address. Firms can train and enable their staff through short-term training programmes tailored by Autodesk for authorised training service providers. These are effective fast-track training programmes. In addition to training people, we also need to consider revisiting and enhancing the 'processes' to support the BIM Transformation.

Amid the growing adoption rate of BIM in the Middle East region, there are still certain sectors that are not aware of the advantages of BIM. "Amid the growing adoption rate of BIM in the Middle East region, there are still certain sectors that are not aware of the advantages of BIM"

BIM will increasingly become the norm for the design and maintenance of buildings, and its widespread use is central to implementing the UAE Government's construction strategy.

Autodesk University was introduced in the Middle East in 2012, and 2015 will be its fourth consecutive year. Last year's edition was dubbed the 'largest CAD event in the Middle East', boasting an attendance of more than 700 design and engineering professionals, students, creative hobbyists and design enthusiasts from various

industries. The event served as a strategic and unique platform for participants to 'Learn, Connect, Explore' through activities that included interactive workshops, demonstrations, knowledge sessions and an exhibition.

Sustainable solutions

Autodesk offers sustainability options that provide essential tools for green building design, manufacturing, energy modelling and sustainable infrastructure projects. The Middle East is at the forefront of developing Smart City solutions, meeting the rising demand for energy and resources from a large and growing urban population. The region's transition from a resource-based to a knowledge-based economy is helping fuel the concept of smart cities.

security, transportation and mobility, sustainable development and citizen engagement,

challenges in water and energy,

Cities in the region face unique

with governments now looking to find new ways to manage these complexities with the increased pressures of urbanisation.

Hosting the World Expo 2020 will allow Dubai to position itself among the world's top 10 sustainable cities, providing both residents and visitors with a highly connected, technology-centric environment committed to optimisation of resources. In line with this, His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, has launched a strategy to transform Dubai into a Smart City, featuring 100 key initiatives within the pillars of life, society, mobility, economy, governance and environment.

In the cloud

Users today expect access to information on an anytime, anywhere basis and in a format relevant to their task to be able to instantly collaborate with project stakeholders. Autodesk cloud and mobile technologies are not only addressing this challenge but also, in some cases, leading. Autodesk is trying to balance the paradigm of project expenditures in the office versus expenditures on site, while also allowing access to technology on site using cloud and mobile. The company has recently developed BIM 360 field construction field management software, which combines mobile technologies for on-site use with cloud-based collaboration and reporting.

The solution is aimed at giving construction professionals the advantage of new ways to manage field processes, such as quality, safety, and commissioning checklists; distribution of plans and drawings; and mobile 3D and BIM construction document access.

The onset of cloud and mobile technologies is ushering in a new way of working and managing projects. Autodesk software like Revit enables owners and operators of construction projects to conceptualise, plan and implement construction projects through BIM. In utilising these technologies, the entire construction process too has become virtual and mobile.

Naji Attallah, head of AEC and

manufacturing at Autodesk ME



The Middle East Health & Safety Forum will address the key challenges and solutions for health, safety and environment professionals and provide a platform for debate and solution-finding for regional industries:

OIL & GAS | CONSTRUCTION | INDUSTRIAL | MANUFACTURING | MARINE



BENEFITS OF ATTENDING:

- Examine and understand aspects related to regulation and compliance issues
- Maximise business opportunities through better HSE management
- Hear and gain cutting-edge industry insight from HSE leaders
- Benefit from 12 workshops focused on HSE management systems, critical safety processes, safety strategies in a complex work environment, injury prevention techniques and more



Silver Sponsors









Organised by



Bronze Sponsors











Media Partners



































www.hse-forum.com

For more information and to register: 2 +971 4 448 9260





Building a platform for power players

Following the successes of the 2015 edition of Middle East Electricity earlier in the year, Anita Mathews, director — Informa Energy Group, discusses this year's event and the organiser's plans for the 2016 edition of the region's leading power trade show.

Technical Review ME: What kind of feedback did you receive following the 2015 edition of Middle East Electricity (MEE) and what plans do you have in place for 2016?

Anita Mathews: The feedback this year has been overwhelming. MEE celebrated its 40th anniversary edition in 2015 and what better time to celebrate than when it is the largest it has even been. This year we received more than 20,000 visitors representing 126 countries – the most we have ever received. The internationality of MEE was also replicated in our exhibitor stats, with 61 countries represented, 24 national pavilions and close to 1,500 exhibiting companies.

A staggering 99 per cent of our visitors would recommend attending to a colleague, with nearly the same amount planning to return for the 2016 edition of the show.

Nearly half of our visitor profile this year was made up of distributors, agents and contractors – all who have significant purchasing power and were looking for new products to source – and more than 85 per cent of the floor space at MEE 2016 was booked within two months of the closing the doors on the 40th anniversary edition.

While we are still in the planning phase for 2016, we are aiming to increase our international participation, both in visitors and exhibitors, grow our lighting and sustainable solution show areas and deliver an even more thought-provoking, engaging seminar content schedule.

TRME: How important is it to have new products launched at MEE and how do you encourage exhibitors to use the event as a product launching platform?

AM: In the words of John A. Griffiths, chief executive officer of Lucy Electric, "We use MEE as a showcase for both our internal product development activities, as well as



Anita Mathews, director – Informa Energy Group

thanking our customers for their loyalty and ongoing support throughout the year."

Companies that exhibit with us, whether it be newcomers or long-standing stakeholders, see MEE as the leading platform to put their latest products directly in front of the people they would like to see them – both regionally and internationally.

Naturally, there is the networking aspect of the event, as many of our exhibitors use MEE as their annual networking opportunity to meet with their clientele.

One way we have tried to expand our offering to visitors and exhibitors alike is, for the first time ever this year, including a part of the show dedicated to lighting. As one of our fastest-growing areas for a number of years now, the demand for floor space dedicated to this was too great to ignore so we increased the overall floor space by an additional 21 per cent to match this.

TRME: What is it about MEE that has seen it continually ranked among the world's leading power events?

AM: I think one of the most important factors is to never lose sight of managing the expectations of the key stakeholders, to ensure that we are able to satisfy the requirements of our exhibitors, visitors, sponsors and partners. I don't use the term lightly when I say that 'stakeholders are key', and one of the main drivers of the event's success has been maintaining our focus on this.

For many of our exhibitors we have grown right alongside them, building the trust that is required to ensure the longevity of our event. We also strive to make sure that the core profile of the event remains undiluted and we aim to deliver the right customers to our exhibitors and vice versa.

Currently, the show is spread over 14 halls at the Dubai World Trade Centre and we have approximately 25,000 products on display during the three-day event. It is critical that we manage the visitor flow perfectly, ensuring all visitors who attend the event are able to meet with the manufacturers and suppliers within their areas of interest without any hassle.

TRME: Last year saw the addition of three new national pavilions (Egypt, Morocco and Czech Republic). How did these pavilions perform and can we expect any new national pavilions in 2016?

AM: The country pavilions at MEE have been growing steadily over the years, both in terms of size and number. National pavilions play a very critical role at our event; the manufacturers enjoy the government subsidies and support that helps them with their participation, while, at the same time, the visitors are able to locate products and services from specific countries from within the various country showcases.





For 2015, we recorded an eight per cent increase in national pavilions, and a seven per cent increase in exhibiting countries. Our existing pavilions average a growth of five to 10 per cent year on year with a few of them showing exceptional growth.

This year, Saudi Arabia posted a growth of 210 per cent and Turkey 78 per cent. All new pavilions added to the 2015 edition are looking at a bigger presence for the next edition.

TRME: How well did the new commercial lighting conference perform and do you plan to cover any other industry segments on 2016's conference programme?

AM: The conferences that we run alongside MEE are deemed as knowledge-sharing platforms that add value to the visitor experience. We undertake research every year to gauge the needs of our stakeholders in developing the conference subjects and this year we launched the lighting conferences due to an extremely high demand post-MEE 2014.

The conference was very well received and we definitely plan to continue to build

on it in the coming editions. The core themes and topics will of course be decided once again after we complete our research for 2016.

TRME: Solar Middle East appeared to be busier than ever in 2015 – has this industry sector begun to reach maturity in the Middle East?

AM: Solar Middle East is certainly one to watch and it has proven to be incredibly successful in the very short time it has been running. The inaugural edition of the show in 2013 received 4,700 visitors over three days compared to 6,877 this year, representing an impressive 46 per cent increase in visitor attendance in the first two years alone.

Another interesting figure is that out of the 6,877 visitors we received this year, over half of them were unique visits – a testament to the increased interest in sustainable solutions and Dubai is definitely one of the regional leaders in this regard.

Sustainability is being actively integrated into all aspects of the economy, whether it be energy, transport, hospitality or

agriculture. Dubai also aims to become one of the top 10 sustainable cities in the world by 2020, which will largely be achieved by investing further in solar power, whether for garden lights or water heaters, pumps, buildings and grid-tied generating stations.

Host to 20 leaders driving the region's solar industry, the Solar Middle East Conference, which took place on day two of the show, looked at a number of issues currently surrounding the industry such as recent rooftop regulatory developments holding the promise of making solar viable. With solar technology prices at their lowest in years, a large focus of the exhibition and conference was winning and building business.

Solar Middle East 2016 has posted a yearon-year growth of 135 per cent in exhibition space booking as of 1 July 2015, with a healthy mix of 60 per cent rebooking and 40 per cent new companies. This is testament to the show's success in establishing itself as a pure trade B2B event focused on conducting real business. The region's focus on solar will definitely help us in continuing the growth of this event.





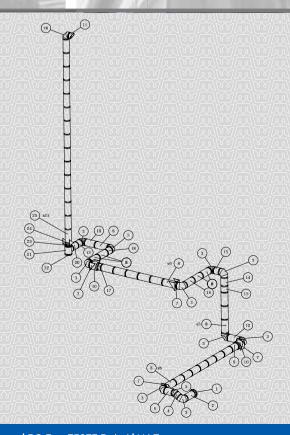






STAINLESS STEEL EXHAUST FOR ALL APPLICATIONS

- > German Engineering
- > Design & Sizing
- > Over 60 different CE & UL certified system
- > Pre-fabricated fire rated flue system
- > Twin wall insulated chimney system
- > Conical push fit metal to metal connection
- > No onsite welding
- > light weight and easy to install
- > 25 years guarantee



Collecting voltage source and additional data

In the second part of his analysis on the latest cable testing and diagnostics solutions for medium-voltage cables with VLF sine voltage sources, Martin Jenny, product manager at BAUR GmbH, Sulz (Austria), looks at how to collect additional information and the voltage source for daily tasks.

NFORMATION FROM BOTH the integral dissipation factor measurement and the local partial discharge measurement complement, and/or confirm one another, giving network and maintenance engineers more and better criteria for evaluating their assets.

The following example shows why it is important to keep the option of a dissipation factor measurement and a partial discharge measurement open. Typically, defective joints, such as defective fittings or those with electrically conducting faults, can be detected with the PD test (see Table 1).

This is not the case, however, with moist joints. In this example (see Fig. 1 and 2, as well as Table 2), during tests in a network in Hong Kong, the tan delta measurement delivered information in this regard. The tan delta standard deviation on conductor 2, identified in Fig. 1, strengthens the suspicion of a moist joint, as the PD test cannot detect any PD activity (too much moisture). The

MWT, (i.e. the combination of cable testing and tan delta measurement over 15 minutes), caused the joint to dry out and



VLF measurement is suitable during commissioning tests of new or modified cable systems for locating faults (Photo: Dmitry Kalinovsky)

the tan delta to drop significantly (Fig. 2). This reinforced the suspicion of moisture being present.

STANDARD DEVIATION	RESULT	MEASUREMENTS REQUIRED	MEASURES REQUIRED	COMMENT
< 0.010	Cable in good condition Water trees Only low PD	Tan delta PD	None, as in good condition	Standard deviation tan delta low No PD, no high PD
0.010 to 0.080	Water trees and PD Only PD	Tan delta PD	Moderate ageing with regard to water trees PD concentration must be analysed	Moderate water trees – no immediate measures Replace joints if there is PD concentration
0.080 to 0.500	Water penetration in joints	Tan delta PD may show no high values	Only the tan delta shows the effect PD values suppressed due to water penetration, PD cannot be used as criterion	Sheath fault location can indicate the location of moist joints because leakage currents occur there Joints with indication of low PD must be investigated (in spite of low PD values)
> 0.500	High water penetration in joints	Tan delta PD are largely eliminated in the relevant joints	Only the tan delta shows the effect PD displays no weak points / immediate replacement of joint Check PD calibration graph	Sheath fault location can indicate the location of moist joints because leakage currents occur there

Table 1: Example guideline for interpreting the standard deviation of tan delta



3 - 5 NOVEMBER 2015

EKO HOTEL, LAGOS - NIGERIA



Are you a manufacturer/supplier of **power**, **lighting**, **water**, **renewable** or **nuclear** solutions?

If so, meet the buyers for Africa's largest economy at Power Nigeria.

BOOK YOUR STAND TODAY

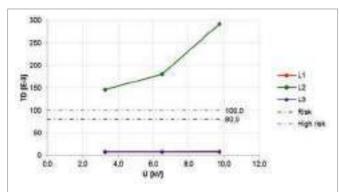


Fig. 1: Dissipation factor measurement on three-phase cable (conductor 2 shows a high standard deviation)

STDTD	0.5U0 (kV)	U0 (kV)	1.5U0 (kV)
מועונ	3.5	6.5	10
L1	0.068	0.036	0.060
L2	4.453	2.313	9.343
L3	0.063	0.004	0.050

Table 2: Measured values for Fig. 1

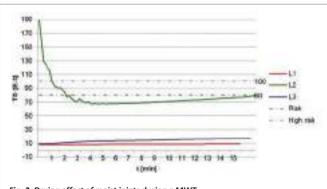


Fig. 2: Drying effect of moist joints during a MWT

Voltage source for daily tasks

About 10 years ago, Elektrizitätswerk Mittelbaden Netzbetriebsgesellschaft mbH (E-Werk Mittelbaden) compared a VLF 0.1Hz sine and a 50Hz method for the PD test based on more than 40 cable routes. As the 50Hz method produced too many highly varying evaluations and especially more negative prognoses at the time, which even today have not been considered failures, the company decided on the VLF 0.1Hz sine method.

In the meantime, the VLF measurement with sine voltage has proved itself in hundreds of tests. This was evident in the diagnostic measurements performed on 240 km with 500 partial routes in the 20kV network of E-Werk Mittelbaden on paper pulp insulated and mixed cable routes.

At E-Werk Mittelbaden, such cable routes have been diagnosed with a VLF sine 0.1Hz by means of PD and, for about seven years, with the tan delta measurement as well.

According to Werner Brucker, director of network operations, using both these diagnostic procedures produces a good overall view of the age and condition of the network. Any partial

routes classified as at risk are then promptly replaced. Isolating defective partial sections results in huge savings, as entire cable runs do not have to be replaced.

In practice, VLF measurement has proved to be suitable during the commissioning tests of new or modified cable systems for locating faults precisely and for using a simultaneous PD test in the future for detecting faults in the fittings so that the work involved in troubleshooting, such as installation faults, or during maintenance, like excavation work, can be kept to a minimum.

Brucker emphasises the weight and suitability for daily use as an essential advantage of the VLF sine voltage source. The 0.1Hz technology can be transported and operated by any employee, which would certainly not be possible with a 50Hz system.

The use of a test car with two persons is rarely required, as the portable measurement and testing device is sufficient for most cable lengths. A test car is therefore only necessary during every seventh measurement or so.

E-Werk Mittelbaden has a clear cost advantage by applying the VLF 0.1Hz technology, as measurements are easily performed by a single employee in a short time. Due to the short connection time and test duration as well as the need for fewer persons, one can easily test several cable routes per year.

Routes or partial sections identified as critical during the measurements are scheduled for repair or replacement.

Maintenance budgets can thus be planned accordingly. With the knowledge of weak points in the network and the condition-based maintenance it is possible to run the medium-voltage network with a low failure rate and in a cost-optimised manner, in spite of the growing cable stock.

The E-Werk Mittelbaden maintenance plan costs approx. €4mn (US\$4.4mn), of which €2.5mn (US\$2.8mn) relate to the distribution network. The costs for cable diagnostics are currently €90,000 (US\$99,913) per annum.

From the comparative tests conducted before procuring the VLF equipment, Brucker knows that there were distinct differences between his VLF 0.1Hz sine and 50Hz measurements.

In practice, a changeover no longer seems relevant, as E-Werk Mittelbaden has become very well acquainted with the VLF 0.1Hz measurements and their interpretation, and can gather measured values with high reliability for classifying cable routes.

Owing to vast experience, it is even possible to predict with relative accuracy whether a cable route is likely to fail in the short or medium term, thus making it easier to prioritise maintenance measures accordingly.

In conclusion

The VLF sine voltage source makes it possible for a single person to perform cable tests and diagnostics of a cable route with portable equipment.

The ideal, load-independent sine form proved to be of benefit as far as the reproducibility of results is concerned and when good comparability of results is desired. The time-saving diagnostics thus offers the following advantages:

- Specific allocation of maintenance budget
- Cost savings by isolating faulty partial sections
- Lower failure rate
- Positive effect on the cost structure in relation to the network failure rate
- Quality of new cable routes (detection of installation faults before any actual failure)



From Start to Finish

Your Best-in-Class Partner for Event Management



To find out how we can help you with planning an event that is aligned with your expectation and fits your needs, contact:

Riad Mannan, Head of Events, on +971 4 448 9260 or bemail: riad.mannan@alaincharles.com

New rotary telehandlers range launched by Bobcat

Bobcat's new EVO generation of rotary telehandlers offer a selection of new features that provide users with higher performance and increased productivity.

OBCAT HAS LAUNCHED its new EVO generation of Stage IIIB/Tier 4 interim rotary telescopic handlers, which have been designed as easy-to-use machines that combine more comfortable and safer operation with the latest developments in the field.

Comprising four models – the TR38160, TR50190, TR50210 and TR40250 rotary telehandlers – the equipment provides maximum lifting heights of 15.7, 18.7, 20.5 and 24.1 metres, respectively.

The rotary telehandlers come with a wide range of new features that offer higher performance and increased productivity.

The 400° rotating capability of the TR38160 model and the 360° turntable rotation available in the TR50190, TR50210 and TR40250 telehandlers allow the machines to serve the needs of an entire site from just one position, and feature exceptional stability for lifting heavy materials either vertically up to a roof or horizontally onto the edge of an excavated site. An auto wheels alignment feature, which is optional on the TR38160 model and standard on the other three models, allows the operator to easily change the steering modes, while the stabilisers have both individual and all-at-once activation in order to ensure machine stability in all types

The TR38160 EVO model is powered by the Kubota V-3800 DI T 3.8 L 4-cylinder Stage IIIB/Tier 4 interim compliant diesel engine, providing 74.5 kW (100 HP) of power at a rated speed of 2,600 RPM. This model offers a maximum lifting capacity of 3.8 tonne and a maximum horizontal reach of 13.4 metres.

The TR50190, TR50210 and TR40250 models are powered by the FPT-NEF Series 4.5L Stage IIIB/Tier 4 interim diesel engine with an output of 105 kW (141 HP). The TR50190 and TR50210 models both have a lift capacity of five tonnes, while the TR40250 telehandler has lift capacity of four tonnes.



All four models in Bobcat's EVO generation range of rotary telescopic handlers feature a new higher-mounted cab offering all-round visibility

The maximum horizontal reach in the three models is 16.4, 18.0 and 20.5 metres.

Comfort and control

All four models have a new higher-mounted cab that offers outstanding all-round visibility, and a larger back window opens up the field of vision to the rear of the machines, ensuring better overall spatial awareness for the operator.

The curved front window provides better visibility of the attachment at height and the glass cab door ensures optimum side visibility when manoeuvring close to walls or other obstacles.

The steering wheel column and ergonomic pneumatic suspension seat can be adjusted to suit the operator, and the cab offers semi-automatic air conditioning.

The Double Sensi-Touch Joystick controls have increased functions for the operator and all important machine functions are displayed on the new control panel, which has a digital display offering a clear overview of machine performance.

The EVO generation telehandlers feature a new electronic architecture and advanced

software, which Bobcat says is key to all four machines. Of the technology, Bobcat said, "CAN Bus Management technology guarantees smooth and precise functions, with all boom and swing operations monitored by digital sensors located on the main components of the machine, providing total machine control and safety in all situations."

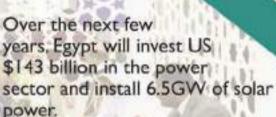
The Boom Cushion system is a standard feature allowing operators to focus on the job without worrying about each machine's limits, as it is self-managed by the system, while self-diagnostics and troubleshooting keep the operator informed at all times on the machine's status with boom position and capacity shown at all times, and providing notifications of maintenance requirements.

The new range are ready for use with a choice of six different man platform attachments and Bobcat has made a wide range of options available to buyers who wish to customise the machines to their own needs.

For more information about Bobcat and its products, please visit **www.bobcat.eu**

ELECTRICX 25th ANNIVERSARY

www.electricxegypt.com



Meet the buyers at the Electricx and Solar-Tec exhibitions.



6-8 DECEMBER 2015
CAIRO INTERNATIONAL
CONVENTION CENTRE
EGYPT

SOLAR-TEC

www.solartecegypt.com

Partner Events

SOLAR





Co-located









Specialinsert expands into the Middle East





OR MORE THAN 40 years, Specialinsert has been producing fastening systems for a variety of applications.

Originally specialising in mechanical fasteners, the company has branched out into the design and manufacture of innovative, custom solutions.

Specialinsert now provides a range of inserts for metal sheets, wood, plastics and composite materials to customers in more than 40 countries around the world.

All of the company's products are manufactured in Italy, at its Maerne plant in Venice, while its R&D activities are carried out across all three of the company's facilities in Turin, Milan and Venice.

From these bases, Specialinsert is planning expand its distribution to cover the Middle East, starting with its two newest product ranges – Keep-Nut and Master-Plate – before it plans to extend its offerings.

Specialinsert in the wall cladding and façades industry

Following an agreement with Italian company Dallera, which specialises in the design and installation of cladding substructures for ventilated façades, Specialinsert has begun supplying its Keep-Nut inserts to architectural projects in several countries, including in the Middle East.

Keep-Nut inserts for stone and solid surfaces such as ceramics, composites and glass are already widely used to install undermount sinks, as well as a variety of furniture and interior elements.



Current façade project with hidden anchors

Now the Keep-Nut has been approved for use as a hidden anchor in exterior wall cladding for stone and ceramic tiles.

The company's partnership with Dallera allows for the provision of a range of support for ventilated façade projects, from design and structural calculations to technician training.

Advantages of Keep-Nut inserts, compared to alternative anchors for undercut holes:

- · Cheaper than undercut anchors
- No undercut holes required, just a standard round hole for an easier, cheaper drilling process
- Fast assembly no special equipment required
- No need for adhesive or resins
- No waiting for water or chemicals to dry before installation
- Can be safely moved following installation at the factory without any risk

Specialinsert will soon begin its first pilot project in Saudi Arabia with one of the largest construction companies in the Middle East. A detailed report will be published in the next issue of *Technical Review Middle East*.

For more information please contact export@specialinsert.it

Bosch cordless screwdriver features ergonomic design

THE IXO CORDLESS screwdriver from Bosch features a new switch, light and charging concept.

The smallest cordless screwdriver from Bosch, which in the future will feature a fabric label bearing its name, is being marketed as unique by its manufacturer due to

its multi functionality. The
Ixo can carry out a range of tasks not
normally associated with power tools
due to its universal cutting adapter that
enables it to open wine bottles, season
food, help ignite a BBQ, drive screws
round corners and cut through
different materials.

Along with its new trademark feature, it has also been designed to be more ergonomical, with a shape designed to fit the hand and a new control concept.

The Ixo cordless screwdriver has been designed to fit the user's hand and can be stored alongside its charging cable and 10 screwdriver bits The switch for forward and reverse rotation has been modified to make it easier to operate, while the on/off switch has been modified to enable the Ixo to be operated in different grip positions.

The Ixo brightens the area in front of it using its 'PowerLight' LED, which is positioned on the head of the screwdriver and emits a bright white light. The LED features adjustable settings, such as a scattered light setting that illuminates the work area. When set to spotlight mode, the light is cast precisely on the screw head.

The screwdriver can be charged using a micro USB cable, and its charging time has been reduced to three hours.

After use, the Ixo can be compactly stored alongside the charging cable and 10 screwdriver bits in its slim metal casket that resembles a clutch bag. In the set versions, this casket can be clicked onto a higher module in which the matching adapters and other accessories can also be stored.

