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June 2014 / Vol. XXXII Issue 6

Arab Construction World

عالم الإنشاءات العربي



UAE: An Attractive Destination On All Fronts (P.43)

**Turning the Tide on
Sea Water Corrosion**

(P.11)

**Energy-Efficient Architecture
with Glass**

(P.23)

Highest Priority on Safety

(P.16)

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INTRODUCTION

Issue Content	01	Opening Letter & CPH Team	02	MENA Construction Digest	04
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CONSTRUCTION MACHINES & EQUIPMENT

Compactors, Loaders & Rollers Fresh Impetus for Earthmoving Equipment Market	07
--	----



08

BUILDING PRODUCTS & EQUIPMENT

Geotextiles & Membranes Turning the Tide on Sea Water Corrosion	11
---	----



14

FEATURE

Material Handling & Processing Highest Priority on Safety	16
---	----



18

INDUSTRY SPOTLIGHTS

Automation & Instrumentation Regional Dynamics to Shape ME Market for Automation & Instrumentation	20
Facades & Claddings Energy-Efficient Architecture with Glass	23
Marble & Granite Three in a Row for Italian Marble: Sector Exports Up for 3 rd Year Running	29



22

COUNTRY / REGIONAL REPORTS

France Very Low Interest Rates Keep French Market Fairly Resilient	35
Jordan Jordan Real Estate Sector: Unstoppable Momentum	38
Russia Russia's Construction Industry: A Hindered Growth	39
United Arab Emirates UAE: An Attractive Destination On All Fronts	43



40

DEPARTMENTS

Corporate Happenings	48
E-News	49
Interviews & Profiles	50
Products & Services	51
Projects & Developments	53



52

EVENTS

Events Preview	55	Events Review	56
----------------	----	---------------	----

SERVICES

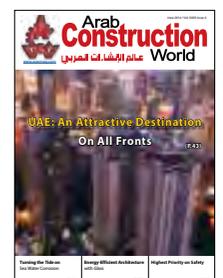
Coming Events	58	Buyers' Guide	59
---------------	----	---------------	----

INFO

Advertisers' Index	60	General Information	61
Closing Letter	62	Subscription Form	63

COVER STORY

In line with Vision 2030, Abu Dhabi government has a long term investment program to upgrade its national infrastructure, airports, seaports and public transport system to cater to the growing population.



Cover Photo Courtesy of ©Luke Joyce

The Revival of Middle East's Construction Market



انتعاش سوق الإنشاءات في الشرق الأوسط

The Middle East region is witnessing a surge in construction and infrastructure projects with Saudi Arabia being by far the largest projects market (USD61 billion worth of contracts awarded last year, and a further over USD1 trillion worth of projects planned or under construction). In addition, the United Arab Emirates (UAE) awarded USD38 billion worth construction projects in 2013 and is expected to award projects of a value of USD46 billion in 2014 while Qatar plans to invest over USD140 billion over the next five years in transport infrastructure.

This ongoing construction movement is driving the demand on construction equipment, construction and building materials and machinery and tools. As a result, investors' confidence is heightened as numerous mega projects are expected to be announced during this year and international machinery and material manufacturers and suppliers are attracted to this market. This movement will be reflected at Project Lebanon which will be held from 3 to 6 June at BIEL. The **Arab Construction World (ACW)** magazine, in line with its historic support of the event, will participate as a Media Partner and will be present at the stand number A46.

The June 2014 issue of ACW magazine tackles different interesting projects and topics such as the growth of earthmoving equipment market on page 07 and the development of automation and instrumentation market in the Middle East on page 20. Moreover, the article on page 43 sheds the light on UAE's construction sector boom. Furthermore, this issue is abounded with a number of technical articles, country reports as well as news about latest innovations and market trends.

Your comments and remarks are appreciated, so don't hesitate to contact us through our email content@cphworldmedia.com

تشهد منطقة الشرق الأوسط طفرة في مشاريع الإنشاء والبنية التحتية مع سيطرة المملكة العربية السعودية على سوق المشاريع إلى حد كبير إذ منحت في العام الماضي مشاريع بقيمة ٦١ مليار دولار أمريكي بالإضافة إلى مشاريع مخططة أو قيد الإنشاء تُقدَّر بأكثر من تريليون دولار أمريكي. أما الإمارات العربية المتحدة فقد منحت في العام ٢٠١٣ مشاريع إنشائية بقيمة ٣٨ مليار دولار أمريكي مع توقعات بأن تمنح في العام ٢٠١٤ مشاريع بقيمة ٤٦ مليار دولار أمريكي بينما تُخطِّط قطر استثمار أكثر من ١٤٠ مليار دولار أمريكي في السنوات الخمس القادمة في البنية التحتية للنقل.

إن حركة الإنشاءات الجارية تدفع الطلب على آلات الإنشاء وأدواته ومواد البناء والتشييد وبالتالي تُقوِّي ثقة المستثمرين حيث من المتوقع أن يتم الكشف عن عدد كبير من المشاريع الضخمة خلال هذا العام بالإضافة إلى جذب مصنعي وموردي الآلات والمواد العالميين. ومن المتوقع أن تنعكس هذه الحركة في معرض "بروجكت ليبانون" الذي سينعقد من ٣ إلى ٦ حزيران/يونيو في مركز "بيال". ستكون مجلة عالم الإنشاءات العربي وفي إطار دعمها التاريخي للمعرض حاضرة في المعرض كشريك إعلامي في القسم رقم A46.

يُغطّي عدد حزيران/يونيو ٢٠١٤ من مجلة عالم الإنشاءات العربي مواضيع ومشاريع مختلفة ومثيرة للاهتمام مثل نمو سوق آلات الحفر في الصفحة ٠٧ وتطور سوق الأتمتة والأجهزة في الشرق الأوسط في الصفحة ٢٠. أما مقال الصفحة ٤٣ فيسلط الضوء على ازدهار قطاع الإنشاءات في الإمارات العربية المتحدة. كما يزرخ هذا العدد بعدد من المقالات التقنية وتقارير حول البلدان بالإضافة إلى آخر الأخبار حول آخر ابتكارات واتجاهات سوق الإنشاءات.

آراءكم وتعليقاتكم تهمنا، فلا تترددوا بالتواصل معنا عبر البريد الإلكتروني content@cphworldmedia.com

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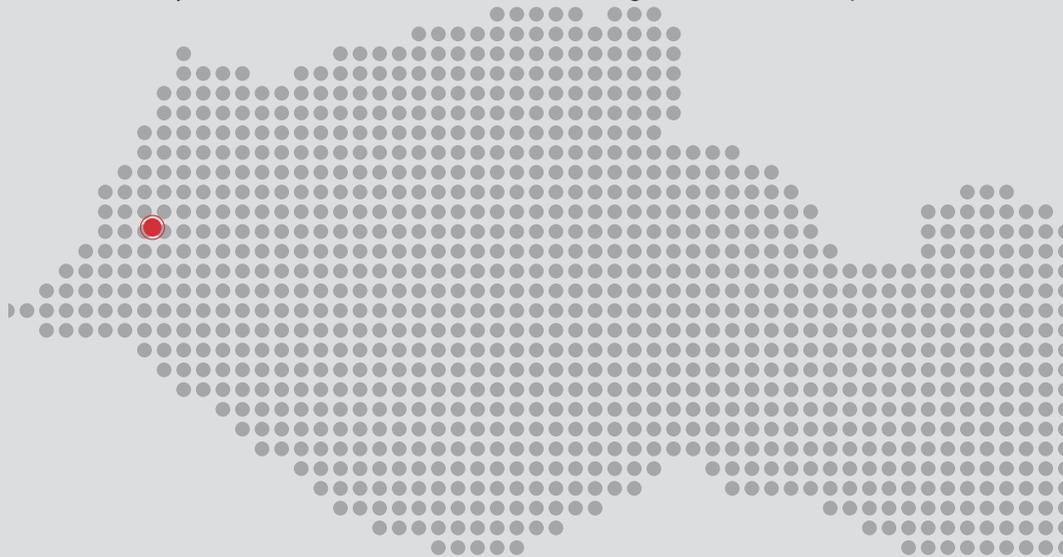
Egypt

New Cairo Metro Line Handed Over

The Egyptian authorities opened last month a new 7.2 km of section of Line 3 of the Cairo metro serving five new stations in the eastern part of the city - Cairo Fair, Stadium, Kolleyet el Banat, Al Ahram and Haroun El Rachid. The Phase 2 civil engineering project, led by **VINCI Construction Grands Projets** alongside **Bouygues Travaux Publics**, a subsidiary of **Bouygues Construction**, and their Egyptian partners **Orascom Construction** and **Arab Contractors**, got under way in May 2009. More than 3,000 Egyptian workers were employed on the project, which was handed over five months ahead of schedule. This achievement reflects the more than 30 years of experience that VINCI Construction Grands Projets and Bouygues Travaux Publics have acquired since the signature of the contract for Line 1 of the Cairo metro in 1981. Developed in phases, Line 3 of the metro will ultimately cross the Egyptian capital east to west, connecting the airport with the districts west of the Nile over a distance of nearly 40 km.