Saudi Mining & Minerals

The Saudi Arabian International Mining & Minerals Exhibition & Conference for Exploration, Extraction, Financing & Industrial Development



SAUDI MINING & MINERALS 2015

will provide opportunities for international manufacturers and suppliers of:

- Mining machinery and equipment
- Surface mining and equipment
- Drilling technology
- Conveying equipment
- Exploration technology
- Energy
- Infrastructure support facilities and equipment

Under the patronage of

His Excellency Ali bin Ibrahim Al-Naimi, Minister of Petroleum and Mineral Resources

27-29 October 2015

Prince Sultan Grand Hall Al Faisaliah Exhibition & Conference Centre RIYADH

Book your exhibition stand **NOW!**

For further information and participation details, please contact:

INTERNATIONAL

nick.piper@montex.co.uk +44 (0) 20 7886 3028

SAUDI ARABIA

Mohamed Kamal Shaban m.shaban@star.com.sa +966 (0) 11 463 0352



www.saudi-mining.com

Keeping an eye on transformer health

MONTRANO IS AN online monitoring system designed for assessing the dielectric health of power transformers under load, according to OMICRON, provider of testing, diagnosis and monitoring solutions for electrical power systems.

The application of OMICRON products enables users to assess the condition of the primary and secondary equipment on their systems with complete confidence. Services offered in the area of consulting, commissioning, testing, diagnosis and training make the product range complete. The company offers partial discharge (PD) measuring systems for diagnostics and for periodic and continuous monitoring. The measuring systems have a modular design, meaning they can easily be expanded if the users' requirements increase. These PD measuring systems can be used on all devices that run at high voltages. Users include energy providers and manufacturers of high-voltage equipment worldwide.

Dielectric flashover of insulation in bushings and transformers is one of the most frequent causes of failure in power transformers. Aging insulation progressively degrades to the point that it can no longer withstand electrical stress. This can cause bushings to explode, transformer destruction and long outages for repair. Online dielectric condition monitoring of bushing and transformer insulation is therefore essential for managing transformer health.

The online monitoring system from OMICRON records changes in capacitance (C), dissipation/power factor (DF/PF), partial discharge (PD) and transient over-voltages. These are primary indicators of insulation breakdown, which can lead to dielectric failure in bushings and transformers.

Advanced warning of pending failures

Detailed trend charts show you the dielectric state of insulation over time. Early warnings and alarms indicate the severity of negative trends. This enables you to assess the risk of failure and plan corrective action early to extent transformer service life.

Reliable online results

The system is designed to minimize the misleading impact that changes in grid unbalance (phase shifts) can have on C and DF/PF measurements. It achieves this by using the individual phases of a





The online monitoring system is designed for assessing the dielectric health of power transformers under load

nearby voltage transformer as an absolute measurement reference. The resulting accuracy enables reliable comparison with recommended supplier reference values to determine bushing insulation condition.

Additionally, the monitoring system employs advanced noise suppression using UHF signals and a unique gating technique for reliable PD source recognition. This enables the system to effectively separate external noise, like corona, from harmful PD.

Web-based data access

A convenient web interface enables you to view data at any time to determine the actual dielectric condition of insulation in bushings and inside the transformer. The interface also allows you to schedule monitoring, set alarm and warning thresholds and check system status.

Expert monitoring support

A dedicated team of HV engineers at OMICRON provides you with expert service and support, such as onsite consulations to evaluate monitoring requirements; system installation, setup and training; as well as assistance with data evaluation and assessment reports.

"The system was able to confirm the existence of partial discharge (PD) in one of our transformers. This confirmed earlier DGA results. Many other systems and techniques had been tried previously and MONTRANO was the only system to successfully prove that the PD was real. The detailed phase resolved analysis of the results carried out by OMICRON has also indicated specific locations which could be the source of the PD," said Colin Feely, plant maintenance engineer, Powercor Australia.

Erwin Vögel, Voralberg Energienetze GmbH, Austria also commented, "The ability to see transient over-voltages at transformer bushings with MONTRANO also offers us new possibilities to assess transformer condition."



MONTRANO provides detailed trend charts that show the dielectric state of insulation over time. Early warnings and alarms indicate the severity of negative trends

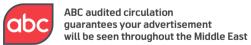
النشرة التقنية - الشرق الأوسط

The region's leading ABC audited industrial title

Now in its 31st year of publication, Technical Review Middle East has established an enviable reputation for the breadth and depth of its editorial. It is distributed throughout the MENA region, contains an exceptional range of subjects, and is read by senior managers, key buyers and specifiers.







Sign up for the FREE fortnightly e-newsletter on www.technicalreview.me





MENA Tel: +971 4 448 9260 **ASIA** Tel: +91 80 6533 3362

USA Tel: +1 203 226 2882 **EUROPE**

web: www.alaincharles.com Tel: +44 20 7834 7676 www.technicalreview.me

e-mail: post@alaincharles.com

Highlighting Kuwait's construction prowess

With US\$188bn of construction projects currently underway or planned, Kuwait's building industry is thriving, which bodes well for exhibitors and visitors at September's Big 5 Kuwait.

HE BIG 5 Kuwait, the largest building and construction event in Kuwait, will return for its third edition in September 2015 at a time when the country's construction sector is enjoying high levels of investment.

The event is set to attract visitors from Kuwait, Saudi Arabia, Bahrain, the UAE and beyond, with a host of local and international construction firms exhibiting their products to senior buyers from across the country's building sectors.

Ashley Roberts, event director of The Big 5 Kuwait, remarked, "Kuwait has earmarked US\$7.2bn from its annual budget for 2015-2016 for the construction sector and accelerated the sector's growth. To leverage

"Following two successful editions, we are upbeat that the 2015 event will generate positive results for exhibitors and visitors alike"



Big 5 Kuwait will take place at Kuwait International Fair from 14-16 September 2015

the fresh momentum experienced by the Kuwaiti market, our event will highlight state-of-the-art solutions and products for the construction sector.

"Following two successful editions, we are upbeat that the 2015 event will generate positive results for exhibitors and visitors alike."

With US\$188bn of projects currently under various stages of planning and construction, Kuwait's construction sector is poised for significant growth, with the demand for

infrastructure, residential developments and commercial properties evident in a number of multi-billion dollar projects.

New features for 2015

Set to take place from 14-16 September 2015 at Kuwait International Fair, the 2015 edition of the show is set to be 40 per cent larger than the 2014 event, with a host of new features set to make their debut at this year's show. They include free-to-attend Continuing Professional Development (CPD) certified workshops, a Building Interiors hall and an online networking tool.

Among the returning features in 2015 will be an extended outdoor 'Plant Machinery and Vehicle' area and the 'How to Trade in Kuwait' seminar.

According to event organisers dmg events, the combined value of Kuwait's retail, interior and fit-out market stands at US\$31mn, and the new Building Interiors hall will feature an exclusive showcase of products from industry segments such as bathroom accessories, wall coverings, ceilings partitions, ceramics and porcelain, flooring, sanitary ware and fitted furniture.

The second new feature for 2015, the free-to-attend CPD-accredited workshops, will offer an educational aspect for architects, interior designers, consultants, procurement managers, contractors, real estate developers, engineers and government sector personnel.



Leading projects in Kuwait

(Source: dmg events)

- Kuwait Metro project (US\$7bn)
- Kuwait International Airport (US\$3.3bn)
- Subiya Causeway (US\$2.6bn)
- Al Zour New Refinery Project (US\$15bn)
- Motorway construction projects (US\$6.2bn)

MAKING THE FEEL A WH

Rugged Build. Smooth Performance.

Engineered for superior performance, Sullivan-Palatek offers the industry's widest range of portable air compressors up to 1800 cfm, 500 psi. CAT engines for all our range. Designed and built in the USA, we make sure to provide you the power and reliability needed to get any job done on time. For more information:

Call or visit us online for details.

Sullivan Palatek AIR COMPRESSORS POWER UNDER PRESSURE



PMV Live and MEC set for 'biggest year' to date

Helped by the region's buoyant construction industry, this year's Middle East Concrete and PMV Live promise to be bigger and better than ever before.

IDDLE EAST CONCRETE (MEC) and the Plant, Machinery and Vehicles Show (PMV Live), taking place alongside The Big 5 Dubai at the Dubai World Trade Centre 23-26 November 2015, promises to be even bigger and better than ever before. The event represents one of the most rapidly expanding sectors of the annual building and construction show. As before, MEC and PMV Live will showcase the latest equipment and ground-breaking technologies, while providing a venue for meeting top global suppliers and manufacturers as well as opportunities to attend free workshops and educational seminars.

"One of our long-term exhibitors, MAN Truck and Bus, is celebrating its 100th anniversary by bringing along a 100-year-old truck to display on its stand during the event," said Nathan Waugh, portfolio director, MEC and PMV Live.

Last year, more than 36,500 people attended the show over four days, making it the most successful PMV event since it first started five years ago, indicative of the market's recovery and exciting outlook.

"We have a few new things happening this year for PMV and MEC, both from the exhibitor's side and from our side as well," Waugh remarked.

The show has consistently grown in both size and number of participants, to more than

400 exhibitors and over 10,000 sq m in 2014, from 179 exhibitors and 5,424 sq m of floor space in 2011.

And the numbers are expected to just keep getting better. The number of international exhibitors has already exceeded expectations, with more participating than ever before, said Waugh, while he expects the show to bring record-breaking numbers of visitors this year.

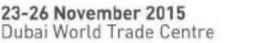
The organisers will be working with exhibitors to do more live demonstration. For example, "Laticrete, a major concrete company based in Ras Al Khaimah, UAE, will be holding a live demonstration of its SUPERCAP system, a new method of laying concrete, in the Outdoor area at MEC," noted Waugh.

Educational programmes were a huge success in 2014, providing a range of topics, including the "How to trade in the UAE" seminar as well as 40 technical seminars on topics such as infrastructure, fire and safety, and the Middle East rail sector.

For 2015, the educational programmes for PMV and MEC have been developed further, with more workshops and topics than ever before. This year there will be even more panel discussions and technical seminars, located in the open seminar theatre on the ground floor and featuring presentations of the latest industry topics. The workshop programme has also been expanded, providing even more CPD-accredited courses for professionals to get more out of their visit with certification and the most up-to-date industry knowledge available.

"It's a good opportunity to add value for our guests that they can't get anywhere else," said Waugh. "Obviously, we give them access to thousands of products from across the world, but to actually give them access to a wealth of free content to add to their credentials is an even greater incentive to visit and stay longer. The main aim is to provide every single visitor with a fantastic experience, whether they are looking for products, networking opportunities, for educational programmes, or even a combination of all three," he concluded.





EXHIBITION, DEMONSTRATION, TRAINING.



CD-LOCATED WITH







GROW YOUR BUSINESS WITH 36,500° POTENTIAL CLIENTS

- Save time by connecting with more than 36,500 current and potential clients over four days
- Raise your profile by exposing your brand at the largest construction event in the Middle East.
- Capitalise on the \$214 Billion market.
 (Projects expected to be awarded in 2015, Source: Ventures Onsite).

For more information contacts

Firas Abou Ltaif

E: FirasAbouLtaif@dmgeventsme.com T: +971 (0) 4 445 3655

www.pmvlive.com

*2014 participation numbers audited by BPA



23-26 November 2015 Dubai World Trade Centre EXHIBITION. CONFERENCE. TRAINING.

CD-LOCATED WITH



WHERE BUILDING BEGINS



GENERATE CONCRETE BUSINESS WITH 36,500+' POTENTIAL CLIENTS

- Save time by connecting with more than 36,500 current and potential clients over four days
- Raise your profile by exposing your brand at the largest construction event in the Middle East.
- Capitalise on the \$214 Billion market.
 [Projects expected to be awarded in 2015. Source: Ventures Onsite].

For more information contact:

Firas Abou Ltaif

E: FirasAbouLtaif@dmgeventsme.com T: +971 (0) 4 445 3655

www.middleeastconcrete.com

*2014 participation numbers audited by BPA

THE ONLY REGIONAL DEDICATED PLATFORM FOR THE CONCRETE INDUSTRY



14 — 16 SEPTEMBER 2015 10:00 - 18:00 DUBAI WORLD TRADE CENTRE

INTERNATIONAL SOLAR & PV EXHIBITION RAW MATERIAL, COMPONENTS, TECHNOLOGY.

THE INTERNATIONAL SOLAR EVENT TO ATTEND

DAYS OF SOLAR INNOVATION

CPD

FULL DAY

OF SOLAR

EXPERTS AT

GLOBAL SOLAR

LEADERS

SUMMIT

REGISTER ONLINE FOR YOUR FREE ENTRY www.gulf.solar

PREMIUM SPONSOR

STRATEGIC SPONSOR

ENDORSED BY











KNOWLEDGE PARTNER

INDUSTRY PARTNER

CO-LOCATED WITH

BROUGHT TO YOU BY THE ORGANISERS OF











Construction Buyers' Guide



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

Section One: Listings by category

Section Two: Suppliers of construction & mining equipment and services, page 56

Section Three: Contact details of Middle East agents & subsidiaries listed by country, page 67

Section One: Listings by category

AIR COMPRESSORS

Alaa For Industry
Atlas Copco
Cummins Middle East FZE
Doosan Portable Power (Doosan
Benelux SA)
Euroblast Middle East
FAMCO (Al-Futtaim Auto &
Machinery Company LLC)
Gardner Denver FZE
Sullivan-Palatek, Inc.

Diesel Driven

Aggreko Middle East Ltd.
Atlas Copco Portable Energy
Division
Doosan Portable Power (Doosan
Benelux SA)
Euroblast Middle East
FG Wilson
JCB Power Products
Jeremias Middle East
Perkins Engines Co. Ltd.

Electric

Aggreko Middle East Ltd.
Atlas Copco Portable Energy
Division
COELMO spa
Euroblast Middle East
HELUKABEL Middle East
Marelli Motori S.p.A.
WAGO Middle East FZC

AIR CONDITIONING

Aggreko Middle East Ltd. Polycon Gulf Ltd. Rubber World Industry LLC Technical Converters Ltd.

ALTERNATORS FOR GENSETS

Linz Electric S.p.A.

BUILDINGS

CAVATORTA FRANCE s.a.s.
COELMO spa
Danway LLC
Guilin HongCheng Mining
Equipment Manufacture Co. Ltd.
INMESOL, S.L.
Polycon Gulf Ltd.
Powertech Switchgear
Industries FZE
Sahyadri Industries Ltd.
WAGO Middle East FZC

COMPONENTS AND SPARE PARTS

Al Muqarram Auto Spare Parts Trading LLC COELMO spa Gardner Denver FZE
Leroy-Somer
Liebherr-Export AG
Lovato Electric S.p.A.
Maitek S.r.I.
Powertech Switchgear
Industries FZE
Shandong Shantui Construction
Machinery Imp.& Exp.Co. Ltd.
Specialinsert S.r.I.
Van der Hilst International b.v

CONCRETE EQUIPMENT

Atlas Copco
Guilin HongCheng Mining
Equipment Manufacture Co. Ltd.
Iveco Astra
Kraft Tool Co.
Liebherr-Export AG
Shandong Shantui Construction
Machinery Imp. & Exp.Co. Ltd.
Wacker Neuson Vertrieb Europa
GmbH & Co. KG - Dubai Branch
Representative Office

Batching Plant

Ammann Group Amog S.r.I. (A Davino Group Branch) LINTEC GmbH & Co. KG Parker Plant Ltd. SPECO Ltd. Vortex Hydra S.r.I.

Block/Tile - Making Equipment

Vortex Hydra S.r.I.

Breakers

Bobcat (Doosan Benelux SA) Danway LLC Doosan Portable Power (Doosan Benelux SA) Keestrack Lovato Electric S.p.A.

Formwork

Doka Middle East Herrenknecht AG PASCHAL-Werk G. Maier GmbH PERI RMD Kwikform Middle East

Mobile Mixing Plant

LINTEC GmbH & Co. KG Merlo S.p.A SPECO Ltd.

Recycling

Keestrack Liebherr-Export AG Magni Telescopic Handlers Terex Minerals Processing Systems

Reinforcement

Alyaf Industrial Company Ltd. Maklada Schoeck ME FZE

Concrete Equipment - Other

Amog S.r.I. (A Davino Group Branch) Bobcat (Doosan Benelux SA) CAVATORTA FRANCE s.a.s. Doka Middle East Doosan Portable Power (Doosan Benelux SA) Elettrondata S.r.I. Euroblast Middle East Kraft Tool Co. LINTEC GmbH & Co. KG

CONSTRUCTION VEHICLES

Action Construction

Equipment Ltd.
Caterpillar SARL
FAMCO (Al-Futtaim Auto &
Machinery Company LLC)
Haulotte Middle East FZE
Iveco Astra
Liebherr-Export AG
Perkins Engines Co. Ltd.
Terex Off-Highway Dump Trucks
Volvo Construction Equipment
Zahid Tractor

Dump Trucks and Haulers

Balkrishna Industries Ltd. (BKT) Caterpillar SARL Iveco Astra Terex Off-Highway Dump Trucks

Engines, Components and Accessories Aksa Power Generation FZE

Caterpillar SARL
COELMO spa
Dresser-Rand
Huegli Tech AG Ltd.
Jubaili Bros
Lovato Electric S.p.A.
Motorenfabrik Hatz GmbH & Co. KG
Perkins Engines Co. Ltd.
RUD Ketten Rieger & Dietz GmbH
u. Co. KG
Van der Hilst International b.v
Volvo Penta
Weichai Middle East FZE

Site Dumpers

Amog S.r.l. (A Davino Group Branch) Caterpillar SARL

Tractors

Caterpillar SARL

Construction Vehicles - Other

Aguamec Ltd.

Caterpillar SARL Haulotte Middle East FZE Iveco Astra Liebherr-Export AG Magni Telescopic Handlers Terex Off-Highway Dump Trucks

CONSULTANCY SERVICES

Cummins Middle East FZE Imeco HandelsgesmbH OMICRON Electronics Middle East Ltd.

DEMOLITION EQUIPMENT

Atlas Copco
Bobcat (Doosan Benelux SA)
Doosan Portable Power (Doosan
Benelux SA)
Liebherr-Export AG
MB Crusher S.p.A.
Volvo Construction Equipment
Wacker Neuson Vertrieb Europa
GmbH & Co. KG - Dubai Branch
Representative Office

DRILLING

Alaa For Industry Eland Cables Sullivan-Palatek, Inc.

Components and Accessories

Huegli Tech AG Ltd. Van der Hilst International b.v WAGO Middle East FZC

Drilling Machinery and Plant

Herrenknecht AG Imeco HandelsgesmbH

Piling

 $Imeco\ HandelsgesmbH$

Trenching and Pipe Laying

Alyaf Industrial Company Ltd. Imeco HandelsgesmbH

Tunnelling

Amog S.r.I. (A Davino Group Branch) Doka Middle East Herrenknecht AG Imeco HandelsgesmbH Liebherr-Export AG Schoeck ME FZE

Drilling - Other

Doosan Portable Power (Doosan Benelux SA)

EARTHMOVING EQUIPMENT

Action Construction Equipment Ltd. Alaa For Industry Bobcat (Doosan Benelux SA) Caterpillar SARL
General Navigation and
Commerce Co. (GENAVCO) LLC
Iveco Astra
Liebherr-Export AG
MB Crusher S.p.A.
Perkins Engines Co. Ltd.
Terex Off-Highway Dump Trucks
Volvo Construction Equipment
Wacker Neuson Vertrieb Europa
GmbH & Co. KG - Dubai Branch
Representative Office
Zahid Tractor

Attachments and Accessories

Bobcat (Doosan Benelux SA) Caterpillar SARL Huegli Tech AG Ltd. MB Crusher S.p.A. Van der Hilst International b.v

Backhoe Loaders

Amog S.r.l. (A Davino Group Branch) Balkrishna Industries Ltd. (BKT) Caterpillar SARL Liugong Machinery (Middle East)

Dozers

Caterpillar SARL Liebherr-Export AG Shandong Shantui Construction Machinery Imp. & Exp.Co. Ltd.

Dumpsters

Kaeser Kompressoren FZE Liebherr-Export AG Terex Off-Highway Dump Trucks

Excavators

Bobcat (Doosan Benelux SA) Caterpillar SARL Kaeser Kompressoren FZE Liebherr-Export AG Liugong Machinery (Middle East) FZE

Merlo S.p.A Shandong Shantui Cons

Shandong Shantui Construction Machinery Imp.& Exp.Co. Ltd.

Loaders - Other

Bobcat (Doosan Benelux SA) Caterpillar SARL Kaeser Kompressoren FZE Liebherr-Export AG Shandong Shantui Construction Machinery Imp. & Exp.Co. Ltd.

Mini-Excavators

Bobcat (Doosan Benelux SA) Caterpillar SARL Kaeser Kompressoren FZE Liebherr-Export AG

Motor Graders

Balkrishna Industries Ltd. (BKT) Caterpillar SARL Liugong Machinery (Middle East) FZF

Scrapers

Caterpillar SARL

Skidsteer Loaders

Balkrishna Industries Ltd. (BKT) Bobcat (Doosan Benelux SA) Caterpillar SARL

Earthmoving Equipment - Other

Aguamec Ltd. Bobcat (Doosan Benelux SA) Caterpillar SARL Liebherr-Export AG Magni Telescopic Handlers Telestack Terex Off-Highway Dump Trucks

FINISHING

Sahvadri Industries Ltd.

Equipment

Euroblast Middle East **Guilin HongCheng Mining** Equipment Manufacture Co. Ltd. Jubaili Bros Kraft Tool Co Vortex Hydra S.r.l.

Insulation Panels

Rubber World Industry LLC

Materials

Sahyadri Industries Ltd. Tremco-illbruck LLC

Services

PASCHAL-Werk G. Maier GmbH

LIFTING EQUIPMENT

Action Construction Equipment Ltd. Alaa For Industry **Eland Cables** General Navigation and Commerce Co. (GENAVCO) LLC Haulotte Middle East FZE Hi-Force Ltd. Liebherr-Export AG Perkins Engines Co. Ltd.

Access

Danway LLC Haulotte Group Haulotte Middle East FZE

Components and Accessories

Hi-Force Ltd. Huegli Tech AG Ltd. RUD Ketten Rieger & Dietz GmbH u. Co. KG Van der Hilst International b.v

Balkrishna Industries Ltd. (BKT) Danway LLC Liebherr-Export AG

Hoists

Liebherr-Export AG

Hydraulic

Alyaf Industrial Company Ltd. Hi-Force Ltd.

Jacking Equipment

Hi-Force Ltd.

Lift Trucks

FAMCO (Al-Futtaim Auto & Machinery Company LLC)

Mechanical

Hi-Force Ltd. Rossi S.p.A.

Pneumatic

Doosan Portable Power (Doosan Benelux SA) PRAMAC Middle East FZE

Telescopic Handlers

Bobcat (Doosan Benelux SA) Haulotte Group Haulotte Middle East FZE Magni Telescopic Handlers Merlo S.p.A

MOBILE POWER SUPPLY UNITS

Aggreko Middle East Ltd. Aksa Power Generation FZE Altaaqa Global CAT Rental Power APR Energy Atlas Copco Cummins Middle East FZE Doosan Portable Power (Doosan Benelux SA) Dresser-Rand **Eland Cables** FG Wilson General Navigation and Commerce Co. (GENAVCO) LLC Himoinsa S.L. Huegli Tech AG Ltd. INMESOL, S.L. JCB Power Products Jubaili Bros

Mahindra Powerol - Mahindra & Mahindra I td Motorenfabrik Hatz GmbH & Co.

SDMO Industries Visa S.p.A.

Weichai Middle East FZE

OTHER SITE EQUIPMENT AND MATERIALS

Bobcat (Doosan Benelux SA) COELMO spa Cummins Middle East FZE Doosan Portable Power (Doosan Benelux SA) **Eland Cables** FAMCO (AI-Futtaim Auto & Machinery Company LLC) FG Wilson Visa S.p.A.

Fencing

CAVATORTA FRANCE s.a.s.

Lighting Masts/Towers

Aksa Power Generation FZE Atlas Copco Portable Energy Division Doosan Portable Power (Doosan Benelux SA) Galva Coat for Galvanizing & Lighing Poles Himoinsa S.L. INMESOL, S.L. JCB Power Products Jubaili Bros Mahindra Powerol - Mahindra & Mahindra Ltd.

PRAMAC Middle East FZE

Tower Light S.r.l. Visa S.p.A.

Pipe and Cable Detecting Systems

HELUKABEL Middle East

Sand Blasting Equipment

Doosan Portable Power (Doosan Benelux SA) Euroblast Middle East

Scaffolding

Diamond Metal Screen PL Doka Middle East Marchetti S.r.I. PASCHAL-Werk G. Maier GmbH PFRI RMD Kwikform Middle East

Wilhelm Layher GmbH & Co. KG

Welding Equipment

INMESOL, S.L PRAMAC Middle East FZE

Wood-working Equipment /Services

Doka Middle East

Pipe Manufacturing

Charlotte Pipe and Foundry Co. Jeremias Middle East Rubber World Industry LLC

PIPES

Jeremias Middle East

Pipe and Cable Detecting

HELUKABEL Middle East

Pipe and Pipeline Fittings/Coatings

Technical Converters Ltd. Triplefast Middle East Ltd.

Pipe Laying

Marini S.p.A.

Pipe Making Equipment

Marini S.p.A.

Pipeline Accessories

Marini S.p.A. Triplefast Middle East Ltd.