inside its soil. The project envisages the connection of Azerbaijani and Iranian railway systems through Qazvin-Rasht-Astara (Iran)-Astara (Azerbaijan). Qazvin-Rasht-Astara (Iran)-Astara (Azerbaijan) railway project is of great importance for the development of "North-South" international transport corridor whose commodity market is estimated to rise to 25-26 million tons by 2015. The significant part of "North-South" corridor runs through Russia's railway. The length of Rasht-Astara-Qazvin railway is 205 kilometers, and the

ca Stock Exchange, which would allow individual Moroccan shareholders and institutional investors to acquire 15 percent of the shares of Total Maroc. The IPO is expected to be launched in the near future. Total will continue to retain a controlling interest in Total Maroc and operate it."Having outside partners acquire interests in our affiliates is a key component of Total's strategy in the petroleum products and services retail sector in Africa and the Middle East, and a critical factor in long-term success," explained *Mo-*



length of the railway track between Qazvin and Rasht is 164 kilometers.

mar Nguer, Senior Vice President, Africa/Middle East at Total Marketing & Services.



Iran

Russia to Construct Rasht-Astara Railway Track

Managing Director of Iran Railways Organization *Mohsen Pour Seyed Aqaie* said last month that Russia will build Rasht-Astara railway track based on an agreement with Tehran and Baku, according to **IRNA**. Moreover, Azerbaijan's Railways Company will construct the railway from Iran-Azerbaijan border to the first railway station



Morocco

Zahid Group: a Shareholder of Total Maroc

Total has announced that it has invited direct foreign investment in its Marketing and Services affiliate, **Total Maroc**, and that **Zahid Group**, headquartered in Jeddah, Saudi Arabia, has become a 30 percent shareholder of the company. Total Maroc is also currently preparing an initial public offering (IPO) on the Casablan-



Qatar

Excavation Works on Mesaimmer Tunnel Started

Qatar's Public Works Authority (**Ashghal**) president Engineer Nasser bin Ali Al Mawlawi inaugurated last month the commencement of excavation works for the Mesaimmer surface and groundwater tunneling, a significant project undertaken by Ashghal to enhance Qatar's drainage network, according to Qatar News

Agency (QNA). The project is scheduled to be completed by early 2017. The inauguration was held on a work site in Al Thummama. Excavation is being carried out by Al Thummama, one of the two

planned pumping station near new Hamad International Airport. Ashghal also reported that design and tender documents preparation for Phase 2 of the project are being finalized.

Jeddah South will be Saudi Arabia's first supercritical thermal power plant, and is being built by a state-owned enterprise, the Saudi Electricity Company, at a site south of the city of Jeddah, which is on Saudi Arabia's western coast, facing the Red Sea. Stage-1 of this project involves the construction of four 723 MW units producing a total of 2,892 MW. Unit 1 is scheduled to start operation in 2017.



UAE

DEWA's Impressive Reduction in Energy & Water Demand

Dubai Electricity and Water Authority (DEWA) has achieved considerable success in reducing the demand for energy and water in Dubai through wide a series of initiatives to meet the goals of the Dubai Integrated Energy Strategy 2030 launched by the Dubai Supreme Council of Energy to reduce energy demand by 30 percent in 2030. DEWA has succeeded in reducing annual per capita consumption of electricity to 15,346 kW in 2013 compared with 16,022 kW in 2010, while the annual per capita consumption rate of water reduced to 40,777 gallons in 2013 compared with 44,631 gallons in 2010. "According to the Dubai Integrated Energy Strategy 2030, achieving energy efficiency is fundamental to reducing energy demand. This will help to reduce our reliance on natural resources, reduce our carbon footprint and protect the environment. We can build on this in the short- to medium term and realize the results in the long-term, and for generations to come," said HE *Saeed Mohammed Al Tayer*, MD & CEO of DEWA. "DEWA is implementing the strategy for energy demand management that was formulated by the Supreme Council of Energy, which has eight programs to manage energy demand," concluded Al Tayer.



Saudi Arabia

Saudi Arabia's 1st Supercritical Thermal Power Plant

Yokogawa Electric Corporation announces the receipt of an order from **Hyundai Heavy Industries Co., Ltd.** to supply control systems, safety instrumented systems, analysis systems, and other products for Stage-1 of the Jeddah South supercritical oil-fired thermal power plant project in Saudi Arabia. The joint order recipients are Yokogawa Electric and a subsidiary, **Yokogawa Middle East & Africa B.S.C.**

technologically advanced TBMs being used for the first time in Qatar and specially designed and developed for the project. The Mesaimer tunnel will run under F-Ring Road, stretching 9.7km. It will run 5.4km from Al Thummama to the west and 4.3km to the east to the

Construction Machines & Equipment

Compactors, Loaders & Rollers

Fresh Impetus for Earthmoving Equipment Market.....	P.07
Cat® 986H Engineered for Durable Performance.....	P.08
Lights, Camera, Action at Studio Site.....	P.08
Trimble New Compaction Control System.....	P.09
Bobcat Launches New S450 Skid-Steer Loader.....	P.10
New EDGE® Heavy-Duty High Reach Clipper.....	P.10

Building Products & Equipment

Geotextiles & Membranes

Turning the Tide on Sea Water Corrosion.....	P.11
Excellent Protection with Air-Shield Air/Vapor Barriers.....	P.13
RENOLIT's Innovative Roofing Membranes.....	P.14
AFITEX: Down to Earth Intelligence.....	P.14



Photo Courtesy of Doosan Construction Equipment

Fresh Impetus for Earthmoving Equipment Market

Earthmoving equipment, also known as heavy equipment vehicles, is used in construction activities that involve earthworks such as the construction of roads, railways, urban infrastructure, ports, and mining. Earthmoving equipment comprises of construction tractors, loaders, and excavators. The Middle East and North Africa (MENA) region is experiencing a construction sector boom in different areas which will result in a higher demand on earthmoving equipment. MENA Projects Tracker published by Citi states that Gulf Cooperation Council (GCC) countries are responsible for almost 90 percent of the projects being built by value in the MENA region, with 60 percent of those in Saudi Arabia and the United Arab Emirates (UAE) while MEED Projects figures show that more than USD90 billion of metro and light rail projects are planned in the MENA region by 2030.

In terms of growth, the global earthmoving equipment market recorded a review-period (2008–2012) compound annual growth rate (CAGR) of 1.67 percent, according to Timetric's report "The Global Earthmoving Equipment Market: Key Trends and Opportunities to 2017". The growth was subdued by a 34.1 percent decline in the market in 2009, due to the financial crisis. Construction activity slowed, and demand for earthmoving equipment declined in 2009, the worst year in the economic crisis. The global earthmoving equipment market is expected to record a forecast-period CAGR of 5.59 percent due to construction industry growth, infrastructure and residential development in emerging economies, and the easing of the financial crisis in Europe.

Timetric added in its report that the Asia-Pacific region was the largest regional market, accounting for 50.7 percent of the global market. It was followed by Europe and North America with respective shares of 23.5 percent and 14.8 percent. China constituted the largest share of the Asia-Pacific market with a 38.2 percent share in 2012, followed by Japan, Australia, Indonesia and South Korea with 29.8 percent, 13.9 percent, 6.6 percent and 5.8 percent respectively. Russia accounted for the largest share with 22.3 percent, followed by Germany, France, Italy, Sweden and Turkey with 13.5 percent, 11.0 percent, 9.8 percent, 7.5 percent and 6.5 percent respectively, added the same report. The 2009 financial crisis and subsequent European debt crisis were detrimental to the European construction industry, and caused the earthmoving equipment market to record a review-period CAGR of -5.74 percent. US was the largest market with a 74.1 percent share, while Canada accounted for the remainder. Demand for earthmoving equipment declined as a result of the housing

"Saudi Arabia was the largest market in the region, accounting for a 47.3 percent share"



crisis and recession, causing the market to record a review-period CAGR of -4.24 percent. Brazil accounted for the largest share with 64.4 percent, followed by Mexico, Colombia and Argentina with 17.5 percent, 11.8 percent and 6.4 percent respectively. The market registered a review-period CAGR of 4.56 percent and is expected to grow at a forecast-period CAGR of 5.01 percent. Brazil is expected to be a key source of demand for earthmoving equipment in Latin America over the forecast period, as the country is hosting the 2016 Olympic Games. Saudi Arabia was the largest market in the region, accounting for a 47.3 percent share, followed by UAE, Qatar and Bahrain with 43.3 percent, 7.0 percent and 2.5 percent respectively. The market recorded a review-period CAGR of -4.43 percent and is expected to register a forecast-period CAGR of 4.96 percent. ■

Prepared by:

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تستعمل معدّات الحفر المعروفة أيضاً بالمعدّات الثقيلة في أعمال الإنشاء التي تتطلّب أعمال حفر مثل بناء الطرق والسكك الحديدية والبنية التحتية الحضرية والموانئ والتعدين. تشمل معدّات الحفر جرارات الإنشاء ولوادرها وحفاراتها. من ناحية أخرى، تشهد منطقة الشرق الأوسط وشمال أفريقيا طفرة في قطاع الإنشاءات في مجالات مختلفة مما سيؤدي إلى ارتفاع الطلب على معدّات الحفر. وتوضح شركة (سي تي) في تقريرها (MENA Projects Tracker) إلى أن دول مجلس التعاون الخليجي مسؤولة عن حوالي ٩٠ في المئة من المشاريع التي يتم تنفيذها من حيث القيمة و تستحوذ المملكة العربية السعودية والإمارات العربية المتحدة على ٦٠ في المئة من هذه النسبة. وتشير أرقام (MEED Projects) إلى أن أكثر من ٩٠ مليار دولار أمريكي من مشاريع المترو والسكك الحديدية الخفيفة معدة للتنفيذ في منطقة الشرق الأوسط وشمال أفريقيا بحلول العام ٢٠٣٠.

Cat® 986H Engineered for Durable Performance

The new **Cat® 986H** Wheel Loader, designed especially for quarry applications—loading both on-highway and off-highway trucks and handling load-and-carry tasks—is a strong, productive machine that is easy to operate and easy to maintain. With bucket capacities ranging from 5.3 to 6.1 m³ (7 to 8 cubic yards), the 305-kW (409-horsepower) 986H features a power train with proven Cat components, a powerful and efficient load-sensing hydraulic system, heavy duty frames and loader linkage, and a safe, comfortable operator station. The 986H is engineered to deliver durable performance at a low cost per ton.

Using solid steel lift arms designed to absorb loading stress, the 986H Z-bar-type loader linkage generates powerful digging and lifting forces and provides excellent visibility to the bucket cutting edge and surrounding work area. Lift arms are available in both standard-lift and high-lift configurations to accommodate a range of haul trucks.

Strength built into the 986H major structures—a full-box-section rear frame fabricated to resist torsional shock and twisting forces, cast axle-mounting pads, and heavy duty steering cylinder mounts—ensures durability through multiple machine life cycles. The



Cat® 986H Wheel Loader

986H also uses Cat Performance Series buckets for fast, consistent loads, and a quick coupler is available. The Cat C15 engine uses reliable mechanically actuated electronic unit injectors that precisely control fuel delivery for optimum performance and economy in all situations. ■

Lights, Camera, Action at Studio Site

A fleet of **Volvo Construction Equipment (Volvo CE)** is helping prepare the 288 acres site for the new Pinewood Studios in Georgia, U.S. The construction process began in summer 2013 and the first phase is due to open later this year. Pinewood Studios commissioned general contractor **Brent Scarbrough & Company** to undertake much of the site preparation work on the project.



An EC480DL excavator in action

Before any new work could begin existing buildings needed to be demolished and a considerable amount of earth moved. To tackle these jobs Brent Scarbrough & Company used three different types of Volvo CE machines, including a fleet of L70G-Series and L70 E-Series wheel loaders, an EC480DL excavator and A40F-Series, A25D-Series and A40E-Series articulated haulers.

Star attractions

"The Volvo wheel loaders are bulletproof," says Glenn Nasworthy, equipment manager at Brent Scarbrough & Company. "They are powerful, stable and our operators prefer the Volvo wheel loaders over other brands. They hold up really well and I think our recent purchase of 10 new L70G-Series machines is a testament to how we feel about these machines." Nasworthy added, "We think Volvo's articulated haulers are the best on the market." "We've been using them for 20 years and have found that they're very reliable. Some of the machines even clocked more than 16,000 hours and all we have done is routine maintenance." ■

Trimble New Compaction Control System

Trimble announced a new GNSS-based machine control solution to improve efficiency of bulk earthworks and landfill compaction operations. Installed on a four-drum soil or landfill compactor, the Trimble® CCS900 Compaction Control System allows a machine operator to make more uniform and efficient passes, report compaction production data in the field, and ensure target compaction is reached with minimal fuel usage and machine wear. The announcement was made at WasteExpo 2014, North America's largest solid **waste** and recycling tradeshow.



GNSS-based machine control solution to improve efficiency of bulk earthworks & landfill compaction operations

CCS900 for bulk earthworks

The CCS900 system tracks compaction passes in real time with easy-to-read color mapping on the in-cab display. It improves bulk earthworks operations by ensuring fill material is adequately balanced and uniformly compacted from the bottom up.

CCS900 for landfills

Landfill operations require contractors to compact the maximum amount of waste into the smallest area of vertical and horizontal cell space. Using CCS900, landfill owners can ensure that cell space is optimized, voids are eliminated and layers are compacted to their target density more efficiently. With real-time mapping on the in-cab display, the operator can avoid unnecessary passes that waste fuel and cause additional wear on the machine. The system also collects as-built layer information for in-field reporting and tracking of daily volumes. ■

TEMPORARY INSTALLATIONS

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22 persons/
2000 kg

MULTILIFT P22

With a load capacity of 2000 kg respectively 22 persons and a lifting height of 200 metres the GEDA Multilift P22 sets new standards.

"The new one" supplements the well-proven Multilift range perfectly by using just one single mast. An ingenious flat cable system enables easy transportation up to dizzy heights. Like the other members of the Multilift range the GEDA Multilift P22 is characterized by its compact, pre-installed unit as well as a quick and easy installation.



info@geda.de
www.geda.de

Bobcat Launches New S450 Skid-Steer Loader

Bobcat has launched the new generation S450 skid-steer loader, building on the success of the S130 model it replaces, by combining the advantages offered by a truly compact loader with many of the new features and improvements found on the larger Bobcat new generation models. As well as its compactness, the S450 skid-steer loader can be supplied with a comprehensive choice of 48 different product families of approved attachments (with more to come), offering solutions for a very wide range of applications and providing a perfect illustration of the Bobcat Tool Carrier concept common to all Bobcat compact loaders. Like the larger models, the S450 skid-steer loader offers significantly improved comfort and visibility to allow for greater control and accuracy in tight working spaces. In addition, for the first time in a skid-steer loader model in this size class, the S450 loader is supplied with a fully pressurized cab with air-conditioning as an option. Other key features include increased hydraulic performance and efficiency; a new tailgate design; integrated rear bumper and enhanced serviceability. Bobcat's best-in-class cab pressurization system is based on a one-piece seal that goes all the way around



S450 Skid-Steer Loader

the door, increasing pressurization to minimize the dirt and dust that might enter the cab. ■

New EDGE® Heavy-Duty High Reach Clipper

CEAttachments, Inc., a global supplier of attachments and accessories for compact equipment, has added a new EDGE Heavy-Duty High Reach Clipper to the lineup of tree shear



EDGE Heavy-Duty High Reach Clipper with Wireless Remote Control

attachments for skid steers and track loaders. This new This EDGE Heavy-Duty High-Reach Clipper is a more rugged-built clipper than the Standard-Duty model also offered. Designed for commercial and rental use with its wireless remote, this High-Reach Clipper is made of 5/8-inch high strength steel for maximum durability in the toughest conditions. The powerful rotator is hard-wearing and built stronger with several extra gussets, and features 110 degree rotation for greater maneuverability and clipping at various angles. The mount is also more robust featuring two extra stabilizer bars for a total of five, rendering more stability and control during operation.

A wireless remote control allows the operator to activate the solenoid valve for rotation, without the complication of wires getting tangled in the brush. It features a Velcro strap for securing in a convenient location. The receiver, along with a sealed 12-volt battery and charger, are secured to the unit inside of a protective steel storage box. This handy feature now allows for quick and easy transfer of the EDGE Heavy-Duty High Reach Clipper from one piece of equipment to another, without the hassle of a wiring harness. ■

Turning the Tide on Sea Water Corrosion

In concrete construction it's crucial to get things right from the bottom up, never more so than when protecting buildings from the corrosive effects of sea water. Although a durable and robust building material, concrete can still be severely compromised when attacked by sulphates and chlorides. And with an estimated 75 percent of building failures worldwide attributed to water ingress, **Grace Construction Products** believes the solution is simple – eliminate water to eliminate the problem. With sea water making up 70 percent of the earth's surface, structures will always need to be built near to the coast or more recently in direct contact with sea water. As a result, proven high performance waterproofing membranes have fast become a vital specification choice at major construction projects worldwide.