PUMPING EQUIPMENT

Eland Cables Mahindra Powerol - Mahindra & Mahindra Ltd. Sullivan-Palatek, Inc.

Wacker Neuson Vertrieb Europa GmbH & Co. KG - Dubai Branch Representative Office

Concrete

Liebherr-Export AG

Submersible

Atlas Copco Portable Energy Division Danway LLC

Pumping Equipment - Other

Maitek S.r.I. Motorenfabrik Hatz GmbH & Co. KG

RAW MATERIALS

General Navigation and Commerce Co. (GENAVCO) LLC Rubber World Industry LLC

Crushing, Screening and Washing

Diamond Metal Screen PL Guilin HongCheng Mining Equipment Manufacture Co. l td Keestrack Maitek S.r.l. Minyu Machinery Corp. Parker Plant Ltd. Rockster Recycler SPECO Ltd. Telestack Terex Minerals Processing Systems

Grinding Equipment

Guilin HongCheng Mining Equipment Manufacture Co.

Mixing

SPECO Ltd.

Quarrying

Doosan Portable Power (Doosan Benelux SA) Liebherr-Export AG Minyu Machinery Corp. Telestack Terex Minerals Processing Systems Terex Off-Highway Dump Trucks

Elettrondata S.r.l. **OMICRON Electronics Middle** East Ltd.

RENTAL EQUIPMENT

Aggreko Middle East Ltd. Aksa Power Generation FZE Altaaga Global CAT Rental Power APR Energy Caterpillar SARL Cummins Middle East FZE FAMCO (Al-Futtaim Auto & Machinery Company LLC) FG Wilson Herrenknecht AG Hi-Force Ltd. Himoinsa S.L. INMESOL, S.L JCB Power Products Jubaili Bros Magni Telescopic Handlers Peter Berghaus GmbH RMD Kwikform Middle East SDMO Industries Sullivan-Palatek, Inc. Visa S.p.A. Zahid Tractor

ROAD BUILDING EQUIPMENT

Action Construction

Equipment Ltd. Atlas Copco Bobcat (Doosan Benelux SA) Caterpillar SARL CAVATORTA FRANCE s.a.s. Ciber Equipamentos Rodoviários Doosan Portable Power (Doosan Benelux SA) Gardner Denver FZE General Navigation and Commerce Co. (GENAVCO) LLC Liebherr-Export AG MB Crusher S.p.A. Sullivan-Palatek, Inc.

Volvo Construction Equipment Wacker Neuson Vertrieb Europa GmbH & Co. KG - Dubai Branch Representative Office

Asphalt Plant

Ammann Group Ciber Equipamentos Rodoviários Ltda LINTEC GmbH & Co. KG Parker Plant Ltd. SPECO Ltd.

Compaction Equipment

Ammann Group Caterpillar SARL Doosan Portable Power (Doosan Benelux SA)

Pavers

Alyaf Industrial Company Ltd. Ammann Group Caterpillar SARL Ciber Equipamentos Rodoviários Ltda

Recycling

Ciber Equipamentos Rodoviários Ltda LINTEC GmbH & Co. KG Maitek S.r.I. MB Crusher S.p.A. Telestack Terex Minerals Processing Systems

Road Marking

Euroblast Middle East Telestack

Rollers

Ammann Group Caterpillar SARL Ciber Equipamentos Rodoviários Ltda Liugong Machinery (Middle East) FZE Road Building Equipment -Other

Alyaf Industrial Company Ltd. Bobcat (Doosan Benelux SA) Caterpillar SARL CAVATORTA FRANCE s.a.s. Doosan Portable Power (Doosan Benelux SA) Elettrondata Ś.r.l. Kraft Tool Co. Peter Berghaus GmbH Zahid Tractor

SOFTWARE

Construction Computer Software (Gulf) LLC PASCHAL-Werk G. Maier GmbH XP Solutions

Construction Computer Software (Gulf) LLC XP Solutions

Management Systems

Construction Computer Software (Gulf) LLC Elettrondata S.r.l. XP Solutions

Software - Other

Construction Computer Software (Gulf) LLC Elettrondata S.r.l.

XP Solutions

STEEL

Diamond Metal Screen PL Hypertherm Europe b.v. Maklada Valbruna Gulf FZE

Fabrication and Structures

Galva Coat for Galvanizing & Lighing Poles Hypertherm Europe b.v. Jeremias Middle East Marchetti S.r.l. Technical Converters Ltd. Zamii Steel Industries

Steel - Other

Diamond Metal Screen PL Hypertherm Europe b.v. Jeremias Middle East Technical Converters Ltd. Triplefast Middle East Ltd.

TOOLS

Alaa For Industry Doosan Portable Power (Doosan Benelux SA) Gardner Denver FZE Hi-Force Ltd. Hypertherm Europe b.v.

Hydraulic

Hi-Force Ltd.

Mechanical

Hi-Force Ltd.

Pneumatic

Doosan Portable Power (Doosan Benelux SA)

Hi-Force Ltd.

Tools - Other

Hi-Force Ltd.
Hypertherm Europe b.v.
Kraft Tool Co.
OMICRON Electronics
Middle East Ltd.
Specialinsert S.r.l.

USED EQUIPMENT

Atlas Copco Portable Energy Division Caterpillar SARL Herrenknecht AG Himoinsa S.L. Maitek S.r.l. Terex Minerals Processing Systems Visa S.p.A. Vortex Hydra S.r.l.

MODEL UHH UNIVERSAL HANDHELD TEST INSTRUMENT Mobile Meter App and Androig ME AS URES: - Air Voloth - Tenperature - Relative Humidity - Differential Prossure VL REATTLE BYSES CONVILOTS TO NAULTIPPLIE PROBES AND MODULES VIA WIRELESS GATTEVEN WWW.DWYER-INST.CO.UK 144 1494 451707 | Lalesme@dwyer-inst.co.uk

Section Two: Suppliers of Equipment and Services

Action Construction Equipment Ltd.

5th Floor, TDI Centre
Jasola, New Delhi, 110025, India
Tel: +91 11 40549900
Fax: +91 11 40549922
Web: www.ace-cranes.com
E-mail: bhogal@ace-cranes.com
exports@ace-cranes.com

ACE is India's leading material handling and construction equipment manufacturing company with a majority market share in mobile cranes and tower cranes segment. In addition to Mobile Cranes, ACE also offers mobile / fixed tower cranes, crawler cranes, truck mounted cranes, lorry loaders, backhoe loaders/ loaders, vibratory rollers, forklifts, tractors & harvesters and other construction equipment.

Aggreko Middle East Ltd.

PO Box 16875
Jebel Ali Free Zone, Dubai
United Arab Emirates
Tel: +971 4 8086100
Fax: +971 4 8831827
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 quarring, oil and gas to refineries and events.

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.aksauae.com E-mail: sales@aksauae.com

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

Al Fajer Information & Services

PO Box 11183 Al Quoz Industrial Area 3, Dubai United Arab Emirates Tel: +971 4 3406888 Fax: +971 4 3403608

Web: www.alfajer.net E-mail: alfajer@emirates.net.ae

Al Fajer Information & Services (AFIS), a unit of Al Fajer Enterprises - a fully nationally owned company was established in the year 1970, by its group president His Highness Sheikh Hasher Maktoum Juma Al Maktoum.

AFIS, a multi-faceted trade fair organisation with over four decades of trade fair experience and expertise, provides a complete range of exhibition organisation, management and services through its five divisions - fairs & exhibitions, international exhibit builders, octanorm, display & shopfittings and design & graphics.

Al Muqarram Auto Spare Parts Trading LLC

PO Box 60235 Deira 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.

Al Wasit Group

PO Box 40258 Industrial Area 13 Sharjah United Arab Emirates

Tel: +971 6 5334912 Fax: +971 6 5331653 Web: www.alwasit.com

Alaa For Industry PO Box 9998

Dammam 31423 Saudi Arabia Tel: +966 13 8470033 Fax: +966 13 8470077 Web: www.afi.com.sa

E-mail: afi@afi.com.sa

Founded in 1984, Alaa For Industry (AFI) is a leading provider of engineering products and services for hydraulics, pneumatics, transportation, power transmission and industrial equipment.

Registered under Ibrahim Ali Al Rashoodi & Partners Holding Company (LLC), AFI is one of the largest and most diverse industrial companies in the Arabian Gulf. With 18 branches and over 1,200 employees, AFI provides a focused approach towards the local market and delivers quality services and innovative solutions for a wide range of industrial applications.

Agents:

Bahrain - Alaa Industrial Equipment Factory Kuwait - Alaa Industrial Equipment Factory Qatar - Alaa Industrial Equipment Factory

Altaaqa Global CAT Rental Power

PO Box 262989 Dubai

United Arab Emirates Tel: +971 4 8808006 Fax: +971 4 8808007

Web: www.altaaqaglobal.com E-mail: rbagatsing@altaaqaglobal.com

Altaaqa Global, a subsidiary of Zahid Group, has been selected by Caterpillar Inc. to deliver multimegawatt turnkey temporary power solutions worldwide. The company owns, mobilizes, installs, and operates efficient temporary independent power plants (IPP's) at customer sites, offering power rental equipment that will operate with different types of fuel such as diesel, natural gas or dual-fuel.

Alyaf Industrial Company Ltd. PO Box 10737, Dammam

31443, Saudi Arabia Tel: +966 3 8121206 Fax: +966 3 8121836 Web: www.alyaf.com E-mail: info@alyaf.com

Alyaf Industrial Company Ltd., is the largest manufacturer of geotextiles in the Middle East and has pioneered the development of technical nonwovens. Incorporated in the year 1992 with manufacturing facility located at Dammam, Saudi Arabia, and sales offices at Riyadh and Jeddah; it is currently one of the few companies in the world that manufactures the widest possible range of nonwoven geotextiles.

Ammann Group

Eisenbahnstrasse 25 Langenthal, CH-4901, Switzerland Tel: +41 62 9166161 Fax: +41 62 916402

Web: www.ammann-group.com E-mail: info.aag@ammann-group.com

Ammann is the leading supplier of machines. systems and services for the construction industry with core competences in asphalt and road building worldwide. Established in 1869 Ammann is a highly credible family owned Swiss business representing sustainable values -Productivity Partnership for a lifetime!

Amog S.r.l. (A Davino Group Branch)

Via Padula 102, Brusciano (Napoli) 80031, Italy

Tel: +39 081 6588361 Fax: +39 081 8863398 Web: www.davinomixer.com E-mail: sales@davinogroup.com

Since 1975 Davinomixer has been bringing to the market the most innovative self loading mobile concrete mixers range being the Davino 360DELTA4, the ultimate, unique and the only load and cast all rounder mixer today available: 360°-visibility mixer to produce high quality certifiable concrete thanks to the very advanced Davino weighing system.

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.

Aquamec Ltd.

PO Box 260, Sakyla 27801. Finland

Tel: +358 10 4026400 Fax: +358 10 4026422 Web: www.watermaster.fi

E-mail: watermaster@watermaster.fi

Watermaster is a uniquely mobile multipurpose water construction and dredging machine.

Watermaster's capabilities include suction dredging, backhoe dredging and pile driving. Finnish made serially produced Watermaster is a proven concept with over 300 references worldwide. Watermaster is versatile, mobile and proven - a smart solution for hard work.

Arminox Gulf FZCO

PO Box 51626 Hamariyah Free Zone

Sharjah

United Arab Emirates Tel: +971 4 8872777 Fax: +971 4 8872778 Web: www.arminox.com E-mail: arminox@emirates.net.ae

Atlas Copco

Atlas Copco Services Middle East PO Box 122778 Office 2119-26

Building 2

Gold & Diamond Park

Duhai

United Arab Emirates Tel: +971 4 3738111 Fax: +971 4 3233961 Web: www.atlascopco.com E-mail: info.acsme@bh.atlascopco.com

Atlas Copco is a leading manufacturer of road construction equipment, portable compressors. generators, tools and attachments used in the construction and demolition industries. We are contantly seeking ways to improve ourselves and to accommodate the specific demands, of our customers by providing them with one total construction solution.

Atlas Copco Portable Energy Division

Ingberthoeveweg 7

Aartselaar 2630 Belaium

Tel: +32 3 8702111 Web: www.atlascopco.com E-mail: info@atlascopco.com

Atlas Copco is a world-leading provider of sustainable productivity solutions. We serve customers in more than 180 countries with products and services focused on productivity, energy efficiency, safety and ergonomics. The Portable Energy division develops, manufactures and markets portable compressors, high pressure boosters, generators, light towers and portable dewatering pumps.

Atlas Copco CR/MR Regional Office MEN covers the following countries:

- Egpyt
- Iraq
- Jordan
- Kuwait
- Lebanon
- Libyan Arab Jamahiriya
- Oman
- Qatar
- Saudi Arabia
- United Arab Emirates
- Yemen

Bahrain - Atlas Copco CR/MR Regional Office MEN Egypt - Atlas Copco Equipment Egypt S.A.E.

Balkrishna Industries Ltd. (BKT)

BKT House C/15, Trade World Kamala Mills Compound Lower Parel Mumbai

400013 India

Tel: +91 22 66663800 Fax: +91 22 66663898 Web: www.bkt-tires.com E-mail: mena@bkt-tires.com

BKT is one of the global leaders in the 'off highway' tires segment which includes industrial & construction, earthmoving, agriculture and lawn & garden application. For more details, please visit the website www.bkt-tires.com

Benninghoven GmbH & Co. KG

Industriegelände Mülheim/Mosel

54486 Germany

Tel: +49 65 341890 Fax: +49 65 348970

Web: www.benninghoven.com E-mail: info@benninghoven.com

Bobcat (Doosan Benelux SA)



PO Box 262688 JLT Platinum Tower Cluster I

Level 18 Office 1802

Dubai

United Arab Emirates Tel: +971 4 2767206 Fax: +971 4 2767204 Web: www.bobcat.eu

E-mail: gaby.rhayem@doosan.com

Bobcat manufactures the widest range of marketleading compact equipment including skid-steer and compact tracked loaders, compact excavators and telescopic handlers. The impressive selection of Bobcat attachments for use with these machines includes wheel saws, trenchers, planers, hydraulic breakers and graders, saving time, effort and cost in carrying out an increasing range of applications in the Middle East.

Agents:

Bahrain - Yusuf Bin Ahmed Kanoo Co. WLL (Perkins Engine) Egypt - Otrac Heavy Equipment (Bobcat)

Iraq - Tristar Co. Iraq

Jordan - Arab Equipment Trading Co. Kuwait - Bahrah Trading Co. WLL Lebanon - Tracksparco Ltd.

Libya - Rawasee Co. Oman - International Heavy Equipment LLC Qatar - Jaidah Motors & Trading Co. Saudi Arabia - General Trading & Equipment United Arab Emirates - Kanoo Machinery LLC

Bosch Termoteknik Isitma ve Klima Ticaret AS

Ankara Asfalti Uzeri - Onur Sok. No: 18/A Kosuyolu Istanbul, 34718

Turkev

Tel: +90 216 5441132 Fax: +90 216 3404017 Web: www.bosch-industrial.com E-mail: fatih.oner@tr.bosch.com

Bosch Thermotechnik GmbH represents the Thermotechnology Division of the Bosch Group. Together with its subsidaries, the company is a leading supplier of heating products and hot water solutions in Europe.

Bosch Thermotechnology has strong international and regional brands and manufactures a diversified product range in 21 plants in 11 European, North American and Asian countries

Bosch Thermotechnik can draw on many decades of experience as a manufacturer of heating and water heating systems - with an uncompromising priority on quality, customer benefits and innovations

About Bosch Industriekessel Located in Gunzenhausen in Northern Bavaria. the company has been offering innovative largescale and industrial boilers for all commercial and industrial applications for more than 145 years. Our customers benefit from project-specific solutions, advanced products and extensive expertise in the area of industrial boiler

technology. At mordern production facilities in Germany and Austria we manufacture over 1,500 boiler systems annually. Our product range comprises steam boilers with an output range from 175 kg/h up to 55,000 kg/h. Furthermore, we produce hot waters for power ranges of up to 38 MW and heating boilers up to 19.2 MW. Our boiler house components in modular technology can be used individually and simplify the planning, construction and operation of the boiler systems. We also offer a comprehensive range of services to complement our product portfolio.

Caterpillar Lift Trucks

Hefbrugweg 77 Almere 1332 AC The Netherlands

Tel: +31 36 5494411 Fax: +31 36 5494698

Web: www.catlifttruck.com

Agents:

Bahrain - Mohamed Abdulrahman Al-Bahar Bahrain Jordan - Jordan Tractor & Equipment Kuwait - Mohamed Abdulrahman Al-Bahar Kuwait Lebanon - M. Ezzat Jallad & Fils

Oman - Oasis Trading & Equipment Co. LLC Qatar - Mohamed Abdulrahman Al-Bahar Qatar Saudi Arabia - Zahid Tractor & Heavy

Machinery Co. Ltd.
United Arab Emirates - Mohamed Abdulrahman Al Bahar (Al Ain)

United Arab Emirates - Mohamed Abdulrahman Al-Bahar (Abu Dhabi) United Arab Emirates - Mohamed Abdulrahman Al-

Bahar (Sharjah)

Yemen - The Tehama Trading Co.

Caterpillar SARL

PO Box 262147 Jebel Ali Free Zone (South) Dubai

United Arab Emirates Tel: +971 4 8106464 Fax: +971 4 8106465 Web: www.cat.com

For nearly 90 years, Caterpillar Inc. has been making sustainable progress possible and driving positive change on every continent. Customers turn to Caterpillar to help them develop infrastructure, energy and natural resource assets. With 2013 sales and revenues of \$55.656 billion, Caterpillar is the world's leading manufacturer of construction and mining equipment, company principally operates through its three product segments - Resource Industries, Construction Industries and Energy & Transportation - and also provides financing and related services through its Financial Products segment. For more information, visit caterpillar.com. To connect with us on social media, visit caterpillar.com/social-media

Agents:

Algeria - Bergerat Monnoyeur Bahrain - Mohamed Abdulrahman Al-Bahar Bahrain Egypt - Mantrac SAE

Iraq - Iraqi Co. for Machinery and Equipment Service Jordan - Jordan Tractor & Equipment
Kuwait - Mohamed Abdulrahman Al-Bahar Kuwait
Lebanon - M. Ezzat Jallad & Fils (Lebanon) Morocco - Tractrafric Equipement Oman - Oasis Trading & Equipment Co. LLC
Palestine - Palestinian Tractor & Equipment Co. Qatar - Mohamed Abdulrahman Al-Bahar Qatar

Saudi Arabia - Zahid Tractor & Heavy Machinery Co. Ltd. Tunisia - Parenin United Arab Emirates - Mohamed Abdulrahman Al-Bahar (Abu Dhabi)

United Arab Emirates - Mohamed Abdulrahman Al-Bahar (Sharjah) Yemen - Tehama Trading

CAVATORTA FRANCE s.a.s.

Rue Jean-Baptiste Godin ZI de Villeneuve St Germain 02 200 Villeneuve St Germain France

Tel: +39 3 484121305 Web: www.cavatorta.it/fr E-mail: s.cavatorta@cavatorta.it

Galvanised and PVC coated welded mesh producer leader in Europe

Charlotte Pipe and Foundry Co.

PO Box 35430 Charlotte, NC, 28235 USA

Tel: +1 704 3486450 Fax: +1 800 5531605 Web: www.charlottepipe.com E-mail: contactus@charlottepipe.com

Chauvin Arnoux Group

190, rue Championnet Cedex 18, Paris 75876 France

Tel: +33 1 44854485 Fax: +33 1 46277389 Web: www.chauvin-arnoux.fr E-mail: info@chauvin-arnoux.fr

Agents:

Lebanon - Chauvin Arnoux Middle East

Ciber Equipamentos Rodoviários Ltda

Rua Senhor do Bom Fim. 177 Porto Alegre/RSCEP: 91140-380 Brazil

Tel: +55 51 33649200 Fax: +55 51 33649228 Web: www.ciber.com.br E-mail: ciber@ciber.com.br

Ciber offers a complete line of equipments for building, maintaining and repairing pavements in the markets where it is located. The company manufactures high-quality equipments for various highway applications that streamlines the building of roads and brings savings to its customers by joining efficiency and high productivity.

COELMO spa



Agglomerato Industriale ASI Acerra (NA), 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 (DMCC Branch)

Construction Computer Software (Gulf) LLC

PO Box 34387, Dubai United Arab Emirates Tel: +971 4 3466456 Fax: +971 4 3884663 Web: www.ccsqulf.com E-mail: info@ccsgulf.com

Construction Computer Software or CCS provides essential software solutions to the construction industry and has been doing so far over 30 years. CCS's two leading software products are buildsmart an ERP construction accounting & costing system and candy, a construction estimating & project control system.

Cummins Middle East FZE



Middle East

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

Cummins Middle East FZE, the first whollyowned 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, CPG (Cummins Power Generation) offers one of the widest ranges in diesel power generators, starting from 17kVA till 4375kVA.

Danway LLC

PO Box 50048, Dubai United Arab Emirates Tel: +971 4 3473700 Fax: +971 4 3473232 Web: www.danwayllc.com E-mail: info@danwayllc.com

Danway, the proud engineering arm of Al-Nowais Investments is a registered UAE manufacturer and also holds a GCC state-manufacturing license for a variety of products

The multi-coloured bouquet of DANWAY's areas of excellence includes the electrical, power and automation division, the support technologies division, power division and the industrial and retail systems division.

Diamond Metal Screen PL



Plot No. 26 R.S.S. No. 336/1 Majagaon, Udayambag Belgaum, Karnataka India

Tel: +91 831 2407775 Web: www.diamondscreens.com E-mail: diamondscreens@vsnl.com

Doka Middle East

C/o Doka Gulf FZE, PO Box 61407 Jebel Ali Free Zone

Dubai

United Arab Emirates Tel: +971 4 3313938 Fax: +971 4 3329239 Web: www.doka.com E-mail: marketing-me@doka.com

Worldwide, Doka is one of the leading firms in the formwork industry. Our globe-spanning organisation with 160 sales and logistics locations give construction companies around the world fast access to safe, dependable and highperforming formwork solutions. Doka customers profit from speedy and prompt availability of required formwork together with Doka's unmatched services for every type of building construction and civil engineering project.

Agents: Bahrain - Doka Bahrain Doka Saudi Co. Ltd. for Trading Rep. Office

Jordan - Doka Jordan LLC

Kuwait - Doka Kuwait - Div. of Riham Gen. Trad. &

Cont. Co. Lebanon - Doka Lebanon Oman - Doka Muscat LLC Qatar - Doka Qatar WLL

Saudi Arabia - Doka Saudi Arabia Co. Ltd. for Trading (Dammam Branch)
Saudi Arabia - Doka Saudi Arabia Co. Ltd. for Trading

(Jeddah - Head Office)
Saudi Arabia - Doka Saudi Arabia Co. Ltd. for Trading
(Riyadh Branch)

United Arab Emirates - Doka Emirates LLC (Abu Dhabi Branch)

United Arab Emirates - Doka Emirates LLC (Sharjah Branch)

Doosan Portable Power (Doosan Benelux SA)



PO Box 262688, JLT Platinum Tower

Cluster I, Level 18 Office 1802, Dubai United Arab Emirates Tel: +971 4 2767206 Fax: +971 4 2767204

Web: www.doosanportablepower.com E-mail: hazem.elnageeb@doosan.com

Doosan Portable Power is a market leading manufacturer of portable compressors and mobile lighting systems for the Middle East market. All Doosan Portable Power products are designed and rigorously tested to ensure they give outstanding operation on the toughest sites and in the most extreme conditions around the world, for applications in construction, roads, utilities, rental, quarrying and many other industries.

Agents:

Bahrain - Mohammed Jalal & Sons WLL Egypt - Otrac Heavy Equipment Co. Iraq - Tristar Co. Iraq Jordan - Arab Equipment Trading Co. Kuwait - Bahrah Trading Co. WLL Lebanon - Tracksparco Bachalani SARL Libya - Rawasee Co. Oman - Al-Futtaim Auto & Machinery Co. LLC (FAMCO - Oman) Qatar - Jaidah Group Saudi Arabia - The Machinery Group LLC United Arab Emirates - Al Futtaim Auto & Machinery Co. LLC

Dresser-Rand

Barrio De Oikia.44 Zumaia-Gipuzkoa, 20759

Spain

Tel: +34 943 865200 Fax: +34 943 865210 Web: www.dresser-rand.com E-mail: guascor@dresser-rand.com

Dresser-Rand, global supplier of environmentally-friendly technology in power generation of oil & gas, industrial, construction, mining, and commercial industries, are designed to work with a wide range of fuels for its Guascor engines, including natgas, diesel, biogas, biodiesel, flare gas, syngas, low methane and other gases to produce hot water, steam/cold and power. Range: 100kWe-2.5mWe

Eaton

Eaton Middle East PO Box 52080 Dubai Techno Park Duhai

United Arab Emirates Tel: +971 4 8066100 Fax: +971 4 3329239

Web: www.eaton.ae

Eaton is a power management company with 2013 sales of \$22.0 billion. Eaton provides energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 101,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.com.