Causes of deterioration

Concrete which is directly or indirectly exposed to sea water will deteriorate due to combined contamination from groundwater and aggressive climatic conditions, as well as sulphate attack and chloride induced corrosion. A complex cocktail of chemicals and sea water increases concrete's permeability to make it more susceptible to further attack whilst also reducing its protection from the additional sources of deterioration.

Following an initial stage of deterioration, the compromised concrete will then provide further paths of contamination – in the form of cracks and fractures. No matter how small these penetrations, contaminant ingress will be further accelerated to jeopardize the concrete's integrity and dramatically reduce its service life. Rebar corrosion is also an extremely common form of deterioration in reinforced concrete structures, with chloride ingress the most frequent cause. As chloride builds up on the concrete surface, through airborne salts or below-ground chlorides and sulphates, it penetrates by diffusion. In hotter countries, this process is even quicker as every +10°C doubles the rate of diffusion.

Although the key requirement in basement waterproofing is simply to keep water out, this can cause subsequent problems if sea water is a factor. With a dry internal environment and an external environment that remains wet, capillary action increases the risk of sulphate attack. Due to groundwater sulphates refreshing the reactionary process, concrete composition and microstructure changes cause extensive cracking, expansion and loss of bond between the cement paste and aggregate, leading to an overall loss of concrete strength.

Although continuous developments and innovations in concrete production have created an improved resistance to sea water, without a membrane solution the concrete will never be immune from its harmful effects. Concrete can only be fully protected if water infiltration is prevented entirely – with the waterproofing membrane providing a physical barrier to sea water corrosion before it can begin.

Prevention and cure

A high performance HDPE waterproofing membrane



“...
waterproofing
membranes
have fast
become a vital
specification
choice at major
construction
projects”

will improve concrete's long term structural performance and durability by providing constant protection from sulphate, chloride and water ingress. The ideal waterproofing solution stops water penetration and guards against any future failure. Get the specification right first time and water ingress can be prevented with one relatively simple application.

For over half a century, Grace Construction Products has provided solutions to many of the most challenging waterproofing projects. From retail plazas and shopping malls to high rise offices and luxury hotels, construction projects from all over the world have turned to Grace's advanced technologies to enhance structural performance and ensure longevity.

Designed with synthetic adhesive layers combined with a robust HDPE film, Grace's Preprufe® waterproofing system provides a permanent physical barrier to protect the concrete from the salt and sulphates found in the sea, ground and coastal environment. Unlike other waterproofing solutions, Preprufe® ensures the structure remains unaffected by salt and sulphate attack even if concentration levels change.

Preprufe® also eliminates the issue of water migration – water tracking between the membrane and structure



– a problem well recognized by industry experts. Once a conventional membrane is breached the whole structure is vulnerable, so when a leak becomes visible it is often a considerable distance from the actual source. This makes leak remediation haphazard and expensive, and the concrete will have been exposed to salt water for some time before the leak is seen and repaired and lasting damage may already have been done. A simple Preprufe® application would have prevented and cured the problem in one.

Conventional membranes are often sealed to the wrong surface such as mud slabs or blinding, leading to water migration as a result of membrane discontinuity. Grace's patented Advanced Bond Technology™ enables concrete to aggressively adhere to Preprufe®, forming a unique, continuous and intimate seal which prevents any water migration and substantially reduces the risk of leaks.

Exhibitions in waterproofing

In the Arabian Gulf, the climate and corrosive salt environment presented a series of project challenges during construction of the Museum of Islamic Art. Constructed on reclaimed land just 60 meters from Qatar's Doha Corniche and with foundations resting below the water table, highly aggressive chloride and sulphate conditions

would have quickly deteriorated the concrete and significantly reduced its life cycle.

Grace's Preprufe® 300R waterproofing membrane was applied below the slab to prevent water migration around the substructure. In addition, Grace's Bituthene® 8000 HC waterproofing membrane was chosen to protect the substructure walls from the harsh ground environment, whilst Bituthene® Liquid Membrane and Servipak® protection boards completed the waterproofing package.

As concrete corrosion and diffusion rates increase at higher temperatures, the Preprufe® waterproofing membrane has played a crucial role protecting structures in some of the world's most aggressive climates. At Africa's largest shopping Centre – the AED 920 million Morocco Mall on Casablanca's world-famous waterfront – the membrane demonstrated its abilities to provide water tightness whilst showing no effects from ground contaminants.

Occupying a 10 hectare site just 20 meters from the Atlantic Ocean, the Morocco Mall required a comprehensive waterproofing system which would protect the concrete slab from water penetration, provide protection from salt and sulphates in the ground and preserve the lifespan of the structure. Once again, Preprufe® offered the safest and most reliable waterproofing option available.

Applied to buildings worldwide exposed to a variety of different climates and weather conditions – from I. M. Pei's Museum of Islamic Art to California's Sonoma State University – Preprufe® has proven to protect and preserve the structural, waterproofing and aesthetic qualities of concrete against the effects of constant, intermittent and indirect contact with sea water. ■

“... the Morocco Mall required a comprehensive waterproofing system which would protect the concrete slab from water penetration”

Source:
Christine Welby
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تعتبر حماية المباني من آثار التآكل الناتجة عن مياه البحر من الأمور الضرورية والأساسية لإتمام بناء ما على أكمل وجه ومن كافة الجهات والنواحي. وبالرغم من أن الخرسانة مادة بناء متينة وصلبة إلا أنها عرضة لخطر كبير خاصة عندما تحتك بالكبريت والكلوريد. وإذ يعزى ما يُقدَّر بنحو ٧٥ في المئة من تدهور المباني في جميع أنحاء العالم إلى دخول المياه، تعتقد شركة (Grace Construction Products) بأن الحل بسيط وهو يكمن في إزالة المياه من أجل القضاء على المشكلة. وإذ تشكل مياه البحر ٧٠ في المئة من مساحة الأرض، ستحتاج الأساسات لأن تُبنى دائماً بالقرب من الساحل أو كما في الآونة الأخيرة أن تكون على اتصال مباشر مع مياه البحر. وبالرغم من أن إنتاج الخرسانة قد مر بتطورات وابتكارات مستمرة أدت إلى مقاومة محسنة لمياه البحر إلا أن الخرسانة لن تكون بمنأى عن آثار مياه البحر المؤذية من دون اعتماد حل الأغشية. تكون الخرسانة محمية بشكل تام فقط في حال منع تسرب المياه تماماً وذلك عبر اعتماد غشاء مصمّم للمياه يؤمن حاجزاً ملموساً لمياه البحر المسببة للتآكل قبل حدوثه. ونتيجة لذلك، أصبحت وبسرعة كبيرة الأغشية المصمّدة للمياه العالية الجودة من المواصفات الأساسية المختارة في مشاريع الإنشاء الرئيسية في جميع أنحاء العالم.

Excellent Protection with Air-Shield Air/Vapor Barriers

W. R. MEADOWS' AIR-SHIELD air/vapor and liquid moisture barrier is part of a total W. R. MEADOWS system to complete the building envelope. This unique, self-adhesive membrane is protected by a special release paper that makes it strong and durable. It remains flexible when surface mounted and will adhere to most primed surfaces at minimum temperatures of 40° F (4° C) and provides excellent protection that won't shrink, sag, dry out, crack, or rot.



Air-Shield Air/Vapor Barriers

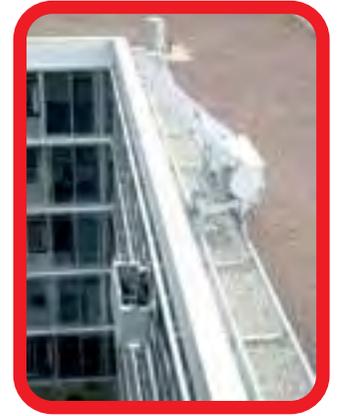
AIR-SHIELD offers incomparable resistance to punctures during installation, and its self-healing characteristics facilitate recovery if minimal damage is sustained under normal use applications. It is a roll-type product that is nominally 40 mils thick and the membrane's controlled thickness is fabricated from cross-laminated polyethylene bonded to specially modified asphalt which provides a complete above-grade air, vapor, and water barrier on a variety of construction materials. Its low permeability prevents the transmission of air and inhibits moisture vapor through porous building materials. "We provide the industry with three different types of AIR-SHIELD for use at various application temperatures, allowing applications with temperatures down to 0° F," said W. R. MEADOWS Building Science Specialist, Russ Snow. "AIR-SHIELD's excellent adhesion to prepared substrates of precast concrete, cast-in-place concrete, masonry (concrete block), interior and exterior gypsum board, Styrofoam, primed steel, aluminum mill finish, anodized aluminum, primed galvanized metal, drywall, and plywood makes it the ultimate choice in air/vapor and liquid moisture protection." ■



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RENOLIT's Innovative Roofing Membranes

The **RENOLIT Group** is an international manufacturer of high-quality plastic films and related products for technical applications. This independent family-owned business, which has been setting benchmarks for quality and innovation for over 65 years, now employs a workforce of approximately 4,500 employees at 21 production sites and 17 sales entities. The RENOLIT brand enjoys a worldwide reputation for technical expertise, modern product design and customer-orientated service.

RENOLIT's Waterproofing Business Unit is active in 4 complementary activities: Roofing, including solutions for Solar Systems, Swimming Pool and Civil Engineering Corrugated and flat building sheets. Over 40 years' experience on site; several thousands of prestigious references which can be seen all over the world; tens of millions of square meters of membrane forming an impermeable barrier to water in most climates; expertise in both new construction and renovation.

RENOLIT wide range of synthetic roofing membranes and innovative roof systems are used worldwide in new construction and renovation projects of roofs. (ex the automotive sector, aviation industry, transport sector airports, publics and distributions sector).



Foundations with RENOLIT ALKORPLAN PVC membrane in Kuwait – College of Engineering

RENOLIT is a specialist in the development and production of waterproofing solutions for swimming pools. The RENOLIT ALKORPLAN brand has become globally renowned thanks to the high quality and ingenuity of our pool membranes, and The company's reinforced membranes have been installed in everything from simple backyard pools to the most emblematic installations such as competition pools at Olympic games. At least, RENOLIT ALKORGEO market offers solutions in Water Management systems, which allow the Collection, Storage, Treatment, Transport of water for different purposes. ■

AFITEX: Down to Earth Intelligence

AFITEX MIDDLE EAST, a company specializing in ground drainage, earth-retaining and lining systems, designs and markets innovative solutions for



Sidi Rached Landfill in Tipaza - Algeria

construction, urban transports, road infrastructures, hydraulic works, and waste storage facilities applications. The company carries out the design, manufacture and marketing of synthetic materials mainly intended for the environment, construction and infrastructure markets – transforming textile raw materials into geocomposite drainage products. These products DRAINTUBE(TM) are adapted in view of a variety of applications for the following sectors:

- Construction: for the protection, drainage and sealing of foundations. Practical and economical processes, confirmed by technical assessments from the **CSTB (French Scientific and Technical Construction Agency)**
- Environment: waste storage facilities, and drainage and sealing of hydraulic applications
- Public Works: road infrastructure decontamination, lifespan improvement, groundwater protection, etc. (from foundations to surface environment), with a backup of technical certifications, calculation software and technical assessments under European & International organization

AFITEX thus asserts its presence in France and worldwide through a network of distributors specializing in geosynthetics, as well as subsidiaries in Europe, Middle East, North Africa, Latin America and Canada. ■

Feature

Material Handling & Processing

Highest Priority on Safety.....	P.16
Versatile Air Hoists for Safe & Efficient Lifting.....	P.17
SENNEBOGEN 673 Telescopic Crawler Crane: Extremely Flexible.....	P.18
BEUMER Demonstrated CrisBag at Dubai Airport Show.....	P.18



Photo Courtesy of SENNEBOGEN Maschinenfabrik GmbH

Highest Priority on Safety

Together with **Terex Material Handling** and with input provided by the industrial employers' mutual insurance association, the hot-galvanizing company **Helling & Neuhaus** has developed a solution that allows workers to remain beneath suspended loads. The lifting and drop sections on two conveyor lines are each equipped with two Demag double chain hoists that are connected to each other by means of a tandem control system. According to the manufacturer, this concept, which satisfies the requirements of BGV D8 Plus hoists in full, is a pioneering solution that is suitable for other sectors of industry and provides for maximum safety.

In many production facilities it is necessary for people to spend time beneath suspended loads which are held by chain hoists. Applications such as these are subject to special safety requirements, which are laid down in the BGV D8 safety regulations. The applications for which these design and safety requirements have to be met also include production facilities for the treatment of metal surfaces, such as galvanizing plants. Even though the production process is performed automatically in most cases, the material to be coated is often attached to the spreaders and removed at the end of the circuit by hand.

Safe & reliable solution for D8 Plus hoists

Helling & Neuhaus GmbH, based in Gütersloh, Germany, and part of the **Seppeler Group**, operates two parallel production circuits. The lifting motions at each of the pick-up and deposit stations were previously provided by chain hoists fitted with a catch. This solution operated to the customer's complete satisfaction, however, the safety features needed to be further optimized. *Michael Rother*, Engineering Director, states: "Together with Terex Material Handling and the industrial employers' mutual insurance association, we first carried out a risk assessment and analysis. On the basis of the results, a concept was developed to satisfy the requirements of the BGV 8+ regulations and allow people to work beneath the trolleys."

The solution employed by the galvanizing specialists utilizes Demag LDC-D size 10 double chain hoists, which are paired to each other by a tandem control system. Developed for transporting long materials



Working safely beneath suspended loads

"... Helling & Neuhaus has developed a solution that allows workers to remain beneath suspended loads"

and for spreader operation, the LDC-D has two mechanically synchronized chain lead-offs which are rigidly connected to each other by a common frame. The LDC-D unit drives a separate lifting block that has its own chain drive via a connecting shaft.

High safety & reliability for lifting & lowering

The four attachment and removal stations employed at Helling & Neuhaus consist of six meter-long I-beam sections, which are integrated into the conveyor track. They are held by two stationary LDC-D double chain hoists that have a hook center distance of 800 mm. When a spreader trolley reaches one of the stations, the spreader is first locked in position and then the rail section is lowered to allow the parts to be attached for the galvanizing process.

Two chain lead-offs also double the level of safety. Synchronized operation of the hoists is also monitored by the tandem control system. This arrangement ensures that the four hooks are always level with each other during lifting and lowering motions. Even if one of the chains were to break, the load bar would remain in a stable position. The lifting and lowering stations operate with several secondary safety features – also thanks to a double brake system – to ensure the highest possible safety and reliability for the workers.

Intelligent control system integration

The tandem controls of each spreader trolley are integrated into the control concept of the material flow system. The hook position of the chain hoists is reported to the control system by additional limit switches. This system has enabled Helling & Neuhaus to achieve a safe and efficient method to implement a D8 Plus hoist unit that meets the provisions of the BGV D8 regulations and permits staff to work beneath the drop sections of the monorail circuits. The technical solution is based on the use of Demag standard components from the modular construction kit which also meet the design specifications of galvanizing applications with additional corrosion protection measures.

Implemented in a minimum of time

After the project engineering work had been completed for the technical solution, the next challenge was posed by technical implementation. To ensure maximum reliability within the operating process, a test



Concept for improved safety

system was first set up under actual ambient conditions. Following completion of the test phase, Demag Service then successively converted the lifting and drop sections on non-working weekends.

For Terex Material Handling, this solution featuring Demag double chain hoists connected by a tandem control system serves as a prototype. The conveying and lifting equipment that satisfies the BGV D8 Plus requirements is not only of interest for companies in the surface finishing sector, but is also ideally suited for applications in other industries. ■

Source:

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تتطلب الكثير من مرافق الإنتاج أن يقضي الناس وقتاً تحت أحمال متدلية معلقة بسلسلة رافعات. ومن أجل ذلك قامت شركة (Helling & Neuhaus) بالتعاون مع شركة (Terex Material Handling) وبمعلومات مقدّمة من جمعية التأمين المتبادل لأرباب العمل الصناعيين، بتطوير حلّ يسمح للعمال بأن يبقوا بأمان تحت الأحمال المعلقة. تمّ تجهيز كل قسم من الرفع والإنزال الموجود على خطين للنقل بالتالي رفع (Demag) ذات سلسلتين متصلة ببعضها البعض بواسطة نظام تحكّم ترادفي. ووفقاً للمصنّع فإن هذا المفهوم الذي يلبي شروط رافعات (Plus BGV D8) بالكامل هو حلّ رائد ملائم للقطاعات الصناعية الأخرى ويوفّر أقصى درجات السلامة. تشرح شركة (Terex) في المقال التالي هذا المفهوم المبتكر وإيجابياته ومنافعه وكيفية تركيبه.

Versatile Air Hoists for Safe & Efficient Lifting

The range of modern air operated hoists manufactured by **J D Neuhaus** offer safe and efficient lifting and handling facilities for a wide range of general engineering and industrial applications. Their Profi TI hoist range has been upgraded to combine quieter operation, with faster lifting/lowering speeds while being more energy efficient as well as incorporating some lighter and more compact build qualities.