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@eland.co.uk

For more than 35 years, Eland Cables have been supplying cable to some of the world's most demanding industries including oil & gas, marine, rail and power transmission.

Today the company operates in more than 130 countries worldwide.

Elettrondata S.r.l.

Via Del Canaletto 77/79 Spezzano Di Fiorano (MO) 41042. Italy

Tel: +39 0536 1840500 Fax: +39 0536 1840501 Web: www.elettrondata.it E-mail: info@elettrondata.it

Italian leading company for automatic batching control systems in concrete industry, fleet monitoring solutions, laboratory software, ERP for ready mix industry, liquid admixtures batching equipment and moisture measurements probes.

Agents:

United Arab Emirates - Malfer

Euroblast Middle East

PO Box 31230 Dubai UAE

Tel: +971 4 2824200/2824400 Fax: +971 4 2824264 Web: www.euroblastme.com

Web: www.euroblastme.com E-mail: sales@euroblastme.com

Euroblast is the exclusive provider of turnkey solutions to the surface preparation industry and has created an icon in the industry as a solution provider for steel and concrete surface preparation and coating.

Euroblast is associated with world leaders in the technology for surface preparation and coating offers the following:

- · Autoblast Machine
- Wheel Blast Machine and Blast Room
- Automated Blast Room Facilities
- Automated Paint Room Facilities
- Graco Paint Spray Equipment
- Metalization Equipment
- Elcometer Testing Equipment

Agents:

Qatar - Euroblast, Doha Saudi Arabia - Euroblast, Dammam Saudi Arabia - Euroblast, Jeddah United Arab Emirates - Euroblast, Abu Dhabi

FAMCO (Al-Futtaim Auto & Machinery Company LLC)

PO Box 5502

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, Stertil & 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 and Qatar. 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 Belfast Co. Antrim Northern Ireland BT12 7AL United Kingdom Tel: +44 28 90495000 Fax: +44 28 28261111 Web: www.fgwilson.com E-mail: sales@fgwilson.com

FG Wilson is a world leading manufacturer of diesel and gas generator sets from 5.5 over 2,500kVA. With global production in Brazil, China, India, the USA and company headquarters in Northern Ireland, we have the capacity to produce over 132,000 generator sets each year. Our network of over 370 dealers in more than 150 countries, ensures we are best placed to deliver the most cost effective and technically advanced power generation systems around the world.



Fluke Europe b.v

PO Box 1186 Eindhoven 5602 The Netherlands

Tel: +31 40 2675200 Fax: +31 40 2675222 Web: www.fluke.eu

Founded in 1948, Fluke is the leader in compact, professional electronic test tools. Our products are used by technicians and engineers in service, installation, maintenance, manufacturing test and quality functions in a variety of industries throughout the world. The company's worldwide headquarters are in Everett, WA, USA. The sales and service headquarters for Europe, Middle East and Africa are located in Eindhoven, The Netherlands.

Galva Coat for Galvanizing & Lighing Poles



PO Box 8485 Musaffah Industrial Area (MW-4) Abu Dhabi United Arab Emirates

Tel: +971 2 5511188 Fax: +971 2 5510188 Web: www.galvacoat.ae E-mail: galvaind@eim.ae

Galvacoat, 3 time winner of Sheikh Khalifa Industry Golden Award, winner of Sheikha Khalifa Excellence Quality Award and having ISO 9001–2008, ISO 14001–2004 & Oshad approval certificate, is a leading manufacturer of various kinds of lighting & transmission poles, guard rails, cable management system and providing hot dip galvanizing services in the UAE.

Agents:

Saudi Arabia - M/s Inara Company Ltd.

Gardner Denver FZE



LB180202, Jafza View 18 Jebel Ali Free Zone 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.

General Navigation and Commerce Co. (GENAVCO) LLC



Za'abeel Road, Al Karama, Dubai United Arab Emirates Tel: +971 4 3961000 Fax: +971 4 3961308 Web: www.genavco.com

E-mail: ahmed.samir@genavco.com

General Navigation and Commerce Company (GENAVCO) L.L.C. is a leading supplier of high-tech Industrial and Construction equipment, provided by some of the world renowned manufactures across the globe. GENAVCO offers a diverse range of equipment and products that are used in majority of Industrial and Construction projects in the U.A.E. GENAVCO not only supplies with high quality products to customers but also focuses on building strong customer relationship by promising to deliver the finest and reliable equipment, thus strengthening customers trust and enhancing their satisfaction with GENAVCO services

Greaves Cotton Ltd.

Industry Manor, 3rd Floor Motilal Oswal Tower Junction of Gokhale & Sayani Road Prabhadevi, Mumbai, 400 025, India Tel: +91 22 33551700 Fax: +91 22 3351799 Web: www.greavescotton.com E-mail: info@greavescotton.com

Guilin HongCheng Mining Equipment Manufacture Co. Ltd.

Yangtang Industrial Park Xicheng Economic Development Zone Guangxi, P.R., 541199, China Tel: +86 773 8100666 Fax: +86 773 3568987 Web: www.hcraymondmill.com

China's No.1 Grinding Mill, Raymond Mill, Vertical Mill, Micro Powder Mill +2000 Case Plants in China can erase all your doubts. Come to HongCheng, enjoy the best mill in China.

E-mail: glhcmill@hotmail.com

Hamm AG

Hammstraße 1, Tirschenreuth, D-95643 Germanv

Tel: +49 9631 800 Fax: +49 9631 80111 Web: www.hamm.eu E-mail: info@hamm.eu

Haulotte Group

Haulotte Group, BP 9, La Perroniere L'Horme, 42152, France Tel: +33 4 77292424

Fax: +33 4 77294395 Web: www.haulotte.com E-mail: haulotte@haulotte.com

Haulotte Group, the specialist of people and material lifting equipment, manufactures and sells, through its sales and services network, a range of over 60 models: aerial work platforms, telehandlers to meet customer's needs.

Haulotte Middle East FZE

PO Box 293881 Dubai Airport Freezone Dubai

United Arab Emirates Tel: +971 4 2997735 Fax: +971 4 2996028 Web: www.haulotte.ae E-mail: haulottemiddle-east@haulotte.com

Haulotte Group is the largest European manufacturer of people and material handling equipment with a full range of telehandlers and aerial work platforms ranging from 6M to 43M. Based in Dubai, Haulotte Middle East is the regional hub for equipment and spare parts sales and technical support of Haulotte machines.

HELUKABEL Middle East



Business Park Office E-1-0103 Dubai Aviation City Logistics City Dubai

United Arab Emirates Tel: +971 4 8879594 Fax: +971 4 8879266 Web: www.helukabel.ae

E-mail: waseem.ashqar@helukabel.ae

- Flexible Control & Data Cables
- Power & Infrastructure Cables
- Instrumentation Cables
- · High flex Cables for Drag Chains & Motors
- Cable Accessories
- Custom Cables Solutions

Established in 1978, HELUKABEL is one of the world's leading cable manufacturers with 50 global warehouse locations and 30,000+ products in stock.

Herrenknecht AG

Schlehenweg 2 Schwanau 77963 Germany

Tel: +49 7824 3020 Fax: +49 7824 3403

Web: www.herrenknecht.com E-mail: pr@herrenknecht.com

Herrenknecht is a technology and market leader in the area of mechanized tunnelling systems. As the only company worldwide, Herrenknecht delivers cutting-edge tunnel boring machines for all ground conditions and in all diameters – ranging from 0.10 to 19 meters.

Agents:

United Arab Emirates - Herrenknecht Middle East FZE

Hi-Force Ltd.



Prospect Way, Daventry, Northants NN11 8PL

United Kingdom Tel: +44 1327 301000 Fax: +44 1327 706555 Web: www.hi-force.com

E-mail: daventry@hi-force.com

Hi-Force is the UK's leading manufacturer and supplier of hydraulic tools and bolting equipment, and offers a wide range of products suitable for use in several industries worldwide.

Agents:

United Arab Emirates - Hi-Force FZCO United Arab Emirates - Hi-Force Hydraulics

Himoinsa S.L.



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 S.L. is a market leading company and is world renowned as one of the top three European generating sets manufacturers. Exceptional designs of high quality generators, ranging from 3 up to 3000kVA, are the standard factory production, all complemented with AC generators, lighting towers, motor welding machines, power take-off generators, motor pumps and control systems.

Agents:

United Arab Emirates - Himoinsa Middle East FZE

Huegli Tech AG Ltd.

Murgenthalstrasse 30 Langenthal, 4900, Switzerland Tel: +41 62 9165030 Fax: +41 62 9165035 Web: www.huegli-tech.com E-mail: sales@huegli-tech.com

Huegli Tech is a leading supplier and wholesaler with core competences in Engine Govering Systems, Generating Set Controls, Hydraulic Engine Starting Systems, Acabecide 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

HYDAC International GmbH

Postfach 12 51, Sulzbach/Saar 66273, Germany Tel: +49 6897 50901

Fax: +49 6897 509577 Web: www.hydac.com E-mail: id@hydac.com

Agents:

Egypt - El-Masry Industrial Services LLC Egypt - Yasser Fahmy Hydraulic Eng.

Hypertherm Europe b.v.

Vaartveld 9, Roosendaal, 4704 SE The Netherlands Tel: +31 165 596908

Fax: +31 165 596901 Web: www.hypertherm.com E-mail: yl@hypertherm.com

Hypertherm designs and manufactures advanced cutting products for use in a variety of industries such as construction, shipbuilding and manufacturing. Its product line includes handheld and mechanized plasma systems and consumables as well as fiber laser and waterjet products, in addition to CNC montion and height controls and CAM cutting software.

Imeco HandelsgesmbH

Traklgasse 25/1. Vienna 1190, Austria

Tel: +43 1 3289980 Fax: +43 1 3289944 Web: www.imeco.at E-mail: imeco@imeco.at

Exporting new and used machines and equipment for infrastructure, civil engineering and marine projects especially for trench shoring, tunneling, piling, drilling and foundation works. Serving contractors in the Middle East for more than 30 years with products of outstanding quality as well as consultancy services.

Indeco Ind. S.p.A.

Viale Lindemann, 10 ZI, Bari 70132. Italy

Tel: +39 080 5313370 Fax: +39 080 5377976 Web: www.indeco.it E-mail: info@indeco.it

INMESOL, S.L.



Ctra. Fuente Alamo, 2 Corvera, Murcia, 30153, Spain Tel· +34 968 380300 Web: www.inmesol.com

E-mail: inmesol@inmesol.com

Inmesol is a company that designs, manufactures and sells: generators set (from 2,2 to 2500 kVA), lighting towers, welding generators and hybrid generation systems.

IronPlanet

Suite 11. Plaza 212 Blanchardstown Corporate Park Two Ballycoolin, Dublin 15, Ireland Tel: +353 1 8605000 Fax: +353 1 8605021 Web: www.ironplanet.com E-mail: nmccartan@ironplanet.com

IronPlanet is the risk-free, hassle-free, global auction and online marketplace for buying and selling pre-owned industrial equipment. For more than a decade. IronPlanet has been the online fleet management solution where sellers see faster, greater returns and buyers find great deals on fully inspected equipment from brands like Caterpillar, Komatsu and Volvo, backed by our IronClad Assurance™ guarantee.

Iveco Astra

Via Caorsana 79 Piacenza, 29122

Italy

Tel: +39 0523 543414 Fax: +39 0523 591773 Web: www.astraspa.com

Truck manufacturer - special vehicles.

JCB Power Products



Denstone Road, Rocester Staffordshire United Kingdom Tel: +44 1889 590312

Web: www.jcbgenerators.com E-mail: romy.tilbury@jcb.com

JCB Power Products offer a comprehensive range of over 170 generators and lighting towers ranging from 8-3300kVA. Available in 50Hz or 60Hz, the range divides into standard, rental and heavy, including both open and canopy, as well as containerised generators. JCB Power Products support your power and lighting needs, 24, 7. For general enquiries please email generator.sales@jcb.com

Agents:

Egypt - IPC Iraq - Al Ghodwa Iraq - KM Machinery (JCB Power) Kuwait - Riham Lebanon - Fares Baladi Libya - Al Noras Oman - MOS Oatar - Mannai Saudi Arabia - Abahsain United Arab Emirates - Galadari

JCB Sales Ltd.

Roceste, Staffordshire ST14 5JP United Kinadom Tel: +44 1889 590312

Web: www.jcb.com

Agents:

Kuwait - Riham General Trading and Contracting Co. WLL Qatar - Mannai Trading Co. WLL Saudi Arabia - Saleh & Abdulaziz Abahsain Co. Ltd.

United Arab Emirates - Galadari Trucks & Heavy Equipment Co. Ltd.

Jeremias Middle East



PO Box 75873

Tiffany Tower, Jumeirah Lake Towers JLT, Dubai, United Arab Emirates Tel: +971 50 9596119

Fax: +971 4 4470152 Web: www.ieremias-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 kinds of domestic, commercial and industrial applications complemented by freestanding industrial steel chimneys up to 3 meter diameter.

JLG

JLG International Polaris Avenue 63 Hoofddorp, 2132 The Netherlands Tel: +31 23 5655665 Fax: +31 23 5573750 Web: www.ilg.com

John Deere Power Systems

Orléans - Saran Unit



La Foulonnerie 45401 Fleury les Aubrais Cedex BP 11013, France Tel: +33 2 38826119 Fax: +33 2 38846266 Web: www.JohnDeere.com E-mail: idengine@JohnDeere.com

John Deere Power Systems develops, manufactures and markets diesel engines for a large variety of industrial and agricultural applications, material handling equipment, compressors and generator sets.

Jotun Paints UAE Ltd. LLC



PO Box 3671 Al Quoz Industrial Area Dubai

United Arab Emirates Tel: +971 4 3395000 Fax: +971 4 3380666 Web: www.jotun.com

E-mail: venkat.krishnan@jotundxb.ae

Agents:

Bahrain - Jotun Bahrain Egypt - El-Mohandes Jotun SAE Egypt - El-Mohandes Jotun SAE (Cairo) Egypt - El-Mohandes Jotun SAE (Smouha) Jordan - Corro-Coat Saudi Arabia Co. Ltd. Jordan - Universal Paint Inc. Kuwait - Jotun Powder Coatings

Lebanon - Commrite Group SARL Saudi Arabia - Jotun Saudia Co. Ltd. (Jeddah) Saudi Arabia - Red Sea Paints Co. Ltd. United Arab Emirates - Jotun Abu Dhabi Ltd. LLC United Arab Emirates - Jotun Al Ain United Arab Emirates - Jotun Powder Coatings UAE

Yemen - Jotun Yemen Paints Co. Ltd.

Jubaili Bros

Jebel Ali Free Zone United Arah Emirates 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 over 35 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 8 countries with 23 branches and a strong dealer network

Agents: Kuwait - Jubaili Bros Lebanon - Jubaili Bros Qatar - Jubaili Bros WLL

Kaeser Kompressoren FZE

PO Box 17485, Street 1243 Jebel Ali Free Zone (North), Dubai **United Arab Emirates** Tel: +971 4 8050000

Fax: +971 4 8050077 Web: www.kaeser.com E-mail: info.dubai@kaeser.com

Manufactures of industrial air compressors, construction type air compressors as well as industrial low pressure blowers, together with associated accessories such as air treatment equipment and centralised control systems.

Keestrack

Taunusweg 2 Bilzen, 3740 Belgium

Tel: +32 89 515851 Fax: +32 89 515850 Web: www.keestrack.com E-mail: info@keestrack.net

Keestrack designs and produces mobile crushing and screening equipment. Quality, innovation, flexibility and after sales support are key. R&D ensures Keestrack equipment is recognized as a market leader in quality and performance all over the world. Keestrack has a wide range mobile screens, impact crushers, jaw crushers, cone crushers and stackers.

Agents:

United Arab Emirates - ILE Rental

Kirloskar Oil Engines Ltd.



Enriching Lives

Laxmanrao Kirloskar Road Khadki, Pune, 411003, India Tel: +91 20 25810341/4574 Fax: +91 20 25813208/0209 Web: www.kirloskar.com E-mail: shashikant.adsul@ kirloskar.com

Kirloskar Group is counted amongst India's largest multi-product, 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 offer world class products. Koel has a sizable presence in international markets with offices in Dubai, South Africa and Kenya and representatives in Indonesia and Nigeria. Koel also has a strong distribution network throughout the Middle East and Africa.

Agents:

Bahrain - M.H. Al Mahroos BSC © Egypt - Egyptian Engineering & Trading Co. Kuwait - Boodai Trading Co. Lebanon - Hassan Hussein Machinery Est. Oman - Al Shirawi Modern Enterprises LLC Qatar - Boodai Trading Co. Ltd. Saudi Arabia - Abdullah Hashim Co. Ltd. United Arab Emirates - Al Shirawi Enterprises LLC

Kohler Power Systems

Kristallaan 1, Zevenbergen, 4761 ZC The Netherlands Tel: +31 16 8331630

Web: www.kohlerpower.com E-mail: powersystems.emea@kohler.com

For every aspect of your critical load requirements, Kohler has engineered the product: EPA-complaint generator sets from 5 to 3250 kW, a full line of automatic transfer switches. customizable paralleling switchgear, controls that can manage a multitude of power systems applications, along with wireless and webenabled remote PC power system monitoring.

Agents:

Saudi Arabia - A.Abunayyan Trading Corporation

Kraft Tool Co.

8325 Hedge Lane Terrace, USA Tel: +1 913 4224848 Fax: +1 913 4221018 Web: www.KraftTool.com E-mail: steve@KraftTool.com

Kraft Tool Co.® manufactures over 5,000 high quality tools and accessories for the concrete, masonry, asphalt, drywall and floor covering industries. Manufactured with care and precision, Kraft offers high quality tools for construction professionals. We are proud of our "Hand-Krafted" workmanship attributed to every product made in the USA.

For more details on agents please contact export department.

Leroy-Somer

Succursale commerciale d'Angoulême Usine de Rabion, CS 10015 Angouleme Cedex 9, 16915, France

Tel: +33 545 945975 Fax: +33 545 685665 Web: www.leroy-somer.com E-mail: succursaleISAngouleme.ials@ emerson com

Leroy-Somer, a business of Emerson, is the world leader in low and medium-voltage alternators and one of the world's leading manufacturers in electro-mechanical and electronic drive systems. with extensive ranges of electric motors, gearmotors, variable speed drives and electronic controllers. These drive solutions help increase productivity and energy efficiency.

Agents:

United Arab Emirates - Leroy-Somer C/o Emerson FZE

Liebherr-Export AG

EBHERR

General-Guisan-Straße 14 Nussbaumen, 5415, Switzerland Web: www.liebherr.com www.facebook.com/LiebherrConstruction E-mail: info.lex@liebherr.com

The Liebherr Group comprises more than 130 companies in every continent of the world and employs a workforce of about 41,000 people. In 2014, the Liebherr Group achieved a total consolidated turnover of more than 8.8 billion Euros. The Liebherr Group's holding company is Liebherr-International AG in Bulle, Switzerland, which is entirely owned by members of the Liebherr family.

Linde AG

Linde AG, Engineering Division Dr.-Carl-von-Linde-Str. 6-14 Pullach, 82049 Germany

Tel: +49 89 74450 Fax: +49 89 74454908

Web: www.linde-engineering.com E-mail: info@linde-le.com

LINTEC GmbH & Co. KG

Alter Postweg 28 Buxtehude 21614

Germany

Tel: +49 4161 8660 Fax: +49 4161 866188 E-mail: info@lintec-gmbh.de

LINTEC Germany manufactures concrete and asphalt mixing plants at highest quality level in 100% ISO sea containers. The modular concept enables easy and economical transportation and a quick set-up at the job site. Also ideal for project business when a relocation is required. Innovative aggregate cooling system for concrete without ice!

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 specialized in the production of alternators and rotating welders. Part of the Pedrollo Group of companies, Linz Electric has become, in just a few years, one of the major players in the sector thanks to the original innovative solutions in energy transformations.

Liugong Machinery (Middle East) FZE

RA08YB05 Jebel Ali Free Zone Dubai

United Arab Emirates Tel: +971 4 8870641 Fax: +971 4 8870642

Web: www.liugong.com E-mail: xule@liugong.com

Liugong Middle East has a 3,300 square meter warehouse located in Jebel Ali Freezone, Dubai. We have an automated warehouse management system with electronic scanning, allocation, order picking and packaging of spare parts. Our mission is to provide our customers with first class construction machinery and services. Quality, Honesty and Services is our princple. Our loyalty and commitments remain respectfully at your service.

Lovato Electric S.p.A.



Via Don Mazza, 12 Gorle (BG)

24020. Italy Tel: +39 035 4282111

Fax: +39 035 4282200 Web: www.lovatoelectric.com E-mail: info@lovatoelectric.com

Electrical components for industrial automation and energy efficiency since 1922.

Magni Telescopic Handlers

Via Magellano, 22

Castelfranco Emilia (MO), 41013, Italy

Tel: +39 059 8630811 Fax: +39 059 8638012 Web: www.magnith.com E-mail: commerciale@magnith.com

Magni TH is a new company manufacturing high

capacity machines. Up to 30 TON, with really high quality standards and components.

Agents:

United Arab Emirates - Acore Global I I C

Mahindra Powerol - Mahindra & Mahindra Ltd.

FES, Gate No. 2 Akurli Road Kandivali East, Mumbai, 400101, India Tel: +91 22 67504023

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. Kuwait - Abek Intl General Trading & Contracting Co. Oman - Bin Salim Enterprises LLC Qatar - Mannai Trading Co. WLL Saudi Arabia - Intermodal Services of SA Trading &

Contracting
United Arab Emirates - Al Rawahy Establishment LLC United Arab Emirates - Utility Auto Corp JLT

Maitek S.r.l.

Via Vittorio Alfieri Ponterio Di San Constanzo (PU) 8 - 61039, Italy Tel: +39 0721 959340 Fax: +39 0721 936623 Web: www.maiteksrl.com E-mail: info@maiteksrl.com

Maitek manufactures aggregates crushing, screening and washing plants for quarry and mine, including water clarifying and sludge treatment plants, dust suppression systems. Turnkey projects from engineering to after-sale assistance and spare parts. Warehouse of new and second-hand machines in prompt delivery.

Maklada

ZI Bori Cedria Bir El bey **BP 10** Tunisia

Tel: +216 79 412488 Fax: +216 79 412430 Web: www.maklada.com E-mail: marketing@maklada.com

Maklada is specialized in prestressed steel manufacturing, supplying to more than 35 countries.

Agents: United Arab Emirates - Venus Steel Trading FZCO

MAN Truck & Bus Middle East and Africa F7F

PO Box 293521 Dubai Airport Free Zone **United Arab Emirates** Tel: +971 4 2991991 Fax: +971 4 2991993

Web: www.man-middleeast.com E-mail: middleeast@man.eu

Since 2006, MAN Truck & Bus Middle East has been the regional representative of MAN Truck & Bus AG and is a leading provider of commercial vehicles and buses that are renowned for their robustness, reliability and adherence to high standards of driver and passenger comfort and safety.

Agents:

Bahrain - Ahmed Mansoor Al-A Ali Co. BSC Egypt - Gorica Egypt Group Jordan - Integrated Automotive Kuwait - Al Ahlia Heavy Vehicles Selling & Import Co. Oman - Arabian Engineering Services LLC Qatar - Qatar International Automobiles Saudi Arabia - Haji Husein Alireza & Co. Ltd. Tunisia - Alpha International Tunisie United Arab Emirates - Darwish Bin Ahmed & Sons

Manitowoc Cranes

PO Box 261734 Jebel Ali Free Zone South Side Dubai

United Arab Emirates Tel: +971 4 8862677 Fax: +971 4 8862678

Web: www.manitowoccranes.com

Marchetti S.r.l.

Via Piemonte 22 Citta' Della Pieve (Perugia) 06062

Tel: +39 0578 20348 Fax: +39 0578 226488 Web: www.marchettionline.it E-mail: export@marchettionline.it

Production 100% made in Italy of: ladders and scaffoldings, in aluminium and steel, From more than 60 years our goals are pursued with professional ethics. The quality of our products is guaranteed by the greatest attention to details. Certification: UNI EN ISO 9001 QMS (Quality Management Systems) UNI EN ISO 15614, UNI EN 1418, EN 287-1 (Specification and qualification of welding procedures for metallic materials)

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 application: power generation, industrial manufacturing, oil & gas, renewable energies (hydro), cogeneration and UPS, marine and navy.

Marini S.p.A.

Via Roma, 50 Alfonsine (RA)

Italy

Tel: +39 0544 88111 Fax: +39 0544 81341 Web: www.marini.fayat.com E-mail: info@marini.fayat.com

Marini is a worldwide leader in the manufacture of batch mix asphalt plants (production 60 to 500tph), both stationary and mobile, plants for recycling of asphalt pavements and for production of cement mixes. Its products are the results of the most modern technologies and 50 years of experience.

Agents:

Egypt - M.S.E. - Modern Structures & Equipment Iran - Fan Va Tose EH Co. Ltd. Kuwait - Teknoline Group Lebanon - A.T.C.O

Oman - Saud Bahwan Projects & Equipment LLC Qatar - Oriental Trading Co. Ltd. United Arab Emirates - Favat Middle East FZE

MB Crusher S.p.A.

Via Astico 30/A Fara Vicentino (VI) 36030 Italy

Tel: +39 445 308148 Fax: +39 445 308179 Web: www.mbcrusher.com E-mail: info@mbcrusher.com

MB is a global leader in the production and marketing of equipment, machinery and accessories for the earth movement, demolition and recycling sectors. MB products include crusher and screening buckets, iron separator and grapple rotary movement.

Merlo S.p.A

Via Nazionale 9 – 12010 S. Defendente di Cervasca

Cuneo

Tel: +39 0171 614111 Fax: +39 0171 684101 Web: www.merlo.com E-mail: info@merlo.com

The Merlo Group is a dynamic, innovative, fully integrated and privately owned manufacturer of hi-tech machines

The Merlo Group designs and manufactures
Telescopic handlers, slewing telehandler, load
capacities up to 12 tones, lift heights up to 30
meters. Moreover Self-loading concrete
mixers and multipurpose tracked carriers.

- Tre Emme is part of the Group and manufacture heavy-duty tool carriers and forestry tractors as well as attachments for Merlo machines.
- Merlo was founded in 1964, has about 1,150 employees (20% are university graduates).
- The manufacturing facilities in Cuneo (Italy) have 220,000 m2 of covered space.
- Net sales in 2012 were about 400 million Euros (more than 90% export).
- Sales through six sister companies and more than 600 dealers worldwide.

Metso Minerals

PO Box 1220 FIN-00101 Finland

Tel: +358 20 484100 Fax: +358 20 484101 Web: www.metso.com

Minyu Machinery Corp.

4F, No.431 Ruiguang Rd Neihu Dist. Taipei City 11492 Taiwan

Tel: +886 2 87512022 Fax: +886 2 87512051 Web: www.minyu.com E-mail: office@minyu.com

Established nearly 50 years ago, Minyu has since become a world leader in crushing and screening equipments manufacturing. Minyu manufactures and provides technological cutting-edge crushers and screens to the construction, mining and quarry industries at the best quality to price ratio.

Mohamed Abdulrahman Al-Bahar LLC

PO Box 6038

Manama159 Al-Wasit Street Industrial Area No. 3

Sharjah

United Arab Emirates Tel: +971 6 5433555 Fax: +971 6 5432555 Web: www.albahar.com E-mail: info@albahar.ae

Agents:

Bahrain - Mohamed Abdulrahman Al-Bahar Kuwait - Mohamed Abdulrahman Al-Bahar Oman - Oasis Trading & Equipment Co. LLC Oatar - Mohamed Abdulrahman Al-Bahar United Arab Emirates - Mohamed Abdulrahman Al-Bahar Abu Dhabi

Motorenfabrik Hatz GmbH & Co. KG

Ernst-Hatz-Str. 16 Ruhstorf, 94099 Germany

Tel: +49 8531 3190 Fax: +49 8531 319418 Web: www.hatz-diesel.com E-mail: marketing@hatz-diesel.de

Hatz is specialist in 1 to 4 cylinder diesel engines which are used in all manner of applications, such as construction machinery, compressors and utility vehicles. Besides, Hatz produces complete systems like generating sets, smart grid systems, pumps and special systems based on customer demand.

Agents:

Bahrain - Gulf Equipment & Technology Jordan - Al Ghanem Trading & Contracting Co. Oman - Inma Co. Oman LLC Qatar - Inma Co. Qatar LLC Saudi Arabia - Electrical Work & Maintenance United Arab Emirates - Inma Gulf Development & Construction LLC

NICOLAS Industrie SAS

19 Avenue du Tertre Champs-sur-Yonne 89290 France

Tel: +33 3 86535200 Fax: +33 3 86535249 Web: www.nicolas.fr

Web: www.nicolas.fr E-mail: contact@nicolas.fr

OMICRON Electronics Middle East Ltd.

44

OMICRON

Almoayyad Tower 39th Floor Offices 3901 & 3902, Bldg 2504 Road 2832, Block 428, Seef District

Bahrain

Tel: +973 17116400 Web: www.omicron.at E-mail: info.mideast@omicron.at

OMICRON is an international company serving the electrical power industry with innovative testing and diagnostic solutions. OMICRON products allow users to assess the condition of the primary and secondary equipment on their systems with complete confidence. OMICRON services including consulting, commissioning, testing, diagnosis and training make the product range complete.

Panasonic Marketing Middle East & Africa FZE

PO Box 17985 Jebel Ali, Freezone (South)

Dubai

United Arab Emirates Tel: +971 4 8862142/8007262

Fax: +971 4 8807054 Web: www.panasonic.ae

E-mail:

customer care@ae.panasonic.com

Panasonic, with history of 100 years in the Industry of Electrical and Allied Components, is a premier supplier of Electrical Construction Material in the region.

Panasonic product catergory includes Wiring Devices and Accessories (A,B and C type), Conduit Pipe and Accessories, Energy Saving Lamps (CFL and LED), Air Moving Solutions (Ventilating Fan, Ceiling Fan, Energy Recovery Ventilation) these product categories aimed at achieving highest efficiency in terms of energy usage and built around strong foundation of quality commitment as Brand Panasonic represents.

Parker Plant Ltd.

Viaduct Works Canon Street Leicester United Kingdom

Tel: +44 116 2665999
Fax: +44 116 2664422
Web: www.parkerplant.com
E-mail: sales@parkerplant.com

Parker Plant is one of the foremost providers of reliable and dependable solutions for crushing, screening, sand & gravel, concrete, asphalt and bitumen surfacing applications throughout the world. Established over 100 years, Parker's huge wealth of practical experience has gained an enviable reputation for technical ability, quality and reliable performance.

PASCHAL-Werk G. Maier GmbH

Kreuzbühlstraße 5, Steinach 77790

Germany

Tel: +49 7832/71-0 Fax: +49 7832/71-209 Web: www.paschal.de E-mail: service@paschal.de

In over 40 countries PASCHAL-Group is an internationally well-known provider for services, distribution and production of concrete formwork, supporting systems and formwork planning software.

Our portfolio includes the circular formwork TTR/TTS, Modular Universal Formwork with large-size elements GE, the large-size formwork LOGO.3 and ATHLETE, column formwork, climbing and single-sided forming and supporting systems.

Agents:

Saudi Arabia - PASCHAL-Werk G. Maier GmbH (Scientific and Technical Office)

PERI PO Box 27933

U-Bora Tower Business Bay Dubai United Arab Emirates Tel: +971 4 4276654 Web: www.peri.com E-mail: info-mea@peri.de

PERI provides German-made, en-certified modular scaffold systems for access, working platforms and suspended scaffold applications as well as concrete formwork solutions complemented by professional design and engineering services.

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

Perkins is the world's leading supplier of offhighway diesel and gas engines in the 4–2000kW market. Perkin's strength is its ability to tailor engines to meet customers requirements, which is why its engine solutions are trusted by over 1000 industrial, construction agricultural, materials handling and electrical power generation manufacturers.

Agents:

Bahrain - Yusuf Bin Ahmed Kanoo Co. WLL Qatar - Obaikan Equipment & Services WLL Saudi Arabia - Yusuf Bin Ahmed Kanoo Co. Ltd. (Dammam)

Saudi Arabia - Yusuf Bin Ahmed Kanoo Co. Ltd. (Jeddah)

Saudi Arabia - Yusuf Bin Ahmed Kanoo Co. Ltd. (Riyadh)

United Arab Emirates - Kanoo Machinery LLC United Arab Emirates - Power Systems Gulf LLC Yemen - Haskan Ltd.

Peter Berghaus GmbH



Herrenhohe 6, Kuerten 51515, Germany Tel: +49 2207 96770 Fax: +49 2207 967780 Web: www.berghausverkehrstechnik.de E-mail: mail@berghaus-

verkehrstechnik.de

Peter Berghaus GmbH - Well known manufacturer of innovative safety products for working zones from Germany. Portable traffic lights, mobile barrier systems, warning lights and warning trailers - All you need for safety on your road construction site.

Polycon Gulf Ltd.

PO Box 44903, 5th Floor

LiwaTower, Capital Centre
Near ADNEC
Al Khaleej Al Arabi Street
Abu Dhabi
United Arab Emirates
Tel: +971 2 5059160
Fax: +971 2 6318007
Web: www.polycongulf.com
E-mail: polycon@emirates.net.ae

Polycon Gulf Ltd. is a part of Al Nasser Industrial Enterprises (ANIE) - a well reputed group with interests in metal, power, polymers and environmental protection. Polycon Gulf Ltd., is a pioneer in the manufacture of water storage tanks. road barriers and other roto moulded products in the GCC and serves the needs of thousands of satisfied customers throughout the region. Polycon products are designed using the latest and finite analytical methods, allowing for suitable changes to be made to the thickness and variation of the products so that stresses and deflections can be minimized. This makes them resistant to heavy hydrostatic loads with a built-in factor of safety, thereby ensuring many years of service. Polycon Gulf is the first choice of

architects, builders and consultants for a range of water storage applications in the UAE. Check out our products and you'll experience what we mean. Visit www.polycongulf.com to embark on a future with Polycon.

Powertech Switchgear Industries FZE



PO Box 2335, Ajman Free Zone United Arab Emirates Tel: +971 6 7472274 Fax: +971 6 7472551

Web: www.powertechswitchgear.com E-mail: info@ptswitch.ae

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 Co. LLC

PRAMAC Middle East FZE

Jafza View 18, 1206 Jebel Ali Free Zone South, Dubai United Arab Emirates Tel: +971 4 8865275 Fax: +971 4 8865276 Web: www.pramac.com

E-mail: elvin.iskan@pramac.com

PRAMAC manufactures a wide range of Power Generation Equipment and Materials Handling Equipment. We produce generator 1 kvA to 3.360 kvA with Perkins, Volvo, MTU, Deutz, Cummins, Doosan, FPT Iveco, Yanmar Engines and Hand Pallet Truck, Scales Hand Pallet Trucks, Electric Pallet Trucks, Electric Stackers and Special Handling Solutions.

Proceq Middle East

PO Box 8365 Sharjah Airport International Free (SAIF) Zone Sharjah

United Arab Emirates Tel: +971 6 5578505 Fax: +971 6 5578606 Web: www.proceq.com

Putzmeister Holding GmbH

Max-Eyth-Str. 10 Aichtal 72631 Germany

Tel: +49 7127 5990 Fax: +49 7127 599520 Web: www.putzmeister.com

Agents:

Bahrain - M.H. Al Mahroos BSC ©

Kuwait - Arab Group For Equipments & Construction Co.
Lebanon - Bardawil & Co. Construction Equipment &

Materials SARL
Oman - International Heavy Equipment LLC
Qatar - Construction Equipment Div. Darwish

Trading Co.
Saudi Arabia - Medco
Saudi Arabia - Medco (Jeddah)
Saudi Arabia - Medco (Riyadh)

United Arab Emirates - German Gulf Enterprises Ltd.

Ritchie Bros Auctioneers

4000 Pine Lake Road Lincoln, Nebraska, 68516 USA

Tel: +1 402 4213631 Fax: +1 402 4211738 Web: www.rbauction.com

RMD Kwikform Middle East

United Arab Emirates

PO Box 5801 Sharjah

Tel: +971 6 5534173 Fax: +971 6 5534327 Web: www.rmdkwikform.com E-mail: rmd.me@rmdkwikform.com

RMD Kwikform supplies, through both Sale and Hire, a diverse range of network and shoring solutions to the construction industry, with extensive experience across a range of sectors. RMD Kwikform is able to offer added value, expert support through all stages of the project, from assessment, planning and design services through to onsite project support.

Rockster Recycler

Wirtschaftszeile West 2 Ennsdorf, 4482 Austria

Tel: +43 7223 81000 Fax: +43 7223 81000-329 Web: www.rockster.at E-mail: office@rockster.at

The company Rockster Recycler specializes in the design and production of mobile crushing and screening plants for profitable recyling of asphalt, concrete and demolition rubble as well as natural stone. Rockster is known for advanced technology like the patented DUPLEX system or the first hybrid impact crusher.

Rockwell Automation

PO Box 45235 Al Wahda Commercial Tower - City Tower 1

18th Floor, Hazaa Bin Zayed The 1st Abu Dhabi

United Arab Emirates Tel: +971 2 6948100 Fax: +971 2 6948199

Web: www.rockwellautomation.com

Rossi S.p.A.

Via Emilia Ovest 915/a Modena, 41123 Italy Tel: +39 059 330288 Fax: +39 059 827774

Fax: +39 059 827774 Web: www.rossi-group.com E-mail: info@rossi-group.com

Rubber World Industry LLC

New Industrial Area 2435, Ajman United Arab Emirates Tel: +971 6 7434176 Fax: +971 6 7434197 Web: www.gulfoflex.com E-mail: rwi@qulfoflex.com

Manufacturers of elastomeric rubber insulation.

RUD Ketten Rieger & Dietz GmbH u. Co. KG



RUD®

Friedensinsel, Aalen, 73432, Germany Tel: +49 7361 5041371 Fax: +49 7361 5041460

Web: www.rud.com E-mail: sling@rud.com

RUD is a world class manufacturer of Sling and Lashing Systems with almost 140 years experience in the branch. With our safety optimized RUD Sling and Lashing means plus the lifting points we have introduced innovative designs that are setting the standards for the entire lifting industry.

Agents:

United Arab Emirates - Carl Stahl

Sahvadri Industries Ltd.



39 – D, Gultekdi, J N Marg Pune Maharashtra, India Tel: +91 20 26444625 Fax: +91 20 25458888

Fax: +91 20 25458888 Web: www.silworld.in E-mail: info@silworld.in

M/S Sahyadri Industries Ltd (SIL) Pune, is engaged in manufacturing building material products since the last six decades with state-of-art plants located in India at Maharashtra, Tamil Nadu, Gujarat and Andhra Pradesh, with ISO 9001:2008 Certification. "ECOPRO" fibre Cement Board — available in various thickness from 6 mm to 18 mm which vary wide applications such as false ceiling, dry wall partitions, wall lining, cladding, roof lining, tile under layers, column cladding, smoke barriers, duct covering, furniture backing, pergolas, kitchen applications, table tops, cabinets, mezzanine flooring etc.

Agents:

United Arab Emirates - Sahyadri Industries Ltd.

Saudi Leather Industries Co. Ltd.

PO Box 31691 2nd Industrial City Damma Street # 69, Cross # 8, Al Khobar 31952, Saudi Arabia

Tel: +966 13 8121066 Fax: +966 13 8122253 Web: www.saudileather.com E-mail: sales@saudileather.com sathish@saudileather.com

SLIC is a Saudi Arabian Co., grown to become leading supplier of Industrial Safety & Work footwear, in Saudi Arabia, Gulf, and Middle East & Africa. SLIC footwear are not just tough, rather are most comfortable industrial footwear too. In fact, by utilizing latest technologies, SLIC produce work footwear, that is similar in quality & flexibility to high performance. As a manufacturer, we proudly meet the world's highest safety standards. Yet, we are committed to much more. SLIC is dedicated to production of work footwear, with nothing less than legendary level of comforts as well as safety provided with Composite Toes. That is why its products offered guarantee against manufacturing defects, for 6 months period.

Saudi Rockwool

PO Box 145, Riyadh K.S.A, 11383, Saudi Arabia Tel: +966 11 2650034 Fax: +966 11 2650089 Web: www.saudirockwool.com E-mail: info@saudirockwool.com

Saudi Vetonit Co. Ltd. (SAVETO)

PO Box 52235, Riyadh 2nd Industrial City, 11563 Saudi Arabia

sales@saudirockwool.com

Tel: +966 11 2653334 Fax: +966 11 2650718 Web: www.saveto.com E-mail: info.Riyadh@saveto.com

Schoeck ME FZE

PO Box 263052 Jebel Ali Free Zone, Dubai **United Arab Emirates** Tel: +971 50 4296307 Web: www.schoeck.ae E-mail: info@schoeck.ae

The mission of Schoeck ME FZE is the local selling, engineering, onsite support and delievery of innovative products for structural applications. One of Schoeck's products is the glass fibre reinforcement ComBAR®. It has an extremely high tensile strength, is corrosion resistant, extremely durable, non-conductive and nonmagnetic and easily machinable.

SDMO Industries



12bis, rue de la Villeneuve 29228 BREST Cedex 2 CS 92848, France Tel: +33 2 98414141 Fax: +33 2 98416307 Web: www.sdmo.com

E-mail: sdmo@sdmo.com

SDMO Industries is one of the world's leading generating sets manufacturers. A wide range of standard products from 1 kVA to several Megawatts through an efficient engineering department meets non-standard requirements. Present in over 150 countries through a dense network, SDMO Industries devotes its energy to supporting you in the successful completion of each of your projects world wide

Agents:

United Arab Emirates - SDMO Middle East

Shandong Shantui Construction Machinery Imp.& Exp.Co. Ltd.

4th Floor, Shantui office Building Shantui Industry Park No. 58 Highway G327, Jining City **Shandong Province** China

Tel: +86 537 2909369 Fax: +10 80115555/452121 Web: www.en.shantui.com E-mail: trade@shantui.com

Agents:

United Arab Emirates - Shantui Construction Machinery FZE

Sir Meccanica S.p.A.

Viale Europa 37, Catanzaro 88100, Italy

Tel: +39 0961 769696 Fax: +39 0961 769543 Web: www.sirmeccanica.com E-mail: sirmecc@sirmeccanica.com

Sir Meccanica, for over 20 years, has been manufacturing portable multifunction machine tools: WS (portable line boring and overlay welding), FMAX (flange facing), RSX9 (boring machine with fixed axle). 200/400 (portable orbital lathe), RW (external rotary welding machine) and other accessory equipment, like the Motorized Facing Head and the External Turning

Specialinsert S.r.l.

1 specialinsert

Via Monfalcone 144, Torino 10136. Italy Tel: +39 011 700301 Fax: +39 011 702947 Web: www.specialinsert.it E-mail: export@specialinsert.it

Specialinsert, since 1974 is Italian leader in the world of fasteners, produces and supplies fastening system for any industries from building & construction, furniture & design, automotive, aerospace, marine and many others. Our standard and customized products are made in Italy and we sell in more 40 countries worldwide.

SPECO Ltd.

313, Soi-Ro, Soi-Myeon Eumseong-Gun ChungcheongBuk-Do, 369872

Tel: +82 43 8714711 Fax: +82 43 8737104 Web: en.speco.co.kr E-mail: soo@speco.co.kr

Ever since the company establishment in 1979, under enormous support and trust, Speco Ltd. has been the leader in asphalt mixing plant, concrete batch and crushing plant industry in South Korea. For over 31 years, we have been proudly dedicating ourselves supplying plants in South Korea and more than 65 countries. As the expert in asphalt plant manufacturer from South Korea, we never stop investing on our R&D. Moreover we believe that our staff, our people, are the root of our strength. This will make a great leap forward and stregthen our position in the global plant industry. To be acknowledged in the global market as in the domestic market. To be unbeatable for the next 100 years and over. To give advanced technology & quality, competitive price and excellent service. These have been SPECO role models and goals. SPECO will be only one in mind, unbeatable and unforgettable.

SSAB AB

PO Box 70 Klarabergsviadukten 70, D6 Stockholm, 10121 Sweden

Tel: +46 8 4545700 Web: www.ssab.com E-mail: info@ssab.com

Sullivan-Palatek, Inc.



1201 W US Highway 20 Michigan City, IN USA

Tel: +1 219 8742497 Fax: +1 219 8090203

Web: www.sullivan-palatek.com E-mail: info@palatek.com

Sullivan-Palatek Inc., a leader in innovation and design, offers the industry's widest range of electric and portable rotary screw air compressors. From humble beginnings in 1984, Sullivan-Palatek has grown from providing engineering services to existing clients, to a privately owned company that manufactures the most rugged and reliable machinery available in

Agents: United Arab Emirates - Rajesh George, Sullivan-

Technical Access Services LLC

PO Box 127463 U-Bora Tower, Business Bay, Duhai

United Arab Emirates Tel: +971 4 4391500 Fax: +971 4 4523330 Web: www.tasuae.com E-mail: nfo@tasuae.com

Technical Converters Ltd.

5 Third Wav Avonmouth Bristol BS119HL United Kingdom

Tel: +44 7909 683397

Web: www.technicalconverters.co.uk F-mail·

mail@technicalconverters.co.uk

UK laminating company making radiant barrier, gas barrier, water proofing, pipe and duct cladding products.

Telestack

Bankmore Way East Omagh Co Tyrone Norther Ireland BT 79 0N2 United Kingdom Tel: +44 28 82251100

Fax: +44 28 82252211 Web: www.telestack.com E-mail: sales@telestack.com

Telestack Limited is a UK based company that designs, manufactures and distributes a range of mobile bulk material handling solutions. They have over 1,000 reference sites across the globe and operate in a variety of applications including mines, quarries, ports, rail yards, power stations and steel mills.

Terex Minerals Processing Systems



Office # 305 Pinnacle Building Sheikh Zayed Road Al Barsha 1 Dubai **United Arab Emirates**

Tel: +971 4 3990381 Fax: +971 4 3990382 Web: www.terexmps.com E-mail: neeraj.gulati@terex.com mpsmarketing@terex.com

Terex® Minerals Processing Systems provides a complete range of crushing & screening equipment to customers around the world. With over 100 years in the minerals processing industry we understand your business.

Terex Off-Highway Dump Trucks



Newhouse Industrial Estate Motherwell United Kingdom Tel: +44 2476 339594

Web: www.terex.com/construction

With more than 60 years of experience in design and manufacture of off-highway dump trucks. Terex have the trucks that provide excellent production in the toughest mine, quarry and construction projects around the world.

Agents: United Arab Emirates - Terex Middle East LLC

ThyssenKrupp Bautechnik GmbH

PO Box 45063 Essen

Germany

Tel: +49 201 8440 Fax: +49 201 844 536000 Web: www.thyssenkrupp.com E-mail: info@thyssenkrupp.com

Tower Light S.r.l.

Via Stazione 3 Bis Villanova D'Ardenghi (PV) 27030 Italy

Tel: +39 0382 567011 Fax: +39 0382 400247 Web: www.towerlight.com E-mail: middleeast@towerlight.it

Mobile lighting towers for building sites, roadworks, mining sites, quarries, airports, ports, industrial warehouses, emergency situations, remote areas, sporting and musical events.

Trelawny Spt Ltd.

Trelawny House 13 Highdown Road Leamington Spa CV31 IXT United Kingdom

Tel: +44 1926 883781 Fax: +44 1926 450352 Web: www.trelawnyspt.com E-mail: sales@trelawny.co.uk

Trelawny Spt Ltd. is an independent manufacturer of pneumatic tools and surface preparation equioment operating from its headquarters in the engineering heart of the UK in Leamington SPA. For over 60 years Trelawny has been offering a range of equipment for the preparation of concrete, steel and stone in various industries.

Tremco-illbruck LLC

Office 402 Lama Tower Al Barsha 1 Dubai **United Arab Emirates** Tel: +971 4 4232012 Fax: +971 4 4232054

Web: www.tremco-illbruck.com E-mail: stuart.wakeham@tremco-

illbruck com

Tremco-illbruck is a European manufacturer and service provider of high-performance sealing, bonding, flooring, waterproofing, and passive fire protection for the construction and manufacturing industries. We provide a broad range of reliable products and services under our product brands: illbruck, TREMCO, Nullifire and PACTAN. With nearly 80 years experience, we have an unrivalled understanding of our customers' business. Our local presence means we are on the ground daily, helping our customers make the most of our products and responding rapidly to their questions. We understand specific local markets, standards and regulations, and actively incorporate customer feedback. Our tailored solutions ensure our customers' success in every project.

Triplefast Middle East Ltd.

PO Box 18664 Building 51 Oilfield Supply Center Jebel Ali Free Zone Dubai

United Arab Emirates Tel: +971 4 8832234 Fax: +971 4 8832235 Web: www.lonestargroup.com E-mail: sales@lonestarme.com

Triplefast Middle East is the regional supply hub of the LoneStar Group offering a unique service of logistical supply and manufacturer of fasteners and gaskets, standard and bespoke solutions including coatings to industries requiring quality and safety critical products with full traceability.

Valbruna Gulf FZE



PO Box 17285 Jebel Ali FZE Dubai

United Arab Emirates Tel: +971 4 8860200 Fax: +971 4 8860201 Web: www.valbrunagulf.com E-mail: sales@valbrunagulf.ae

A wholly owned Subsidiary of Acciaierie Valbruna SpA, Italy

Valbruna Gulf FZE is a stockiest and Distributor for Middle East, Iran and India for Long Profiles Such as Round, Dowels, Flat, Square, Hexagon, Angles, Channels, Wire, Threaded Rods, Reinforcement Bars & Seamless Pipes in all type of Stainless Steel

The mill also manufacture various Nickel Alloys and Titanium Bars.