These robust low-headroom products have a proven pedigree for 100 percent duty rating and unlimited duty cycles for successful operation within a wide range of industrial and engineering environments, including applications in some of the harshest and most dangerous working conditions throughout the world. The Profi TI range operates from either a 4 or 6 bar air supply and the hoists in the 3 to 50 ton lift capacity range are ideal for medium to heavy lifting requirements. For extreme heavy lifting, hoists are also available with lift capacities up to 100 tons. The highly versatile Profi hoists can also be used in tandem or parallel configurations to provide safe lifting for larger or extra heavy loads.

The Profi hoists are all provided with single point top suspension, and can be fitted with trolleys for overhead monorail mountings to facilitate horizontal travel requirements. Trolleys with manual, reel chain or mo-



Typical J D Neuhaus Profi TI 16 air operated hoist with a lift capacity of 16 tons

torized operation can be supplied, combined with a standard hoist lifts of 3 meters, with other special lift requirements also accommodated. ■

SENNEBOGEN 673 Telescopic Crawler Crane: Extremely Flexible

The Swiss company, **METHABAU**, uses a new **SENNEBOGEN 673 R** for lifting and loading activities on the construction site in Bassersdorf near Zurich. Thanks to the crawler undercarriage, the telescopic crane is flexibly on the go on the construction site and can even move under load.

METHABAU, headquartered in Amriswil/Hefenhofen (methabau.ch) is currently executing an innovative project for Eurobus welti furrer AG at the Bassersdorf/ZH location. Here, on a total area of 14,000 m², a two-storey depot for approximately 140 tour buses, as well as public transportation buses, will be built by the end of 2014. On the roof there will be a parking deck for 170 automobiles. METHABAU was commissioned with the order for concept, planning, and building execution of this complex construction project. The Swiss Sales and Service Partner, **Kuhn Baumaschinen**, was able to deliver a new SENNEBOGEN 673 telescopic crawler crane in November 2013 for all lifting and logistics tasks on the site, and for flexible simultaneous coverage of parallel construction sites.



METHABAU successfully uses a new SENNEBOGEN 673 R to build a bus depot near Zurich

The powerful, 160 kW telescopic crane is impressive through the highest level of flexibility with a robust crawler chassis that enables efficient movement under load and excellent maneuverability on site. The variable, telescopic, 4-section telescopic boom offers a convenient reach of 36 meters and maximum safe working loads of up to 70 tons. At METHABAU, the 673 R is used as a classic construction site crane. ■

BEUMER Demonstrated CrisBag at Dubai Airport Show

BEUMER Group Middle East demonstrated the CrisBag® end-to-end in-tote baggage handling and screening system at the Dubai Airport Show 2014. The on-stand demonstration featured a section of the CrisBag® system, which was developed by **BEUMER Group company, Crisplant**. The system uses the 'one bag per



Photo taken at Dubai Airport Show

tote' concept to enable each item of baggage to remain in the same tote from check-in, through the sorting and screening processes. CrisBag's modularity and easy integration into new and legacy systems is combined with adaptive static and dynamic tote-tilting at baggage discharge to provide high levels of operational and energy efficiency. The CrisBag® system, which has already been installed in international airports such as Munich, Helsinki, Singapore and Calgary, was recently chosen for Abu Dhabi International Airport's new Midfield Terminal project. The system is controlled by management software that communicates wirelessly, in real-time, with each ULD carrier, constantly monitoring its destination, position and progress to provide 100 percent traceability.

The innovations showcased by BEUMER Group make it possible for airports to plan the loading process efficiently using a batch building and speed loading system. This allows baggage handlers to open up a position, load bags, close it again and continue with other tasks. Batch building switches baggage handling from a push to a pull system, a concept that is receiving much attention in the baggage handling industry. ■

Industry Spotlights

Automation & Instrumentation

Regional Dynamics to Shape ME Market for Automation & Instrumentation.....	P.20
Building Control via Smartphone.....	P.22
Herrenknecht's Innovative Hydraulic Rig in China.....	P.22

Facades & Claddings

Energy-Efficient Architecture with Glass.....	P.23
Going Up the Easy Way: Mission Building Maintenance.....	P.27
Fire-Resistant FRP Cladding Frees Designers.....	P.27
Architecture with Rhythm.....	P.28
A Pavilion in the Park.....	P.28

Marble & Granite

Three in a Row for Italian Marble:	
Sector Exports Up for 3 rd Year Running.....	P.29
New Holland B100C Backhoe Loader for Cutting Marble.....	P.31
1 st Whirlpool Bathtub in Marble or Natural Stone.....	P.31

Regional Dynamics to Shape ME Market for Automation & Instrumentation

The hydrocarbon industry in the Middle East (ME) plays an integral role in the evolution of the region. Besides contributing a significant share to the global oil and natural gas demand, the ME has natural feedstock advantage for the petrochemicals, chemicals, and fertilizers (PCF) industry. Automation solutions are key part of these process industries, and are vital to maximize production and reduce downtime. The ME has taken great strides towards adopting global best practices, thereby facilitating greater penetration of automation and instrumentation product / solution offerings in the region.

In line with the needs of the growing populace in the ME, the local governments' emphasis on industrialization has increased along with a prospering non-oil and gas industry. The demand for power and water to cater to the burgeoning population and the rapidly growing industrialization has fuelled investments in the power generation, water desalination, and wastewater treatment industries. Automation and instrumentation products, which are an integral part of these industries, witnessed greater demand.

Traditional solutions have been agreed to be insufficient to address today's complex industrial processes and, hence, the need for innovative automation and instrumentation offerings has increased. However, in the wake of recent economic difficulties, a largely contrary mandate of cutting costs has gained prominence. Immediate tangible cost considerations weigh heavier upon decisions than the intangibles of proposed performance enhancement. This often makes the act of convincing end users of an innovation a formidable task for equipment suppliers / solution providers.

"... the need for innovative automation and instrumentation offerings has increased"

Market dynamics

The ME market for automation and instrumentation product / solutions differs from many other developed markets as the extent of local value addition is fairly limited; imports are the primary source of equipment supply. Furthermore, the presence of value-chain par-

ticipants (engineering, procurement, and construction (EPC) contractors, system integrators, and others) is limited, resulting in reduced locally addressable opportunities and hence, orders are placed outside the ME. However, given the current trend about local governments being resolute about localization and encouraging participants (in the projects supply / contracting value chain) to increase their local value addition, the share of local opportunity as a percentage of the total destination potential is expected to increase, albeit gradually.

Competitive landscape

In line with global competitive landscape of the automation and instrumentation market, multi-national corporations like **Honeywell, Yokogawa Electric Corporation, Emerson, Invensys, Siemens, and ABB** dominate the ME; this can be attributed to their extensive solution portfolios. Their presence in the ME spans pre-sales and sales support, marketing, limited assembly operations, and comprehensive after-sales support.

Automation companies with large product portfolios spanning control systems and field instruments benefit from packaged automation orders. They also benefit from replacement demand stemming from their large installed bases. In fact, as a means of market share expansion or even market penetration, addressing replacement demand is a key strategy, despite the tendency to favor the existing supplier. This industry norm is not universally applicable in the instrumentation markets, as product specialist companies are able to compete quite well in certain product markets like level transmitters and flow meters.

Conclusion

While the market for automation and instrumentation in the ME is likely to witness moderate growth, increased revenues are anticipated from non-oil and gas industries. Market consolidation can be expected as companies will invest in expanding their offerings (advanced technology and newer product / solutions) in order to have a competitive edge. Regional dynamics will play an important role as the ME countries continue to impose various conditions on vendors operating here.

Exhibit 1: End-user Industries for Automation & Instrumentation Products in ME

Automation	Major End Users
Distributed Control System (DCS)	Oil and Gas and PCF
Supervisory Control and Data Acquisition (SCADA) / Human Machine Interface (HMI)	Power, Oil and Gas, Water and Wastewater
Programmable Logic Controller (PLC)	Oil and Gas, Power, Cement, Metals, Food and Beverages (F&B)
Process Safety Systems	Oil and Gas, PCF, Power
Advanced Process Controls (APC)	Oil and Gas
Instrumentation	Major End Users
Gas Monitors	Oil and Gas, PCF
Analyzers	Oil and Gas, PCF
Process Transmitters	Oil and Gas, PCF, Power, Water and Wastewater
Gauges	Oil and Gas, PCF, Power

Source: Frost & Sullivan Analysis

Exhibit 2: Growth Enablers & Growth Impediments for ME Automation & Instrumentation Industry (2013-2018)

Growth Enablers	Growth Impediments
<ul style="list-style-type: none"> • Rapid and diversified industrialization • Significant after-sales demand • Increasing emphasis on process and people safety • Increasing geographically dispersed assets • Increased local presence of EPC contractors and OEMs 	<ul style="list-style-type: none"> • Overcapacity of oil production and limited success in exploration of commercially viable non-associated gas reserves • Reluctance to migrate to better systems, attributed to concerns about downtime • Cost-reduction efforts by end users, acceptance of low-cost products / solutions • Success of South Korean EPC contractors, reducing the locally addressable market

Source: Frost & Sullivan Analysis

Changing manufacturing dynamics and business imperatives will play their part in influencing end users

to adopt better solutions to improve process productivity / efficiency. In addition, growing awareness about the cost-benefit, that is, the total cost of ownership (TCO) over capital cost of procurement, will facilitate increased interest in implementing advanced automation solutions. ■

Source:

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يلعب قطاع الهيدروكربون في الشرق الأوسط دوراً أساسياً في نمو المنطقة وتطورها. تملك منطقة الشرق الأوسط إلى جانب المساهمة بحصة كبيرة من الطلب العالمي على النفط والغاز الطبيعي ميزة توفر المواد الأولية الطبيعية لصناعة البتروكيماويات والكيماويات والأسمدة. تُعتبر حلول الأتمتة جزءاً رئيسياً من هذه الصناعات العملية وهي ضرورية من أجل زيادة الإنتاج إلى أقصى حدٍ وتقليص الوقت الضائع. لقد خطت منطقة الشرق الأوسط خطوات كبيرة نحو اعتماد أفضل الممارسات العالمية مما يُسهّل دخول عروض الأتمتة والأجهزة المنتج/الحل إلى المنطقة من بابها الواسع. وتماشياً مع الطبيعة التنافسية العالمية لسوق الأتمتة والأجهزة، تسيطر على سوق الشرق الأوسط شركات متعددة الجنسيات مثل (هانيويل) و(شركة يوكوجاوا إلكترونيك) و(إيمرسون) و(سيمنز) و(إي بي بي). أما السبب في هذه الهيمنة فيمكن أن يُعزى إلى محافظ الحلول الواسعة لدى هذه الشركات. وتجدر الإشارة إلى أن منتجات الأتمتة والأجهزة قد شهدت في المنطقة زيادة هائلة في الطلب مع توقعات بأن تشهد سوقها في الفترة المقبلة نمواً معتدلاً وزيادة في الإيرادات المتوقعة من الصناعات غير النفطية وصناعة الغاز.

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Building Control via Smartphone

The current trends in building technology make life safer, simpler and more convenient. High-level building automation systems are often cost-intensive, feature-rich complete solutions that are not always easily comprehensible and can only be installed by highly specialized companies. With AFRISOLab, **AFRISO** now offers an intelligent, simple solution for the tank, heating system and water technology product range. AFRISOLab is an excellent vantage point into the world of building automation and security and safety technology: It allows for an easy start and can be modularly extended depending on individual requirements. AFRISO uses the wireless transmission technology of the EnOcean Alliance. This wireless technology excels with an impressive signal range and very low energy consumption. It uses so-called energy harvesting technology which taps energy sources from the environment, such as movements, light or temperature differences so that the sensors do not need a power supply. This technology offers an ideal foundation for high quality, functionality and flexibility on the way towards smarthome solutions. The ultimate EnOcean system networks all alarm systems, heating systems, air conditioning systems, lighting



AFRISOLab Assist

systems, shutters, doors, windows and garage doors with the central AFRISOLab Assist building controller - and it is completely wireless. The building controller acquires stores and processes all sensor data and consumption data. AFRISOLab Assist then transmits the required messages, measured values, events, etc. to smartphones or tablet PCs via Internet or GSM and allows the user to respond appropriately. ■

Herrenknecht's Innovative Hydraulic Rig in China

Whereas in Germany the reservations about unconventional gas production dominate, China is getting on with the development of shale gas using deep



The hydraulic pipe handler is used for hoisting the drill string & casing from the horizontal to the vertical drill axis

drilling rigs made in Germany. China's biggest oil and gas producer and supplier, the **China National Petroleum Corporation CNPC**, ordered a Terra Invader 350 deep drilling rig from **Herrenknecht Vertical GmbH**. Packed in 51 transport units, the 1,000 ton "Innovative Hydraulic Rig" is currently on its way from Schwau to the country with the world's largest shale gas resources. The rig's high level of automation allows precise and safe drilling to a depth of 6,000 meters with maximized working safety and small crews. The exploration and production of natural gas trapped in shale is considered very challenging technically. A number of wells at depths of several thousand meters are required in each case. If these are bundled into so-called "multi-well pads" it reduces the total number of locations and hence the ecological footprint. To this end the Herrenknecht "Innovative Hydraulic Rig" with the serial number B-012 can be raised with four hydraulic cylinders and then skidded. This means multiple wells can be drilled from a single location (pad drilling) without having to rig down and rig up the rig. As a result the new, so-called "XY Stepping System" allows the acceleration of the drilling and completion operations, considerably reducing the environmental impact. ■

Energy-Efficient Architecture with Glass

Gleaning glass facades have become a key element of today's cityscapes in most of the world. With their smooth surfaces and coordinated designs, these glass claddings are a symbol of modernity and architectural elegance. Glass creates transparency and allows daylight to reach far into the inner spaces, thus forming a basis for a pleasant living and working atmosphere – in residential spaces as well as in commercial buildings. For years we have been able to observe a trend to larger windows and glass surfaces in this field. The performance parameters of the employed functional glass and the dimensions of the glazed portion of the façade are critical factors in the energetic efficiency of the buildings, whether commercial or residential. The careful fine-tuning of construction and functionality ensures a maximally positive effect.



One design highlight of the Capricorn House building is the i-module façade

Functional glass: the basis of modern architecture

The field of potential applications for high-performance glass products is huge. *François Dubuis*, Director of Corporate Development for the **Glas Trösch Group**, was quoted in a German trade magazine in autumn of 2013 as stating, "The ratio of windows to walls in European buildings is currently 40:60 for walls." The goal of the Swiss glass group is to reverse that ratio. In order to achieve that, according to Dubuis, glass must fulfill even more functions and become a multifunctional structural component in the standard version. Next to the currently major functions – thermal insulation, solar protection and noise insulation, performance characteristics such as light control and energy production via the glass surfaces in the building envelope will be increasingly important in the future. "Solar insulating glass" serves as a collective term for this concept. Already today, modern energy-saving glass has the ability to transform windows – traditionally a weak spot – into heat-producing surfaces. This was verified by a study using, among other products, the triple-insulating SGG

"Already today, modern energy-saving glass has the ability to transform windows [...] into heat-producing surfaces."

Climatop Lux glass ($U=0.7W/m^2K$, $g=0.62$) and SGG Climatop Max ($U=0.5W/m^2K$, $g=0.60$), conducted by the Austrian **ClimaPlusSecurit** partner, **Eckelt Glas**, in collaboration with **Saint Gobain Glass Germany** and *Dr. Peter Holzer* from the **Danube University Krems**. This already high level of performance can be further maximized by integrating additional functions.

Heightening of energetic demands

The future will see a continuous heightening of energetic standards on an international level, and with them, of the performance level of building envelopes. This is, of course, especially true for newly constructed buildings. With its 2010/31/EU policy, for example, the European Union formulated extremely ambitious goals regarding the overall energy efficiency of buildings already in 2010. The implementation of the policy in the national states is targeted to produce a 20 percent increase in the energy efficiency of buildings by the year 2020. For newly constructed buildings, the policy stipulates the demanding "almost zero-energy building"