Agents:

Kuwait - Kharafi National KSC Oman - Bahwan Building Materials LLC Qatar - Valbruna Qatar Saudi Arabia - Zamil Group Holding Co.

Van der Hilst International b.v



PO Box 19 Ampèrestraat 21 8091 XX Wezep 8090 AA Wezep The Netherlands Tel: +31 38 3762856 Fax: +31 38 3764665 Weh.

www.vanderhilstinternational.com E-mail: info@hilstinter.com

We supply components, equipment & parts for heavy equipment all over the world. For example, for Grove, Manitowoc, Demag, Volvo, Liebherr, Krupp, P&H, Potain, Cummins, Deutz, Allison, Clark, Kessler and ZF. Looking for Equipment parts? Try us.

verope AG

St. Antons Gasse 4a CH-6300, Zug ZG Switzerland Tel: +41 41 7280880 Fax: +41 41 728088 Web: www.verope.com E-mail: info@verope.com

Visa S.p.A.

Via 1° Maggio, 55 Fontanelle (TV), 31043 Italv

Tel: +39 0422 5091 Fax: +39 0422 509350 Web: www.visa.it E-mail: visa@visa.it

Visa S.p.A. is a modern Italian company manufacturing around 4000 gensets per year, for continuous and emergency service, ranging from 9 to 3000 kVA, in standard or cuztomized versions (construction, telecommunication,

etc...). We have a network of distributors in more than 80 countries around the world. Visa is amongst the most qualified companies in the sector, guaranteeing a highly operational flexibility and qualitative standards for which it has become a leader in the market for more than 50 years

Volvo Construction Equipment



S-631 85 Eskilstuna Sweden Tel: +46 16 151000 Web: www.volvoce.com

Volvo Construction Equipment, a business area within the Volvo group, is among the world's leading manufacturers of articulated haulers and wheel loaders and one the world's primary manufacturers of excavation equipment, road development machines and compact construction equipment. The products, spare parts and services are offered worldwide in more than 150

Agents:

Bahrain - A.A. Bin Hindi B.S.C © Iraq - Sardar Automobile and Machinery Trading Co. Kuwait - Al-Zabin International Group Co. for Heavy Fauinment

Lebanon - Abdelmassih Trading Company – Amtrac Oman - General Engineering Services Est. (GENSERV) Qatar - Arabian Agencies Co. WLL Saudi Arabia - FAMCO (Al-Futtaim Auto & Machinery

Sadur Arabia - FAnico (Al-Fudalini Auto & Machine Co. LLC)(saudi) United Arab Emirates - FAMCO (Al-Futtaim Auto & Machinery Co. LLC) (UAE) Yemen - Elaghil Trading Co.

Volvo Penta



Gothenburg 40508 Sweden Tel: +46 31235460

Fax: +46 31508187 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 both marine and industrial applications. The engine programme comprises diesel and gasoline engines with power outputs of between 10 and 900hp. Volvo Penta is part of the Volvo Group, one of the world's leading manufacturers of trucks, buses and construction equipment.

Agents:

Bahrain - International Agencies Co. Ltd. Egypt - Orascom Trading SAE HQ Iraq - Inma Jordan - Mithkal, Shawkat & Sami Asfour Co.

Kuwait - Al Boom Marine Co. Lebanon - Khonaysser Motors Libya - LIBTRAC

Oman - Muscat Overseas Industrial & Marine Equipment Trading Co. LLC Qatar - Al-Badi Trading & Contracting Co. Ltd.

Saudi Arabia - Alkhorayef Commercial Co. Ltd. Tunisia - SC Bateaux De Plaisance et de Peche Bateaumed

United Arab Emirates - Al Masaood Trucks, Equipment & Marine Engines Division

Vortex Hydra S.r.l.



www.wetcast.it

Via Argine Volano 355 Fossalta di Copparo (FE), Italy Tel: +39 0532 879411 Fax: +39 0532 866766 Web: www.vortexhvdra.com

E-mail: vh.sales@vortexhvdra.com

Based in Italy, Vortex Hydra have obtained the enviable reputation of being world leaders in the specialist field of concrete roof tile manufacture. Renowed for their "state of the art" large scale, fully automatic production plants, the company has applied its expertise in developing the new Uno Evoluzione lower volume affordable plants.

Wacker Neuson Vertrieb Europa GmbH & Co. KG - Dubai Branch **Representative Office**

PO Box 57198 Sama Tower Office 803B Sheikh Zayed Road Dubai

United Arab Emirates Tel: +971 4 3888930 Fax: +971 4 3888940 Web: www.wackerneuson.ae E-mail: info@wackerneuson.ae

WAGO Middle East FZC

PO Box 120665

04-282 Sharjah Airport Free Zone

(SAIF), Sharjah **United Arab Emirates** Tel: +971 6 5579920 Fax: +971 6 5579921 Web: www.wago.com E-mail: info.uae@wago.com

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:

United Arab Emirates - SunPower Gen FZCO

Wilhelm Layher GmbH & Co. KG

Layher.

More Possibilities, The Scaffolding System,

PO Box 40 Gueglingen - Eibensbach 74363

Germany Tel: +49 71 35700 Fax: +49 71 3570265

Web: www.layher.com E-mail: export@layher.com

Layher is the world's leading manufacturer of scaffolding and protective systems. For more than 70 years the Layher brand has been synonymous with proven safety, ground-breaking innovation, exceptional quality and complete dependability. With its global presence, Lahyer can make its expertise and experience available wherever they are needed

Agents:

United Arab Emirates - Layher FZE

Wirtgen GmbH

Reinhard-Wirtgen-Straße 2 Windhagen, 53578, Germany Tel: +49 26 451310 Fax: +49 26 45131392

Web: www.wirtgen.de E-mail: info@wirtgen.de

XP Solutions

Jacob's Well, West Street Newbury, Berkshire, RG14 1BD United Kingdom

Tel: +44 1635 582555 Fax: +44 1635 582131 Web: www.xpsolutions.com E-mail: eusales@xpsolutions.com

World leading provider of software for smart drainage and flood modelling and mitigation for the civil engineering and environmental sectors. Our powerful, innovative software technology is used around the world by government, engineering companies and environmental organizations to plan, design and model robust solutions for surface water and drainage. Let us delight you with our innovative solutions to make engineering rewarding.

Yamuna Cable Accessories Pvt. Ltd.

3/101 Kaushalaya Park Hauz Khas New Delhi 110016. India

"Densons" brand.

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

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.

Zahid Tractor

PO Box 8928, Jeddah, 21492

Saudi Arabia

Tel: +966 12 6671156 Fax: +966 12 6690727 Web: www.zahid.com E-mail: info@zahid.com

Zamil Steel Industries

PO Box 877, Eastern Province

Saudi Arabia

Tel: +966 13 8472681 Fax: +966 13 8472987 Web: www.zamilsteel.com

E-mail: zsdammam@zamilsteel.com

Zamil Steel was established in 1977, in Dammam, Saudi Arabia, to design, manufacture and supply Pre-Engineered Steel Buildings (PEB). Over the past 32 years, Zamil Steel has grown from a local single-division company into a leader in the growing field of steel fabrication in Asia, Africa and Europe. It has delivered more than 50000 buildings to 85 countries.

Section Three: Agents & subsidiaries in the Middle East

ALGERIA

Bergerat Monnoyeur

Zone Industrielle Lot No. 121 Route de Dar El Beida Oued Smar Alger 16270

Tel: +213 21 513210 Web: www.bm-a.com E-mail: contact.cat@bm-a.com

BAHRAIN

A.A. Bin Hindi B.S.C ©

Tel: +973 17 703078 E-mail: ciesales@binhindi.com

Ahmed Mansoor Al-A Ali Co. BSC

PO Box 28085 Al Mauskar Avenue, Road 95 Block 911 Bldg. 138

East Riffa
Tel: +973 17771030
Fax: +973 17771158
Web: www.alaali.com
E-mail: mansales@
batelco.com.bh

Al Thawadi Electrical & Mechanical Est.

PO Box 28372 East Riffa Tel: +973 17700114 Fax: +973 17700998 Web: www.althawadigroup.com E-mail: althawadisales@ batelco.com.bh

Alaa Industrial Equipment Factory (Bahrain)

PO Box 37202, Askar Tel: +973 17 772900 Fax: +973 17 777803 Web: www.afi.com.sa F-mail: bahrain@afi.com.sa

Atlas Copco CR/MR Regional Office MEN

14th Floor National Bank of Bahrain Tower Government Avenue Manama, 316 Tel: +973 17 221551 Web: www.atlascopco.com E-mail: massimo.marchetti@ bh.atlascopco.com

Doka Bahrain Doka Saudi Co. Ltd. for Trading Rep. Office

Entrance 474, Road 1010 Orchid Dream Tower 1 25th Floor Suite 251 Sanabis, 0410 Tel: +973 17 822084 Fax: +973 17 822085 Web: www.doka-me.com E-mail: bahrain@doka.com

Gulf Equipment & Technology

PO Box 704
Office 2569 Avenue E 80
Al Estiqlal Highway
Nuwaidrat, 646
Tel: +973 1 700008
Fax: +973 1 700983
Web: www.al-alawi.com
E-mail: sales@al-alawi.com

International Agencies Co. Ltd.

PO Box 584 310 Al Khalifa Avenue Manama 310 Tel: +973 728691 Fax: +973 728412 E-mail: sm-service@ intercol.com

Jotun Bahrain

PO Box 363 C/O A.K. Al Moayed Manama Tel: +973 17729311 Fax: +973 17825641 Web: www.jotun.com/me E-mail: csd@jotundxb.ae

M.H. Al Mahroos BSC ©

PO Box 65 Hasan AlMahroos Manama Tel: +973 17408090 Web: www.almahroos.com E-mail: almahroos@ almahroos.com

Mohamed Abdulrahman Al-Bahar Bahrain

PO Box 5357 Building 1207 Road 4625, Block 646 Al-Nuwaidrat, Manama Tel: +973 17 705177 Web: www.albahar.com E-mail: web.inquiry@albahar.ae

Mohammed Jalal & Sons WLL

PO Box 747 Manama Tel: +973 17252606

Yusuf Bin Ahmed Kanoo Co. WLL

PO Box 45, Manama Tel: +973 17 738227 Fax: +973 17 738240 Web: www.psgulf.com E-mail: perkinsengines@ kanoo.ae

EGYPT

Atlas Copco Equipment Egypt S.A.E.

1st Industrial Zone Part 7-Block 13024 El Obour City, Cairo Tel: +20 2 46100337 Web: www.atlascopco.com.eg E-mail: atlascopco.eg@ atlascopco.com

Egyptian Engineering & Trading Co.

45, Champillion Street, Cairo Tel: +20 2 25755229 E-mail: eetco@link.net

El-Masry Industrial Services LLC

3 Africa St., 9th District Nasr City Cairo, 11471 Tel: +20 2 24701111 Fax: +20 2 24731896 Web: www.masry-co.com E-mail: sales@masry-co.com

El-Mohandes Jotun SAE

PO Box 203, Ismailia Indl. Area Tel: +20 64 3481032 Fax: +20 64 3481030 Web: www.jotun.com/me E-mail: jotun@jotun.com.eg

El-Mohandes Jotun SAE (Cairo)

Plot 193
Second District
City Center
Fifth Settlement, New Cairo
Tel: +20 2 26149999
Fax: +20 2 26149998
Web: www.jotun.com/me
E-mail: jotun@jotun.com.eg
ram.ramnath@jotun.ae

El-Mohandes Jotun SAE (Smouha)

18 Yehia El Mashad St. 1st Floor Behind Mubarak Club Smouha Tel: +20 3 4277780/ 4274441/2/8 Fax: +20 3 4271118 Web: www.jotun.com/me E-mail: jotun@jotun.com.eg

Gorica Egypt Group

48 Gamal Abd El Nasser St. Off Gaser EL OSuez St. Cairo, 11331 Tel: +20 2 26980809 Fax: +20 2 26980966 Web: www.man-kastour.com.eg E-mail: ragaei.aziz@ man-kastour.com.eg

IPO

9 Mohamed Adly Kafafy Street Heliopolis 9 11361 Tel: +20 226348397 E-mail: samir.wahib@ ipcmachinery.com

M.S.E. - Modern Structures & Equipment

PO Box 133, 4 Ahmed Nessim St El-Orman Giza

Tel: +20 2 37495498 Fax: +20 2 37484329 E-mail: zeyadhabib@ yahoo.co.uk

Mantrac SAE

PO Box 1054, Alexandria 21111

Tel: +20 3 4541000 Web: www.mantracegypt.com E-mail: info@mantrac.com.eq

Orascom Trading SAE HQ

160, 26 July Street Cairo 1191 Tel: +20 233452510 Fax: +20 233034936 E-mail: youssef.mounir@ orascom-trading.com

Otrac Heavy Equipment

Ardel-Kanoneyeen-Ring Road Al-Salam City, Cairo Tel: +20 2 26977799

Otrac Heavy Equipment Co.

Tel: +20 2 26977799 Fax: +20 2 26972255 Web: www.otrac.com.eg

Yasser Fahmy Hydraulic Eng.

PO Box 6550 65-66-68 Saudi Building Kobba Sawah Cairo, 11813 Tel: +202 2 4520192/4530922/4530923 Fax: +202 2 4530638 E-mail: yasserf@ yf-hydraulic.com.eg

IRAN

Fan Va Tose EH Co. Ltd.

Apt. 19, Venous Tower Mollasadra n°130, Tehran 14359 Tel: +98 21 88042257/8/9 Fax: +98 21 88049866 E-mail: s.maghdouri@

IRAQ

Al Ghodwa

fanvatoseeh.com

Baghdad Tel: +964 7 809124 689 E-mail: sales@ alghodwagroup.com

Inma

100 m Street, Airport Road Erbil Tel: +964 66 2569888 E-mail: info@ittihadia.com

Iraqi Co. for Machinery and Equipment Service

Hamadan Industrial Zone Basra, Al Basrah 61101 Tel: +964 7 901949995 Web: www.iratrac.com E-mail: info@iratrac.com

KM Machinery

100 Meter Road Nearby Cihan University Erbil Tel: +964 77 15795687 E-mail: mustafa.sed@

Sardar Automobile and Machinery Trading Co.

Tel: +964 7503444701 E-mail: ihsan@ sardarmachinery.com

Tristar Co. Iraq

kmachinery.com

100 Meter Ring Road (Adjacent to "Awamedica", Medicine Factory) Erbil, Northern Iraq Tel: +964 750 1442009/ 750 4464413

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

Arab Equipment Trading Co.

PO Box 931163 Prince Hasan Street Amman, 11593 Tel: +962 6 4740840

Corro-Coat Saudi Arabia Co. Ltd.

Al-Shuna Street, Bldg. 9 Hai Nazzal Behind Zenab Mosque, Amman Tel: +962 6 4380134 Fax: +962 6 4380134 Web: www.jotun.com E-mail: ahmed.rashed@ jotun.com

Doka Jordan LLC

PO Box 3856, Al Madina Al Munawara Street, Al Haitham Center Bldg. No. 156 1st Floor 101, Amman, 11953 Tel: +962 6 5545586 Fax: +962 6 5545587 Web: www.doka-me.com E-mail: jordan@doka.com

Integrated Automotive

PO Box 7155
Wadi Al Seer - Industrial Area
Amman, 11118
Tel: +962 6 5725911
Fax: +962 6 5725910
Web: www.ia-jordan.com
E-mail: zzeidan@ia-jordan.com

Jordan Tractor & Equipment

PO Box 313, Amman Asimah 11118 Tel: +962 6 5161141

Tel: +962 6 5161141 Web: www.jordantractor.com E-mail: jtecmgmt@jtec.com.jo

Mithkal, Shawkat & Sami Asfour Co.

Jabal Amman 19 Outhman Bin Afan St. Amman, 11118 Tel: +962 6 4651989 Fax: +962 6 4649636 E-mail: asfourlive@ umniahlive net

Universal Paint Inc.

PO Box 850302 11 Suhat St., Marka Amman, 11185 Tel: +962 6 4884454 Fax: +962 6 4884458 Web: www.ugc.jo E-mail: info@ugc.jo

KUWAIT

Abek Intl General Trading & Contracting Co.

Suwaikh Tel: +965 24835395 Fax: +965 24835258 Web: www.althawadigroup.com E-mail: bijoy.scaria@ abekgroup.com

Al Ahlia Heavy Vehicles Selling & Import Co.

Safat, 13076 Tel: +965 2 4839210 Fax: +965 2 4811090 Web: www.ali-alghanim.net E-mail: asghar-man@alialghanim.net

Al Boom Marine Co.

PO Box 42188, Shuwaihk 70652 Tel: +965 24830474/ 24830570 Fax: +965 24838293 E-mail: boomkwt@kuwait.net

Alaa Industrial Equipment Factory

PO Box 42425, Canada Dry Street Shuwaikh, 70655 Tel: +965 2 4819744 Fax: +965 2 4819755 Web: www.afi.com.sa E-mail: kuwait@afi.com.sa

Al-Zabin International Group Co. for Heavy Equipment

Tel: +965 2 4334721 E-mail: alzabin@ alzabinkuwait.com

PO Box 23112

Arab Group For Equipments & Construction Co.

Salhiya, Fahed Alsalem St

Souq Al Mutahida, 4th Floor Safat, 13092 Tel: +965 2247 0908/9/10 Fax: +965 2247 0911 +965-22470911 Web: www.agecokuwait.com.kw E-mail: sales@ agecokuwait.com.kw

Bahrah Trading Co. WLL

PO Box 5869, Safat, 13059 Tel: +965 1802008

Boodai Trading Co.

PO Box 2217

PO Box 1287, Safat Tel: +965 24838727 E-mail: psharma@boodai.com

Doka Kuwait - Div. of Riham Gen. Trad. & Cont. Co.

Street No. 1, Plot 157 - 173 Shuwaikh Port Authority Area Salmiyah, 22023 Tel: +965 24822462 Fax: +965 24822472 Web: www.doka-me.com E-mail: kuwait@doka.com

Jotun Powder Coatings

PO Box 75, Safat, 13001 Tel: +965 24764452/ 24718536 Fax: +965 24737026 Web: www.jotun.com/me E-mail: abhijeet.ranade@jotun.ae

Jubaili Bros

csd@jotundxb.ae

Kuwait Free Trade Zone Tel: +965 24610356/ 24318547 Web: www.JubailiBros.com E-mail: jbkuwait@ jubailibros.com

Kharafi National KSC

PO Box 24081, Safat, 13101 Tel: +965 2 2259000 Fax: +965 2 4768605 Web: www.kharafinational.com E-mail: jamal.adeeb@ kharafinational.com

Mohamed Abdulrahman Al-Bahar Kuwait

PO Box 148, Shuwaik Port Area Sector No. 3, Block No. 32 Street No. 105, Safat, 13002 Tel: +965 2 4810855 Web: www.albahar.com E-mail: info@albahar.ae

Mohamed Abdulrahman Al-Bahar Kuwait

PO Box 148, Shuwaik Port Area Sector No. 3, Block No. 32 Street No. 105, Safat, 13002 Tel: +965 2 4810855 Web: www.albahar.com E-mail: info@albahar.ae

Riham

Tel: +965 66945557 E-mail: david.peterson@ faa.com.kw

Riham General Trading and Contracting Co. WLL

PO Box 29329 Safat, 13154 Tel: +965 65711624/ 65895103 Fax: +965 24827555

Teknoline Group

PO Box 6833 Shuwaik Industrial Zone Salmiya, 22057 Tel: +965 249 17101/102 Fax: +965 249 17103 E-mail: teknoline31@ hotmail.com

LEBANON

A.T.C.O

Cebaco Center - Block "C" Dora Blvd. Tel: +961 1 256551/2/3 Fax: +961 1 256550 E-mail: atco@intracom.net.lb

Abdelmassih Trading Company – Amtrac

Tel: +961 3425625 E-mail: michel@amtrac-lb.com

Bardawil & Co. Construction Equipment & Materials SARL

PO Box 113377 Bardawil & Co.- Dora BLVD Beirut Tel: +961 1 879900/894533 Fax: +961 1 879911/884187 E-mail: bardawil@ bardawil.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

Chauvin Arnoux Middle East

PO Box 60-154 1241 2020 Beirut Tel: +961 1 890425 Fax: +961 1 890424 E-mail: camie@chauvinamoux.com

Commrite Group SARL

Zouk Mosbeh Tel: +961 9 225909 Fax: +60 3 55190848 E-mail: comritegroup@ terra.net.lb

Doka Lebanon

Damascus Street,Sodeco Square, Block C 9th Floor Ashrafieh, Beirut Tel: +961 1 612569 Fax: +961 1 612570 Web: www.doka-me.com E-mail: lebanon@doka.com

Fares Baladi

Tel: +961 3688060 E-mail: carl@baladifreres.com

Hassan Hussein Machinery Est.

PO Box 246 Dair Al Zahrani Main St. Nabatieh Tel: +961 7 530730 E-mail: hmhs@cyberia.net.lb

Jubaili Bros

Sidon Tel: +961 7 730871 Fax: +961 7 720813 Web: www.JubailiBros.com E-mail: jblebanon@jubailibros.com

Khonaysser Motors

Naher El Mott, Main Road Tel: +961 1 870078 Fax: +961 1 874795 Web: www.khonaysser.com E-mail: info@khonaysser.com

M. Ezzat Jallad & Fils

PO Box 110208 Beirut Tel: +961 9 212077 Web: www.jalladlebanon.com E-mail: anajjar@jallad.com.lb

Tracksparco Bachalani SARL

PO Box 90666 Jdeidet El Meten Beirut Tel: +961 1 891510

Tracksparco Ltd.

PO Box 90666, Jdeidet El Meten, Beirut Tel: +961 1 891510

LIBYA

Al Noras

Alswani, Tripoli Tel: +218 91 2123504 E-mail: m.rwimi@ alnoras.com.ly

LIBTRAC

Kremia, Swani Road Km 11, Tripoli Tel: +218 91 381 54 60

Rawasee Co.

PO Box 5083 Tripoli Main Post Office Al Karama Draibi Tripoli Tel: +218 21 4808947

MOROCCO

Tractrafric Equipement

Route Desserte des Usines KM11 6 Autoroute Casa-Rabat Ain Sebaa Grd Casablanca 20250 Tel: +212 2 2763000 212 2 2763000 Web: www,tractafricequipment.com E-mail: tamcasa@ magrebnet.net.ma

ΟΜΔΝ

Al Shirawi Modern Enterprises LLC

PO Box 25, Muscat, 117 Tel: +968 97093185 E-mail: vivek.sharma@ase.ae

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

Tel: +968 2 4593708 Fax: +968 2 4593709 Web: www.famcooman.com

Arabian Engineering Services LLC

PO Box 3168 Saud Bahwan Group, Ruwi, 112 Tel: +968 2 4578000 Web:

www.saudbahwangroup.com E-mail: sbgaes@ omantel.net.om

Bahwan Building Materials LLC

PO Box 169 Muscat, 100 Tel: +968 2 4810983 Fax: +968 2 4815755 Web:

www.suhailbahwangroup.com E-mail: roy@ suhailbhawangroup.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

Doka Muscat LLC

PO Box 562, M.S.Q Muscat, 115 Tel: +968 2 4484445 Fax: +968 2 4488821 Web: www.doka-me.com E-mail: oman@doka.com

General Engineering Services Est. (GENSERV)

Tel: + 968 2 4490755 E-mail: sales@genservoman.com

Inma Co. Oman LLC

Nizwa Salalah Road Al Mawaleh South, Al Seeb Tel: +968 2455 2455 Fax: +968 2455 2555 E-mail: inmaco@ omantel.net.om

International Heavy Equipment LLC

PO Box 966/800 Seeb Al Rumaillah Street Sultan Qaboos, Azaiba Muscat, 111 Tel: +968 24503999 Fax: +968 24597999 E-mail: rammohan@ ihe-oman.com

MOS

PO Box 1288, PC 114, Muttrah Muscat Tel: +968 97750460 E-mail: kumar.senthil@

muscatoverseas.com

Muscat Overseas Industrial & Marine Equipment Trading Co. LLC

Al Maridh Street Bldg No.155-157, Muttrah 114 Tel: +968 24597950 Fax: +968 24597934 E-mail: moimetco@ muscatoverseas.com

Oasis Trading & Equipment Co. LLC

PO Box 2, Al Ma'arid Street Bldg. No. 25, Way No. 61 Block No. 250, Azaiba Rounabout, Jibroo, Muscat, 114 Tel: +968 2450 9000 Web: www.albahar.com E-mail: info@albahar.ae

Saud Bahwan Projects & Equipment LLC

PO Box 3168 Industrial Wattayah Area Muscat Tel: +968 2 4578000 Fax: +968 2 4561631 E-mail: sbgsbpe@ omantel.net.om

PALESTINE

Palestinian Tractor & Equipment Co.

PO Box 597 Gaza Tel: +972 7 2824889 Web: www.palestiniantractor.ps/pte E-mail: mgmnt@ptec.com.ps

QATAR

Alaa Industrial Equipment Factory

PO Box 11884 Street 45, Gate # 1 Industrial Area, Doha Tel: +974 4 684442 Fax: +974 4 684443 Web: www.afi.com.sa E-mail: qatar@afi.com.sa

Al-Badi Trading & Contracting Co. Ltd.

PO Box 3915, Doha Tel: +974 4 320715 Fax: +974 4 442888 E-mail: albadi@qatar.net.qa

Arabian Agencies Co. WLL

Tel: +974 44 500925 E-mail: araco@araco.com.qa

Boodai Trading Co. Ltd.

PO Box 4569, Doha Tel: +974 5543875 E-mail: boodai@btcqtr.com

Construction Equipment Div. Darwish Trading Co.

PO Box 92, Doha Tel: +974 4 4683361 Fax: +974 4 4691842 Web: www.darwishtrading.com E-mail: o.saleh@ darwish-tdg.qa ced@darwish-tdg.qa

Doka Qatar WLL

PO Box 23439 2nd Gate Light Industrial Area Mesaieed Doha Tel: +974 4 4500628 Fax: +974 4 4500608

Web: www.doka-me.com

E-mail: gatar@doka.com

Euroblast, Doha

Tel: +974 7786 3636/ 55335278 Web: www.euroblastme.com

Inma Co. Qatar LLC

PO Box 9238
Al Awqaf Commercial Complex
Al Mirqaf Area
Salwa Main Rd.
Tel: +974 44 30088
Fax: +971 44 30099
E-mail: inmaco@qatar.net.qa

E-mail: gatar@euroblastme.com

Jaidah Group

PO Box 150, Doha Tel: +974 4 4466888

Jaidah Motors & Trading Co.

Tel: +974 4 4638804 Fax: +974 4 4602440 E-mail: ayman.ahmed@ jaidah.com.ga

Jubaili Bros WLL

Doha Tel: +974 4 4160121 Fax: +974 4 4162257 Web: www.JubailiBros.com E-mail: ibqatar@jubailibros.com

Mannai

PO Box 76, Doha Tel: +974 55 861787 E-mail: hashim.elgendi@ mannai.com.qa

Mannai Trading Co. WLL

PO Box 76, Ramada Junction Salwa Road Industrial Supplies & Building Materials (ISBM),Doha Tel: +974 4 4076000 Fax: +974 4 4076349 Web: www.mannai.com E-mail: ramanna.rai@mannai.com.ga

Mohamed Abdulrahman Al-Bahar Qatar

PO Box 2171, Gate No.43 Street No. 15 Doha Industrial Area, Doha Tel: +974 40 159555 Web: www.albahar.com E-mail: info@albahar.ae

Obaikan Equipment & Services WLL

PO Box 4844
Salwa Road Near Ain Khalid R/A Doha
Tel: +974 4 4581001
Fax: +974 4 4581122
Web: www.psgulf.com
E-mail: perkinsengines@ kanoo.ae

Oriental Trading Co. Ltd.

PO Box 96, Doha Tel: +974 4 466333 Fax: +974 4 433573 E-mail: cherry@ petroservtrading.com

Qatar International Automobiles

PO Box 8155

Industrial Area Street No.2 Doha Tel: +974 4 4603288 Fax: +974 4 4503835 Web: www.qia-manqatar.com E-mail: mandoha@qatar.net.ga

Valbruna Qatar

PO Box 491 c/o Al Mana Trading Co. Doha Tel: +974 44 626284 Fax: +974 44 626966 Web: www.valbrunagulf.ae E-mail: sales.qatar@ valbrunagulf.ae

SAUDI ARABIA

A.Abunayyan Trading Corporation

PO Box 321 King Abdulaziz Street Intersection with Mecca Road Rivadh, 11411 Tel: +966 1 4779111 Weh:

www.abunayyantrading.com E-mail: alliance@ abunayyangroup.com

Abahsain

Al Khobar, 31952 Damam Khobar, 209 Tel: +966 55 7163980 Web: www.abahsainhed.com E-mail: gasim@abahsain.com

Abdullah Hashim Co. Ltd.

PO Box 44 leddah Tel: +966 2 6472200 E-mail: azizr@ahcl.com.sa

Alkhorayef Commercial Co. Ltd.

PO Box 305 Riyadh, 11411 Tel: +966 1 4955452 Fax: +966 1 4950261 E-mail: msd@alkhorayef.com

Black Box KSA

PO Box 10438 91 Prince Hazlool Bin Abd El Aziz Street King Fahd District Riyadh, 11432 Tel: +966 1 2107737 Fax: +966 1 2106930 Weh: www.blackboxcontrol.com E-mail: salesksa@

Doka Saudi Arabia Co. Ltd. for Trading (Dammam Branch)

blackboxcontrol.com

PO Box 60120 Sheikh Al Ardh Building, 4th F Dammam 31545 Tel: +966 13 8320606

Fax: +966 13 8323193 Web: www.doka-me.com E-mail: dammam@doka.com

Doka Saudi Arabia Co. Ltd. for Trading (Jeddah - Head Office)

PO Box 18882 Zahran Business Center, Suite (Opposite Obeikan Mall) Prince Sultan Road, Salama Dis 21425 Tel: +966 12 6691008

Fax: +966 12 6648625 Web: www.doka-me.com E-mail: jeddah@doka.com

Doka Saudi Arabia Co. Ltd. for Trading (Riyadh Branch)

PO Box 20647 Sitteen Street, Malaz Sitteen Commercial Center 6th Floor, Riyadh, 11465 Tel: +966 11 4791003 Fax: +966 11 4775416 E-mail: rivadh@doka.com

Electrical Work & Maintenance

Madinah Road Kilo 9 Jeddah 21462 Tel: +966 2 6916655 Fax: +966 2 6911116 Web: www.ewmcom.com E-mail: commercial@ ewmcom.com

Euroblast, Dammam

PO Box 109939 Tel: +966 505 175490 Fax: +966 2 6402886 Web: www.euroblastme.com E-mail: dammam@ euroblastme.com

Euroblast, Jeddah

PO Box 109939 Tel: +966 2 6401664 Fax: +966 2 6402886 Web: www.euroblastme.com E-mail: jeddah@ euroblastme.com

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

Tel: +966 12 6804444 Web: www.famcosaudi.com E-mail: FAMCO@alfuttaim.sa

General Trading & Equipment

PO Box 867, Al Khobar, 31952 Tel: +966 3 8875722

Haji Husein Alireza & Co. Ltd.

PO Box 40, Jeddah, 21411 Tel: +966 2 6049444 Web: www.hha.com.sa E-mail: andyward@hha.com.sa

Intermodal Services of SA Trading & Contracting

PO Box 23317, Jeddah Tel: +966 26479229 Fax: +966 26495066 Web:

www.intermodaltrade.com E-mail: salescd@ intermodalsa.com

Jotun Saudia Co. Ltd.

PO Box 34698 Phase 3, Industrial Estate Jeddah, 21478 Tel: +966 2 6350535/ 6361271 Fax: +966 2 6362483 Web: www.jotun.com/me E-mail: saudi-csd@jotun.com

M/s Inara Company Ltd.

Rivadh, 11482 Tel: +966 1 4791902 Fax: +966 1 4721948 Web: www.inara.com E-mail: amustapha@inara.com

Medco

PO Box 1140

Al Khobar 31952 Tel: +966 13 8826991 Fax: +966 13 8827196 Web: www.medco1.com E-mail: rami@medco1.com

Medco (Jeddah) PO Box 2680

Makkah Madinah Highway Near Air Base/Aramco Jeddah, 21461 Tel: +966 12 2907230 Fax: +966 12 2907241 Web: www.medco1.com E-mail: jeddah@medco1.com shofy@medco1.com

Medco (Riyadh)

PO Box 19 Rivadh, 11411 Tel: +966 11 4951598 Fax: +966 11 4950832 Web: www.medco1.com E-mail: riyadh@medco1.com robert.seiler@medco1.com

PASCHAL-Werk G. Maier **GmbH** (Scientific and Technical Office)

PO Box 69360 Prince Mohammed Bin Fahd Road, (1st Street) Al Dabal Tower Dammam 31547 Tel: +966 1 38346153 Web: www.paschal.sa.com E-mail: infoksa@paschal.de

Red Sea Paints Co. Ltd.

PO Box 34698 Jeddah Industrial City-Phase 3 Jeddah, 21478 Tel: +966 2 6350535 Fax: +966 2 6080137 Web: www.jotun.com/me E-mail: saudi-csd@jotun.com

Saleh & Abdulaziz Abahsain Co. Ltd.

PO Box 42127 Yamama Cement Factory After Al-Falwa Riyadh 11541 Tel: +966 1 4950104

The Machinery Group LLC

PO Box 8928 Jeddah, 21492 Tel: +966 2 6832216

Fax: +966 1 4954900

Yusuf Bin Ahmed Kanoo Co. Ltd. (Dammam)

PO Box 37, King Saud Street Dammam, 31411 Tel: +966 3 8571265 Fax: +966 3 8577193 Web: www.psgulf.com E-mail: perkinsengines@ kanoo.ae

Yusuf Bin Ahmed Kanoo Co. Ltd. (Jeddah)

PO Box 812 Kilo 7 Madinah Road 21421 Jeddah, 21421 Tel: +966 2 2636171 Fax: +966 2 2632910 Web: www.psgulf.com E-mail: perkinsengines@ kanoo.ae

Yusuf Bin Ahmed Kanoo Co. Ltd. (Riyadh)

PO Box 753 Commercial Centre Kilo 7 Khurais Road, Rivadh, 11421 Tel: +966 1 4914624 Fax: +966 1 4914620 Web: www.psqulf.com E-mail: perkinsengines@ kanoo ae

Zahid Tractor & Heavy Machinery Co. Ltd.

PO Box 8928, Jeddah, 21492 Tel: +966 2 6671156 Web: www.zahid.com E-mail: inquiry@zahid.com

Zamil Group Holding Co.

Steel Division - Al Khobar 85912 Tel: +966 13 8824888 Fax: +966 13 8822509 Web: www.zamil.com E-mail: eissa@zamilcd.com.sa

TUNISIA

PO Box 9

Alpha International Tunisie

Autoroute Tunis-Sousse Mégrine Riadh, Tunis, 2014 Tel: +216 71 398166 Fax: +216 71 308401 E-mail: romdhane.omri@alpha.com.tn

Parenin

Boite Postale 44 Cite Ezzouhour, 2052 Tel: +216 71 592300 Web: www.parenin.com.tn E-mail: parenin@parenin.com.tn

SC Bateaux De Plaisance et de Peche Bateaumed

6 Rue de Lenergie Eolienne Charguia I, Tunis, 2035 Tel: +216 71804159 Fax: +216 71804171 E-mail: bateaumed@planet.tn

UNITED ARAB EMIRATES

Acore Global LLC

PO Box - 611

acoreglobal.com

601 Prism Tower **Business Bay** Dubai Tel: +971 4 4 214077 Fax: +971 4 4214066 Web: www.acoreglobal.com E-mail: sales@

Al Futtaim Auto & Machinery Co. LLC

PO Box 5502 Plot B-131 Dubai Tel: +971 4 2135100 Fax: +971 4 2135400 E-mail: asad.faroog@alfuttaim.ae

Al Masaood Trucks, **Equipment & Marine Engines** Division

M15 Mussafah Abu Dhabi Tel: 800-873682 Fax: +971 4 3241262 Web: www.masaood.com E-mail: volvopenta@ masaood.com

Al Rawahy Establishment

PO Box 14405 Duhai Tel: +971 4 8829570 Fax: +971 4 8829571 Web: www.alrawahydubai.com E-mail: deepak@alrawahydubai.com

Al Shirawi Enterprises LLC

PO Box 7427 Duhai Tel: +971 4 3388776 E-mail: kcpingle@ase.ae

Carl Stahl

PO Box 26607 Duhai Tel: +971 52 6457049 Web: www.rud.com E-mail: milad@carlstahl.ae

COELMO (DMCC Branch)

PO Box 39311 Office 909 1 Lake Plaza Jumeira Lake Tower Cluster T Tel: +971 4 3695548 Fax: +971 4 3695549 Web: www.coelmo.it E-mail: dubai@coelmo.it

Darwish Bin Ahmed & Sons

PO Box 28883 Umm Al Nar Abu Dhabi

Tel: +971 2 5584800 Fax: +971 2 5582242 Web: www.dbasons.com E-mail: razzaqi@dbasons.com

Doka Emirates LLC (Abu Dhabi Branch)

PO Box 44547 Al Wahda Commercial Tower | Suite 201 - 202 Sheikh Hazza bin Zayed Street Abu Dhabi Tel: +971 2 6765855

Fax: +971 2 6765840 Web: www.doka-me.com. E-mail: abu-dhabi@doka.com

Doka Emirates LLC (Sharjah Branch)

PO Box 3658 Buheirah Corniche Road Al Durrah Tower Sharjah Tel: +971 6 5562801

Fax: +971 6 5562802 Web: www.doka-me.com E-mail: sharjah@doka.com

Euroblast, Abu Dhabi

PO Box 47860 Abu Dhabi Tel: +971 2 5544528 Fax: +971 2 5544529 Web: www.euroblastme.com E-mail: abudhabi@ euroblast.com

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

Tel: +971 4 2135100 E-mail: famco@alfuttaim.ae

Fayat Middle East FZE

Jafza South FZS1AH03 Jebel Ali Free Zone Dubai Tel: +971 4 8863233

Fax: +971 4 8863234 E-mail: marinime@ emirates.net.ae

Galadari

PO Box 11080 Dubai Tel: +971 50 1215275 E-mail: khaled.gthe@ galadarigroup.com

Galadari Trucks & Heavy Equipment Co. Ltd.

PO Box 11080 Dubai Tel: +971 4 3385461 Fax: +971 4 3387607 Web: galtruck@ emirates net ae

German Gulf Enterprises Ltd.

PO Box 5937, Sharjah Tel: +971 6 5314161 Fax: +971 6 5314128 E-mail: ggeadmin@germangulf.com

Herrenknecht Middle East F7F

PO Box 61251 LOB 21, Office No.16 Jebel Ali Freezone Dubai Tel: +971 4 8808750 Web: www.herrenknecht.com E-mail: emirates@ herrenknecht.com

Hi-Force FZCO

PO Box 17012 Plot MO 0555, Jebel Ali Dubai Tel: +971 4 8150600 Fax: +971 4 8876526 Web: www.hi-force.com E-mail: dubai@hi-force.com

Hi-Force Hydraulics

PO Box 9722 Unit 24/M-43 Mussaffah Industrial Area Abu Dhabi Tel: +971 2 5513100 Fax: +971 2 5513232 Web: www.hi-force.com E-mail: abu.dhabi@ hi-force.com

Himoinsa Middle East FZE

PO Box 18515 Dubai Tel: +971 4 8873315 Fax: +971 4 8873318 Web: www.himoinsa.com E-mail: kwebb@himoinsa.ae

ILE Rental

PO Box 125645 Jebel Ali Industrial 2 Dubai Tel: +971 4 8856356 Fax: +971 4 8856357 Web: www.ilerental.com E-mail: info@ilerental.com

Inma Gulf Development & Construction LLC

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@emirates.net.ae

Jotun Abu Dhabi Ltd. LLC

PO Box 3714 Mussafah Ind. City, Abu Dhabi Tel: +971 2 6910700 Fax: +971 2 5510232 Web: www.jotun.com/me E-mail: csd@jotunadh.ae

Jotun Al Ain

PO Box 23575 Al Ain Tel: +971 3 7511696 Fax: +971 3 7511353 Web: www.jotun.com/me E-mail: jotun@emirates.net.ae

Jotun Powder Coatings UAE Ltd. LLC

PO Box 51033 Dubai Tel: +971 4 3472515 Fax: +971 4 3472815 Web: www.jotun.com/me E-mail: powder@jotun.ae

Kanoo Machinery LLC

PO Box 290 Dubai Tel: +971 4 3479794 Fax: +971 4 3479179 Web: www.psgulf.com E-mail: perkinsengines@kanoo.ae

Layher FZE

PO Box 17635 Dubai Tel: +971 4 8808071 Fax: +971 4 8808072 Web: www.layher.ae E-mail: info@layher.ae

Leroy-Somer C/o Emerson FZE

PO Box 17034 Jebel Ali Free Zone Dubai Tel: +971 4 8118100 Fax: +971 4 8865464 E-mail: francis.pinto@ emerson.com

Malfer

Tel: +39 3481 385672 Fax: +37 2549 43485 E-mail: malfer.riccardo@ elettrondata.it

Mohamed Abdulrahman Al Bahar (Al Ain)

PO Box 15354

Street No 9 Al Ain Tel: +971 3 7825060 Fax: +971 3 7825035 Web: www.albahar.com E-mail: web.inquiry@albahar.ae

Mohamed Abdulrahman Al-Bahar (Abu Dhabi)

PO Box 441
Plot No. 36
Sector M-15
Mussafah
Abu Dhabi
Tel: +971 2 55544200
Web: www.albahar.com
E-mail: info@albahar.ae

Mohamed Abdulrahman Al-Bahar (Sharjah)

PO Box 6038 Industrial Area No.3 159 Al-Wasit Street Sharjah Tel: +971 6 5433555 Web: www.albahar.com E-mail: info@albahar.ae

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 Systems Gulf LLC

PO Box 290 Dubai Tel: +971 4 3378400 Fax: +971 4 3373660 Web: www.psgulf.com E-mail: perkinsengines@ kanoo.ae

Powertech Electrical Distribution Boards Manufacturing Co. LLC

Dubai Tel: +971 4 2676886 Fax: +971 4 2676456 Web: www.powertechswitch gear.com E-mail: peddubai@eim.ae

PO Box 47366

Rajesh George, Sullivan-Palatek, Inc.

Tel: +971 50 6268709 E-mail: rgeorge@palatek.com

Sahyadri Industries Ltd.

Dubai Tel: +971 50 9202407 Web: www.silworld.in E-mail: leslie@silwolrd.in

SDMO Middle East

Dubai Internet City Building EIB01 Floor 3, Office 310, Dubai Tel: +971 4 4587020 Fax: +971 4 4586985 Web: www.sdmo.com E-mail: laurent.berthouloux@sdmo.com

Shantui Construction Machinery FZE

Unit10, Liu15 Roundabout 7 Jebel Ali Free Zone Dubai Tel: +971 4 8870092 Fax: +971 4 8870091 Web: www.en.shantui.com E-mail: cy@shantui.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

Terex Middle East LLC

PO Box 282325 Pinnacle Building, Sheikh Zayed Tel: +971 4 3990381 Fax: +971 4 3990382 Web: www.terex.com/construction

Utility Auto Corp JLT

PO Box 33714 Unit No. 401, HDS Towers Jumairah Lake Towers Dubai Tel: +971 50 5587428 E-mail: murari@ uacgroupdubai.com

Venus Steel Trading FZCO

PO Box 391165, Dubai Tel: +971 4 8808431 Fax: +971 4 8808432 Web: www.maklada.com E-mail: angeles.hidalgo@ maklada.com

YEMEN

Elaghil Trading Co.

Tel: +967 1 207470 E-mail: elaghil@y.net.ye

Haskan Ltd.

7th Floor, Al-Saeed Co. Altahrir Square Ctre Zuberi St Sanaa, 15482 Tel: +967 1 212642 Fax: +967 1 212665 Web: www.psgulf.com E-mail: perkinsengines@ kanoo.ae

Jotun Yemen Paints Co. Ltd.

PO Box 70183
Al Alam Industrial Area, Aden
Tel: +967 2 820546/9
Fax: +967 2 249362
Web: www.jotun.com/me
E-mail: jotunyemen@y.net.ye

Tehama Trading

PO Box 5370, Maalla'Adan Tel: +967 2 241736 E-mail: ttchod@y.net.ye

The Tehama Trading Co.

PO Box 4422, Kilo-7 Sana'a Street, Hodeidah Tel: +967 3 228496 Fax: +967 3 228856/8386 Web: www.tehama.com.ye E-mail: info@tehama.com.ye

بوضعه متخصصون من جامعة واشنطن بالتعاون مع استشاريي التصميم الهندسي بشركة سي إتش ٢ إم هيل في عام ٢٠٠٧. وتنشر المؤسسة التي تحمل هذا الاسم (وتحدث بشكل منتظم) دليلها الإلكتروني (نوصي بحيازة النسخة المختصرة لإجراء تقييم أولي)، والذي يوضح المعايير المذكورة وكيفية قياسها في جميع مراحل تنفيذ مشروع الطريق. «جرين رودز» هي بالدرجة الأولى منظمة غير حكومية يقع مقرها في الولايات المتحدة. غير أن عملها الريادي له تأثيرات عديدة على مصممي الطرق والمقاولين. وهناك هيئة تكميلية في الولايات المتحدة الأمريكية، تمثل معظم المصالح الفردية للدولة، وتعرف باسم منظمة Green Highways Partnership (شراكة الطرق السريعة الخضراء).

إيجاد تعريف

بالنسبة لأي نوع من أنواع نظام التصنيف، ولكي يتحقق الغرض منه للطرق السريعة، يجب أن تكون فئات التصنيف الفردية محددة بشكل لا لبس فيه، ومفهومة وذات فائدة يمكن إثباتها لكل من المجتمع والدولة. لهذا يستند مفهوم Greenroads (جرين رودز) الأصلى على المعايير التالية الواضحة:

- تخطيطات الطرق المستدامة التي تقلل من إلحاق الضرر بالبيئة الطبيعية إلى أقصى قدر مُمكن، وتخدم الغرض الأساسى من عملية التشييد.
 - انخفاض التأثير البيئي عند استخراج المواد والنقل إلى/من الموقع.
 - وجود معايير مناسبة وملائمة للتعامل مع مياه الأعاصير.
- وجود معايير تصميم شاملة تعزز التحكم في الطاقة والتحكم البيئي، مثل تقليل التلوث الضوئي وتلوث الهواء، والحفاظ على الصحة والسلامة، وضمان نوعية الحياة بالبيئات المجاورة القسرية (بما في ذلك الحياة البرية)، والتفاعل مع الأشكال الأخرى من وسائل النقل.
- تقليل التأثير خلال عملية الإنشاء إلى أقصى قدر مُمكن، بما في ذلك المعالجة المستدامة للمخلفات.
- منح اعتمادات خاصة للابتكارات الفريدة من نوعها في التصميم في المنطقة المحددة التي يمر من خلالها الطريق.

غير أنه، مثلما جرى تطوير معايير نظام تصنيفات الريادة في نظام الطاقة والبيئة تدريجيا على مر السنين، فإنه يجب وضع معايير لتصنيف الطريق باعتباره أيضا صديقاً للبيئة. ومن هنا كان المستوى المرتفع من الاهتمام الدولي بمخطط التطور بأبو ظبي.

وبشكل أساسي، وكما أشار إلى ذلك معهد المهندسين المدنيين في صفحة توجيهات خاصة صدرت بالخارج مؤخرا، ينظر إلى تصميم الطرق المستدامة (المرحلة الحرجة) من حيث معلمتين رئيسيتين.

أولاً وقبل كل شيء، هناك التأثير الذي يحدثه التصميم والإنشاء النهائي للطريق السريع في المقام الأول، عندما يتم بناؤه (ويتم الحفاظ عليه بصورة جوهرية) من نقطة الصفر. وهناك طريقة صديقة للبيئة للقيام بذلك، والعديد من الطرق المخالفة لذلك. ومن خلال المعايير الأصلية التي اقترحها

أولئك الذين كانوا يحاولون توسيع مبادئ نظام تصنيفات الريادة في تصميمات الطاقة والبيئة «ليد» بحيث تشمل إنشاء الطرق في المقام الأول، فإنه كان ولايزال من الضروري استخدام العديد من المواد المحلية قدر الإمكان - بما في ذلك المواد المعاد تدويرها إذا كانت متوفرة بالطبع. والهدف من ذلك هو تقليل عدد «الكيلومترات التي تقطعها الشاحنة»، والتي سيتطلبها المشروع، إلى أقصى قدر مُمكن. وبالتالي، بطبيعة الحال، تظهر المشاكل المتعلقة بالضوضاء والاضطراب والتعامل مع مياه الصرف على الطرق وهكذا. وقد تم الإقرار بعد ذلك بأن المواد محلية المصدر (وخاصة الأسطح) تسهم بشكل دائم، تقريبا بشكل إيجابي، في نوعية البيئة المبنية الناتجة أيضا. وتشهد على ذلك اليوم العديد من المواقع في الرياض وجدة وغيرها من المدن الخليجية.

ثانيا، يأخذ أحدث تفكير أيضا في الحسبان إجمالي استهلاك الطاقة (تقريبا كافة الطاقات الحفرية) التي سيكون الطريق الجديد مسؤولا عنها، في جميع مراحل تطويره واستخدامه وصيانته واستبداله نهائيا. وهذا يتضمن:

- تقليل عدد عمليات الحفر الرئيسية اللازمة لإعداد أسس الطريق لأقصى قدر مُمكن.
- إدماج المواد المناسبة المُعاد تدويرها في تصميم الطبقة السفلية والخلطات العلوية، وهذه، من جهة أخرى، يمكن استخدامها لتعزيز الاقتصاد في استهلاك الوقود (على سبيل المثال، عن طريق تخفيض مقاومة التدحرج)، وكذلك الكبح الأمن/الحد من الانزلاق.
- تسوية المنحدرات من خلال عمليات القطع والتعبئة بحيث يتم تقليل كل من استهلاك الوقود والكبح غير الضروري.
- إنشاء منحنيات واضحة ومواصفات ملفتة للنظر للتقليل من إرهاق السائق وعدم الانتباه.

وبوضع ذلك كله بعين الاعتبار، تولت مجموعة من سبع دول ضمن الاتحاد الأوروبي رعاية إعداد برنامج خاص لتقييم الطاقة مثل (JOULESAVE) ليستخدمه مُصممو الطرق. وكان من أحد النتائج الأولية لذلك البرنامج أن إجراء تغييرات مكلفة في الطاقة في عملية رصف الطريق يمكن أن تحقق فعليا وفورات طويلة الأجل على مدى فترة حياتها العملية كلها. ومن النتائج الأخرى لهذا البرنامج أن توفير الطاقة في عمليات الصيانة يمكن أن يؤدي في النهاية إلى زيادة النفقات من حيث الاستخدام الفعلي. ونتيجة ثالثة لهذا البرنامج هي وجود فرق هائل في الوقود الذي تستهلكه الفئات المختلفة من المركبات، وبالطبع أيضا عمرها/مستوى الصيانة، وكذلك وجود فرق آخر أقل بكثير وفقا لنوع الطريق المُستخدم بالفعل.

ختاما، يجب أن تُصمم الطرق السريعة المستدامة حقا مع وضع ذلك بعين الاعتبار. وغالبا ما نجد أن تصميمات الحارات المزدوجة، المُعدة خصيصا للشاحنات الثقيلة التي تسير بسرعات اقتصادية، هي أكثر الحلول الصديقة للبيئة.



مبادئ «ليد» تروج لاستخدام المواد المحلية أثناء تنفيذ مشروعات إنشاء الطرق

مستقبل الطرق في الشرق الأوسط

لقد تمت مواءمة نظام تصنيفات الريادة في تصميمات الطاقة والبيئة «ليد» لتقنيات التصميم والبناء المستدامة، واعتماده. على نطاق واسع. للمباني عبر منطقة الخليج. غير أنه، وحتى الأن، لم يتم إيلاء اهتمام يذكر لإمكانية تطبيقه على عمليات تطوير الأعمال الإنشائية على الطرق، وهي التغيرات التي تؤثر فعليا على عدد أكبر من السكان. فالطريق السريع الحديث، في النهاية، هو في الأساس مبنى منخفض الارتفاع يتم تشييده بشكل أفقي بدلاً من المستوى الرأسي. ونفس الأمر بالنسب لممر إقلاع الطائرات وهبوطها بالمطار. حيث يحقق كلاهما وفورات ضخمة في مساهمات المواد والطاقة على المدى البعيد إذا ما تم تشييدهما وفقا لأحدث المعايير العالمية للاستدامة.

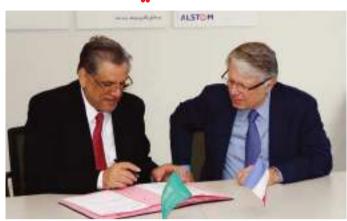
الاستثناء المحلى البارز من ذلك هي إمارة أبو ظبي، حيث تم بالفعل إعداد مستدامة، وذلك على أساس تجريبي. ويجري حاليا تقييم ذلك. دليل Greenroads (جرين رودز) مُعدل إقليميا، وتم مؤخرا تحويل مسافة قصيرة من الطريق السريع ،المزدحم للغاية والممتد إلى دبي، إلى معايير 👚 نقطة إضافية من جرين رودز» (plus'Greenroads' points) والذي قام

ومن الجدير بالملاحظة، على الصعيد الدولي، وجود نظام التصنيف ١٠٠

ألستوم تشترك في تطوير البنية التحتية للطاقة في السعودية

وقعت شركة ألستوم جريد والشركة الوطنية لنقل الكهرباء بالمملكة العربية السعودية مذكرة تفاهم لتطوير البنية التحتية للطاقة في المملكة العربية السعودية وتعزيزها على المدى الطويل. وقد وقع مذكرة التفاهم كل من محمد الرفاع، نائب رئيس الإدارة الهندسية بالشركة الوطنية لنقل الكهرباء، ومايكل أوجنت نائب الرئيس للحلول التجارية بشركة ألستوم جريد. ومن المتوقع أن تتعاون الشركتان في مجالات المعايير والمواصفات، والهندسة والتصميم، والصيانة والتشغيل، ومنتديات التبادل الفني، وخارطة الطريق التكنولوجية. ويشمل التعاون بين شركة ألستوم والشركة الوطنية لنقل الكهرباء بالمملكة العربية السعودية، المعدات الرئيسية؛ مثل المفاتيح الكهربائية ذات الجهد العالى، ومحولات الطاقة، وحلول أتمتة المحطة الفرعية، بما في ذلك حماية الأجهزة الإلكترونية الذكية وقياسها، والمحطة الرقمية الفرعية، والشبكة الذكية، واستخدامات الشبكة الفائقة، وإدارة الشبكات، فضلاً عن الصيانة . بالإضافة إلى ذلك، سيقدم خبراء معهد ألستوم التقنى مجموعة من الدورات التدريبية، التي تمد مهندسي الشركة الوطنية لنقل الكهرباء بالمملكة العربية السعودية بالمستوى الأمثل للمعلومات التقنية التي تلائم متطلباتهم اليومية.

يجدر بالذكر أن الشركة الوطنية لنقل الكهرباء بالمملكة العربية السعودية قد تأسست عام ٢٠١٢ بهدف تشغيل شبكة الكهرباء، وضمان الأداء السلس للشبكة الكهربائية. وقد زادت أطوال شبكات نقل الطاقة الكهربائية بنسبة ٧, ٤ في المائة (٣١٨, ٥٤) كم دائريا بعد إطلاق عدد من المشاريع الجديدة. حيث تمت إضافة ٣٨ محطة فرعية جديدة و١٠٧ محولات. وتم تركيب أحد



محمد الرفاع، نائب رئيس الإدارة الهندسية بالشركة الوطنية لنقل الكهرباء، ومايكل أوجنت نائب الرئيس للحلول التجارية بشركة ألستوم جريد، يوقعان مذكرة التفاهم

عشر محولاً في محطات النقل الفرعية القائمة، وتم أيضا استبدال ثمانية محولات تُقدر طاقتها الإجمالية به ١٥,٥٦٥ ميجا فولط أمبير. كما أضيفت شبكات نقل كهرباء تقدر مساحتها بحوالي ٢,٠٢٩ كم دائريا. وقد بلغ الجهد الكهربائي الكلي للمحطات الفرعية والمحطات الفرعية فائقة الجهد ١٩٨٦ محولاً بطاقة إجمالية قدرها ٢٠٣,٠٠٦ ميجا فولط أمبير. وتعمل الشركة الوطنية لنقل الكهرباء بالمملكة العربية السعودية بانتظام على تحسين شبكات نقل الكهرباء وتطويرها لتصل إلى (١١٠-٣٨) كيلو فولط في جميع قطاعات الشركة السعودية للكهرباء (وسط وشرق وغرب وجنوب). وتهدف الشركة إلى رفع جاهزية الشبكة وضمان استمرارية الاعتماد عليها.



BE A PART OF THE LARGEST CONSTRUCTION EVENT IN KUWAIT





Source thousands of innovative and certified international products



Find contemporary interiors products at the new NEW dedicated Building Interiors hall





Set up meetings with over 5,000 participants using the free networking tool, helping you to maximise your time at the event



Advance professionally at over 20 free CPD Certified Workshops on topics ranging from Project Management, LEED and BIM





See more Plant, Machinery and Heavy Vehicles at the extended outdoor area



Meet exhibitors from over 25 countries including Germany, Italy, Spain and more.





14 - 16 September 2015 Kuwait International Fair

شركة فارنيك تفوز بعقدي خدمة في دبي

وقعت شركة فارنيك لخدمات إدارة المرافق عقدين جديدين بعدة ملايين من الدولارات مع شركة أوراكل العالمية الرائدة في مجال برمجيات قواعد البيانات ويقع مقر إدارتها في الإمارات العربية المتحدة، وذلك لتقديم خدمات التنظيف والصيانة، وكذلك توفير موظفي الدعم في المواقع الرئيسية في دبي. وتبلغ مدة العقد المبرم مع المكتب الرئيسي لشركة أوراكل في الشرق الأوسط، الذي يقع في مدينة دبي للإنترنت، ثلاث سنوات. ويشمل خدمات التنظيف، وتوفير طاقم الخدمة بالمكتب وكذلك الموظفين المعنيين بمقابلة العملاء.

وقد صرح ماركوس أوبرلين، الرئيس التنفيذي لشركة فارنيك قائلا: «تعد شركة أوراكل إحدى أكبر الشركات متعددة الجنسيات في العالم، وتعني خبرتنا في العمل مع عملاء رفيعي المستوى مثلها، أنه يتوفر لدينا فهم شامل للمتطلبات التشغيلية. وقال إن عقد شركة أوراكل عقد متميز، وأن الشركة ستوفر أيضا موظفي استقبال وضيافة «لقاعة الاستقبال» بالشركة، حيث يتم استضافة كبار الشخصيات من العملاء والضيوف، وسنوفر أيضا فريقا من الموظفين ذوى الخبرة الذين يتمتعون بخلفية معرفية بشأن الضيافة».

وسيشمل العقد، الذي تبلغ مدته عاماً واحداً مع شركة ستراتا لإدارة المكان، جميع متطلبات إدارة المرافق لمبنى برج ليك فيو العالمي في منطقة أبراج بحيرة الجميرا في دبي، بما في ذلك الخدمات الميكانيكية والكهربائية وخدمات السباكة، واستراتيجيات الصيانة الوقائية، والتنظيف الشامل



العقد الذي تم إبرامه بين فارنيك ومكتب أوراكل الرئيسي بالشرق الأوسط سيكون ساري المفعول لمدة خلاث سنوات

وصيانة واجهة المبنى، وخدمات إنقاذ الحياة، وأضاف أوبرلين: «إن قدراتنا على تقديم خدمة متكاملة ستدعم التزامنا بإدارة المكان لضمان توفير أعلى جودة بيئية للنزلاء، والوصول بمعايير البناء إلى أعلى مستوى بما يتماشى مع تحديد وضع العلامة التجارية بالنسبة للعميل».

وسينجم عن هذه الاتفاقيات تعيين ٧٥ موظفا من موظفي الخدمة والتنظيف والصيانة بشركة فارنيك. وفي الواقع، تستخدم شركة فارنيك مجموعة من المواد الكيميائية الصديقة للبيئة لما يزيد عن ٨٠ في المائة من أنشطة التنظيف لديها، مما يقلل من استهلاك الماء وانبعاثات الكربون.

رافعات شوكية مصممة خصيصاً لسوق الشرق الأوسط

كشفت شركة فولفو لمعدات البناء النقاب عن سلسلة جديدة من الرافعات الشوكية مصممة خصيصا لسوق الشرق الأوسط. إذ سيتم إطلاق الشوكية مصممة خصيصا لسوق الشرق الأوسط. إذ سيتم إطلاق السلسلة(G) التي تتكون من ثلاث آلات هي Laogz وقد صرحت شركة فولفو أنه جميع أنحاء المنطقة فضلاً عن أفريقيا وروسيا. وقد صرحت شركة فولفو أنه قد تم تصميم هذه المجموعة خصيصاً للاستخدام في الأسواق الناشئة، حيث إنها ذات مواصفات أقل من مواصفات الموديلات الأخرى. ومن المقرر أن يبدأ الإنتاج قريبا جدا، كما أنه من المقرر أن يتم شحن أول منتجات تامة الصنع في أواخر يوليو/تموز 7٠١٥.

وتجمع السلسلة (G) بين عدد من الميزات الرئيسية؛ مثل نظام دواسات الوقود البيئية، والوصول الأرضي لسهولة إجراء الصيانة وزيادة الضغط الهيدروليكي واستخدام قضيب ربط على شكل Z، فضلاً عن استخدام نفس مجموعة نقل الحركة والمحرك والمحاور المستخدمة في الرافعات الشوكية الأخرى التى تنتجها شركة فولفو مثل السلسلة (F).

وأوضح مسعود عكار مدير منتجات GPPE بشركة فولفو لمعدات البناء أن هذه السلسلة (F) دون أي اختلاف. وأضاف قائلا: «لكن بفضل زيادة الضغط الهيدروليكي، وتصميم القضيب على شكل Z، رفعنا ـ بالفعل ـ من قوة التشفيل. لذا سوف يشعر



تقول فولفو إن سلسلة G تم تصميمها لعمليات القواديس في المحاجر الصغيرة ومصانع الأسمنت

المستخدم أنه يمكنه ملء القادوس بسرعة أزيد.

وقال: «كما أن الآلة ما تزال تستخدم نفس مجموعة نقل الحركة ونظام دواسات الوقود الاقتصادية، وهذا يعني أنه سيكون بإمكان جميع مستخدمي هذه الآلة تشغيلها على الوضع الاقتصادي مما يعود بفائدة عظيمة على العملاء». كذلك صرحت شركة فولفو أن السلسلة (G) مثالية للاستخدام في مصانع الأسمنت والمحاجر الصغيرة، وبصورة رئيسية للاستخدامات في إعادة استخدام القادوس.



التعطيلات لن تؤثر على برنامج البنية التحتية الطويل الأجل في قطر

تصريحات حكومية بأن أعمال الإنشاء في قطر تسير ببطء ولكن بثبات

تسبب مؤخرا التباطؤ الذي طرأ على أنشطة الإنشاء واسعة النطاق المخطط لها في قطر، في توترات لدى بعض الشركات الأجنبية، ولكن الحكومة القطرية صرحت بأن المشروعات قد توقفت فقط، ولم يتم إلغاؤها. وقد أدت مزاعم الفساد في الهيئة المنظمة للعبة كرة القدم «الفيفا» إلى التركيز مجددا على استضافة قطر لبطولة كأس العالم ٢٠٢٢ لكرة القدم. غير أن المسؤولين القطريين على ثقة من أن هذا الحدث سيمضى قدما كما هو مخطط له. هذا وتبلغ قيمة الإنشاءات الجديدة، الموجهة لكأس العالم مباشرة، حوالي ١٠ مليارات دولار أمريكي فقط من برنامج تطویر یتکلف مبلغ ۲۰۰ ملیار دولار أمريكى تخطط هذه الدولة الخليجية لاستكماله بحلول عام ٢٠٣٠. ورغم ذلك، تخلق حالة الغموض الملموسة حول هذا الحدث الرياضي مخاوف لدى المقاولين الأجانب.

ولاستضافة بطولة كأس العالم، قامت قطر بتعيين مديرى مشروعات وذلك لبناء خمسة

ملاعب لاستضافة المباريات، ولكنها تحتاج إلى ١٢-٨ ملعبا وفقا لشروط استضافة البطولة. وقد صرح داريل بيرجيسين، المدير العام لشركة الجابر إل إي جي تي للهندسة والمقاولات، ومقرها أبو ظبي، في المكتب الخاص بالشركة في قطر قائلا: «لقد استغرقت عملية تنفيذ الخطط الرئيسية اللازمة لاستضافة نهائيات كأس العالم ولكنه شرح السبب وراء ذلك بقوله: «ومع ذلك، فإن هذا مشروع ضخم وهو الأول من نوعه في منطقة الشرق الأوسط. لذلك لا ينبغي التقليل من حجمه وربما علينا كذلك ألا نتفاجاً من الوقت حجمه وربما علينا كذلك ألا نتفاجاً من الوقت الذي يستغرقه».

يجدر بالذكر هنا أن العائدات الضخمة، الناتجة من إنتاج الغاز الطبيعي، مكنت قطر من الإنفاق بسخاء على إنشاء بنية تحتية جديدة، ولكنها تفعل ذلك وفقا لشروط صارمة. فهناك، على سبيل المثال، شروط في بعض العقود تجعل الاستشاريين مسؤولين ماليا حتى بعد سنوات

عديدة من إنجاز المشروع. وبالتالي، يبدو أن شركات الشرق الأوسط والمشروعات المشتركة المحلية تحقق نتائج أفضل في قطر حيث يُنظر إليها باعتبارها مستثمرة على المدى الطويل في البلاد. وقال جلال الصالحي، مدير شؤون البنية التحتية بهيئة الأشغال العامة القطرية (الأشغال)، المسؤولة عن مشروعات عديدة: «نحن نفضل الشخص الذي يأتي للعمل معنا، ليس لأداء مهمة واحدة فقط ثم يغادرنا».

هذا مع العلم أن الاقتصاد القطري يتوسع بما يزيد عن ستة في المائة سنويا. غير أن النمو

السريع، الذي لا يترجم إلى أرباح سريعة، يدفع بعض الشركات الأجنبية إلى الانتقال إلى أماكن أخرى. وقال الصالحي إن بعض الشركات الأجنبية ترحل بعدما أدركت حجم المنافسة. وأضاف الصالحي قائلا: «لقد تأهل بعض المقاولين مسبقا من قبلنا، ولكنهم لم يتقدموا للمناقصة، وقالوا إن السبب وراء ذلك هو وجود سوق تنافسية للغاية نظرا لوجود المقاولين الآسيويين والأتراك. ولكننا في سوق عالمية ولا نستطيع القول بأننا سنفتح مناقصة للشركات الأوروبية فقط». وتتمثل بعض المشروعات المتأخرة في مشروع معبر الشرق، وهو عبارة عن جسر تبلغ تكلفته ١٢ مليار دولار أمريكي، ووصلة نفق تحت الماء عبر خليج الدوحة، والذي كان من المقرر أن يبدأ تشييده هذا العام بحيث يكون جاهزا لكأس العالم ٢٠٢٢، ومصنع كيماويات شمال الدوحة تبلغ تكلفته عدة مليارات من الدولارات، وكذلك حديقة الدوحة الكبرى على غرار حديقة سنترال بارك بنيويورك.

وقد صرحت الحكومة القطرية بأن التأخيرات على المدى القصير لن تعرقل برنامج بنيتها التحتية. ووفقا لبيان صادر عن الحكومة القطرية: «هناك خطة واضحة بديلة فيما يتعلق بتنفيذ مشروعات البنية التحتية الرئيسية. وتحرص الحكومة على تجنب أي عقبات قد تنشأ، مع الاستمرار في نفس الوقت في تنسيق السياسات المالية والنقدية عن كثب لتحقيق هذه الغاية».









ملخص محتويات القسم الانجليزي

التطورات: تطورات السوق.

تحليلات: نظرة على قطاع الإنشاء، أضواء على إنشاء الطرق.

إنشاءات: الصحة والسلامة، الطاقة في موقع البناء، برمجيات التصميم.

فعاليات: معرض بيج فايف الكويت، معرض كهرباء الشرق الأوسط. الدليل السنوى للمشترين: قطاع الإنشاء.

القسم الحرب

أخىار تباطؤ في أعمال الإنشاء في قطر

فارنیك تفوز بعقدی خدمة فے دبی رافعات شوكية مصممة خصيصا لسوق الشرق الأوسط

ألستوم تشترك في تطوير البنية التحتية للطاقة في السعودية

تحلىلات

ving.mathieson@alaincharles.com

tanmav.mishra@alaincharles.com

bola.olowo@alaincharles.com

annabel.marx@alaincharles.com

stephen.thomas@alaincharles.com

يتم سداد ثمن المحلات لدى: Rahway, NJ.

مستقبل الطرق في الشرق الأوسط

(91) 8040600791

(27) 466245931

الوكيل البريدي بالولايات المتحدة: النشرة التقنية ـ الشرق الأوسط Technical Review Middle East ISSN 0267 5307

Alain Charles Publishing , University House, 11-13 Lower Grosvenor Place, London, SW1W 0EX, UK

Country

China

India

Nigeria

Representative

Ying Mthieson

Tanmav Mishra

Bola Olowo

South Africa Annabel Marx

Alain

Charles

Publishing

Serving the world of business

Telehone

(91) 80 65684483

(27) 218519017

(234) 8034349299 -

(86)10.8472.1899 (86).1084721900

(44) 20 7834 7676 (44) 2079730076



TECHNICAL REVIEW MIDDLE EAST

Grosvenor Place

London SW1 WoEX, UK

هاتف : ۲۰۷۸۳٤۷٦۷٦ (۰) 3٤+

فاکس : ۲۰۷۹۷۳۰۰۷۱ (۰) ٤٤+

SERVING THE REGION'S BUSINESS SINCE 1984 في خدمة شركات المنطقة منذ ١٩٨٤

> ىرىد إلكتروني: trme@alaincharles.com مدير التحرير: بين واطس،

فريق التحرير والتصميم: بوب آدمز، هيريتي بايرو، أندرو كروفت، رانجانات جي إس، براشانت إيه بي، زا تيبت، نكي فالسماكيس، لويز كويك، سندوجا بلاجي، رونيتا باتناك.

الناشر: نــك فوردهـام

ر: بلافي باندي مديرة النـشــ

مديرة مبيعات المجلة: كاميلا كابيتشي

هاتف: ۹۲۱۰ (۶) ۹۲۱ ، فاکس: ۹۷۱ (۶) ۴۶۸ (۶) (۹۷۱ ، برید إلکترونی: ۹۲۱ (۶) ۴۹۷۱ ، ۱۹۷۱ و وزی: ۹۲۱ ماتف

مكتب الشرق الأوسط الإقليمي:

المكتب الرئيسي: Alain Charles Publishing Ltd Alain Charles Middle East FZ - LLC University House, 11-13 Lower

Office 215, Loft 2A مدينة دبي للإعلام

دبي - الإمارات العربية المتحدة - صندوق بريد: ٥٠٢٢٠٧

هاتف : ۹۷۱ (۱۹۶۹ هغ (۶) ۹۷۱+

فاکس : ۹۲۱۱ ۸۶۸ (٤)

المترجم: عزالدين م. علي ezzeddin@movistar.es الت**صميم والإخراج الفني:** محمد مسلم النجار alnajjar722@gmail.com

الطباعة: مطبعة الإمارات ـ دبي

رئيس مجلس الإدارة: دريك فوردهام

الإشتراكات: بريد إلكتروني: circulation@alaincharles.com

تنشرها ست مرات في العام، لقاء 99 دولاراً أمريكياً، شركة آلان تشارلز للنشر

مدير البريد: أرسل التصحيحات إلى: Alain Charles Publishing Ltd, c/o Mercury

Agent: Pronto Mailers International, 200 Wood Avenue, Middlesex, NJ 08846

الإنتاج: دوناتيللا مورانيللي، ناتانييل كومار، نك سولت، صوفيا هوايت، جان، إريكا سيساي بريد إلكتروني: production@alaincharles.com

Airfreight International Ltd, 365 Blair Road, Avenel, NJ 07001. US

© Technical Review Middle East ISSN: 0267-5307

ADVERTISER INDEX

CompanyPage
Bajaj Electricals Ltd
Central Power Research Institute25
CompAir27
Diamond Metal Screens Pvt Ltd59
DMG World Media Dubai Ltd (PMV/MEC/51, 52, 53, 75 Global Solar Leaders' Summit/Big 5 Kuwait 2015)
Doosan Infracore13
Dwyer Instruments Ltd56
Galva Coat for Galvanizing & Lighting Poles14
Helukabel GmbH21
Himoinsa, S.L29
IIR Exhibitions (Power Nigeria/Electricx/Solar-Tec 2015)39, 43
IndoAsian21
Inmesol SI

eremias Middle East	37
aeser Kompressoren FZE	79
Ohler Power Systems	3
G Electronics Gulf FZE	5
iebherr Export AG	17
Nontgomery Exhibitions Ltd	45
Omicron Electronics Middle East	31
eter Berghaus GmbH	18
ahara Emirates Trading	36
ahyadri Industries Limited	9
ullivan-Palatek, Inc	19, 49
erex Equipment Ltd	23
albruna Gulf FZE	35
olvo Group Trucks Sales & Marketing EMEA	11
Veichai Middle East FZE	2



More air

KAESER's new fluid-cooled BSD rotary screw compressors* save energy in four ways with:

- energy-saving SIGMA PROFILE ♣ airends
- 'Super Premium Efficiency' IE4 motors



- · efficient 1:1 direct drive
- · integrated intelligence: SIGMA CONTROL 2

Specific power improved by up to 6%.

*) Optionally available with integrated dryer and / or variable speed control

FAD: 5.7 to 8.2 m3/min, at 7.5 bar



KAESER KOMPRESSOREN FZE

P.O. Box 17485 - Jebel Ali Free Zone - Dubai - UAE Tel: +971 4 805 0000 - Fax: +971 4 805 0077 - E-Mail: info.dubai@kaeser.com

www.kaeser.com