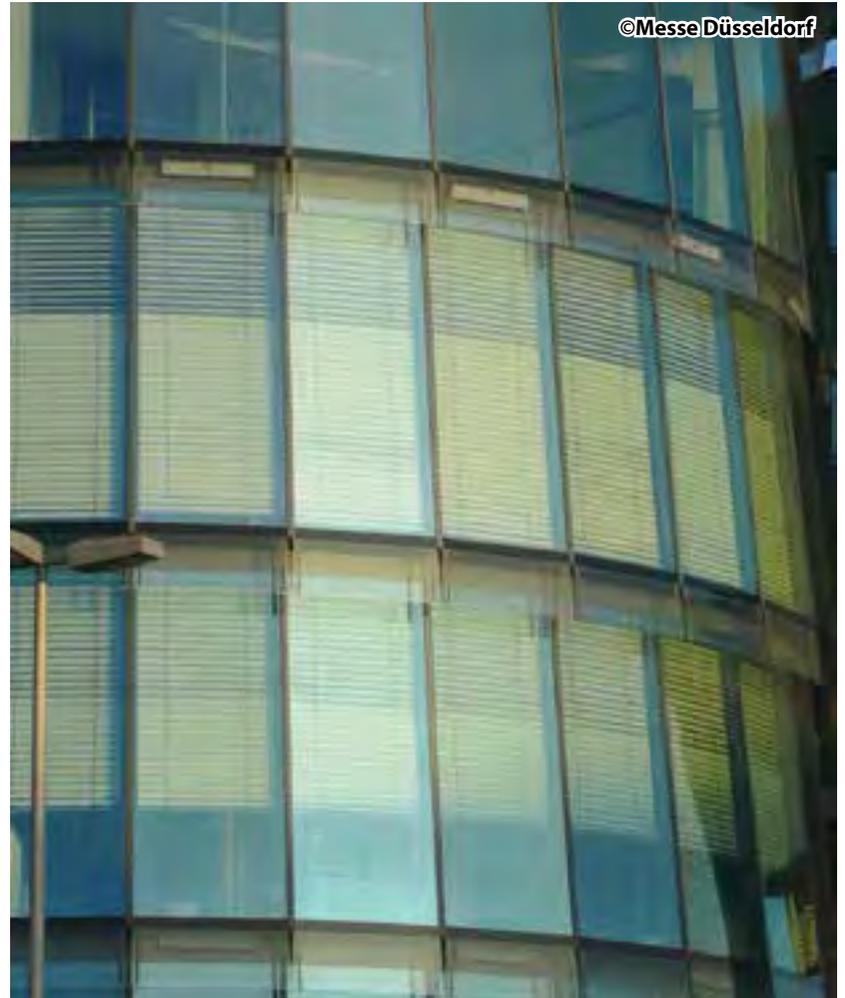
specifications for government buildings beginning in 2019, and in 2021 for all other buildings. Now it's up to the national states to implement these objectives. With the amended Energy Saving Act, enacted in October 2013 (EnEV 2014), the German government has already set an example. Beginning 1 January 2016, all newly constructed buildings are to use 25 percent less energy, while the standards for the thermal insulation of building envelopes will increase by an average of 20 percent.

No reduction of window area

EnEV 2014 specifies maximum values for transmission heat loss in building envelopes, including values via " H_{T} " (specific transmission heat loss based on the heat-transmitting enveloping surface). Although the values specified here were not modified, a heightening of the corresponding standards beginning in 2016 is created by the 25 percent reduction in annual primary energy consumption. What's new is that the building envelope of a planned building is not allowed to have a worse specific transmission heat loss value based on the heat-transmitting enveloping surface than the reference building. This relative relationship to the reference building will prevent the limitation of the window area that is dreaded by the glass and window industry. The background: When strictly observing the heat transmission coefficient responsible for heat loss, the solar gains made possible by glass surfaces are not taken into consideration, in spite of the fact that they lead to a significant reduction in annual energy consumption on all sides of the building with the exception of the north side. As explained by the German Institute for Window Technology (IFT) of Rosenheim in a trade article on the amendments in EnEV 2014, "In the case that a 25 percent reduction in annual energy consumption is not achieved through more extensive use of regenerative modules (e.g. PV modules), this will naturally lead to lower heat transmission coefficient values for all parts of the building envelope. Here we should not disregard the solar gains, and look for high total solar energy transmittance (g-value) and light transmittance (τ), which contribute significantly to a reduction in annual energy consumption. "Given the new maximum heat transmission coefficient for the heat-transmitting enveloping surface effective beginning in 2016, only energetically optimized facade systems will be acceptable for use in newly constructed buildings according to the IFT. It will still be possible, however, to employ double-glazing units when using profile systems with a Uf-value of 1.4 W/m²K.

Heat insulation in summer

EnEV 2014 also dictates higher standards for thermal insulation in summer for residential buildings. Corresponding calculations can only be avoided if the window surface area relative to the floor area is under 35 percent and a specified external sun shelter system,



Ideally the sunshade will be mounted on the façade or in the insulating glass

"... only energetically optimized facade systems will be acceptable for use in newly constructed buildings according to the IFT"

such as roller shutters, is installed. Evidence of such a system is not required if the window surface area is under 10 percent or 15 percent depending on the orientation of the windows. The highly effective solar protective coatings available today for insulating glass provide a significant contribution to the sustainment of a pleasant building climate in summer. The same applies to sunshade and anti-glare systems that are integrated in insulating glazing or mounted externally, as well as functional electrochromic, thermochromic or gasochromic glazing with adaptable transparency. Ideally, intelligent control systems will always provide the ideal incidence of light or solar protection.

Solar gains

Next to transparency and light incidence, the available solar gains are an elementary advantage of integrating glass in the building envelope. This energetic contribution is especially welcome in the winter months. In an interview published by the Institute for Window Technology on the topic of the Energy Saving Ordinance 2014, Professor *Ulrich Sieberath*, Director of the **IFT Rosenheim**, states, "The solar gains through windows



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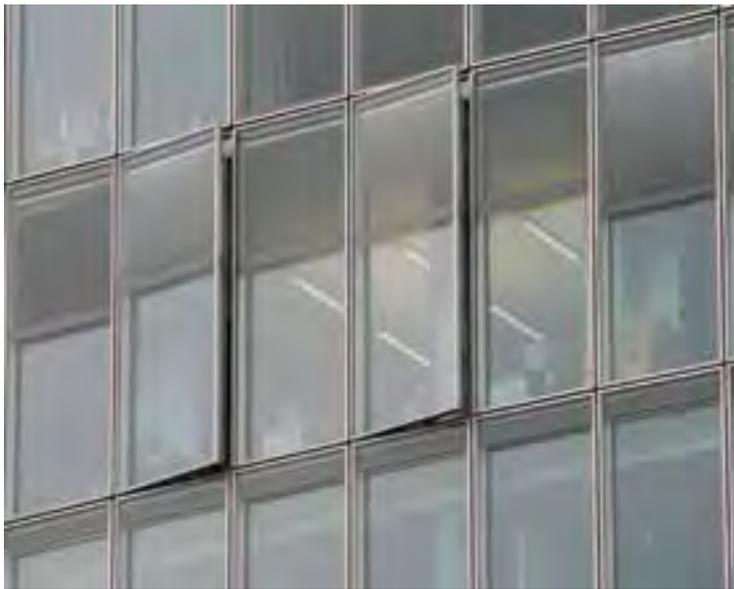
and glazing have been taken into consideration since the EnEV 2002, in the context of a building-related verification – insofar as such a verification is prepared by the architect or building energy consultant. This is required with newly constructed buildings, and optional with current properties. In this process, however, solar gains are not attributed to windows or glass as building components. Thus there are still contractors who are not aware of these advantages.”

Glass as an energy producer

The integration of solar glass (photovoltaic and solar thermal) is a proven method for complying with the heightened annual energy consumption standards. According to the manufacturers of relevant products, however, the lack of knowledge among architects and planners regarding the technical possibilities and performance of available systems remains a significant obstacle. The integral planning of the various work areas is an additional challenge – here there are still deficits to overcome. Moreover, contractors often shy away from

“Thanks to the sunlight, micro-algae grow in the specially developed glass hull”

the high costs, in spite of the fact that manufacturers tirelessly point out that the integration of photovoltaic elements eliminates the need for traditional façade components and the related costs. Another aspect that speaks for the integration of photovoltaic elements in the façade is sustainability (certifications i.e. according to LEED, BREEAM or the German BNB and BGNB methods). In this context, brand-new façade concepts are also interesting, such as the algae façade shown at the special show "glass technology live" at glasstec 2012. Thanks to the sunlight, micro-algae grow in the specially developed glass hull (photo-bioreactors). This process produces biomass and biogas as intermediates, which in turn are used to produce electricity. The current "FluidGlass" research project conducted by the **University of Liechtenstein**, in which a new concept for multifunctional solar-thermal glass façade systems is being developed, is also extremely innovative. Fluid-Glass transforms passive glass façades into active, transparent solar collectors, while simultaneously regulating the energy flow in the building envelope.



Effective solar and anti-glare protection is available via the integrated blinds, even when open

The future of construction with glass

The increased necessity to save even more energy in the building sector in the not-too-distant future will naturally cause an increase in the demands made on the performance of building envelopes. In turn, the suppliers of functional glass for windows and façades will see themselves forced to do their part by developing new, more efficient multifunctional glass products that contribute to an overall increase in efficiency. Integral planning plays an especially integral role in the establishment of multifunctional glass façades. It is the key to the optimal interplay between façade technology, automation, and ventilation and air-conditioning systems, and ensures maximum energy efficiency. ■

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تتمتع الواجهات الزجاجية الوظيفية العالية الأداء بتأثير ملحوظ على كفاءة استخدام الطاقة في المباني ومعدل استخدامها أو نوعية طبيعتها. ويتفق الخبراء على أن الطلب المتزايد سيؤدي إلى تحسين الأداء الوظيفي للمنتجات الزجاجية المستخدمة في واجهات المباني. وقد أصبحت واجهات المباني الزجاجية اللامعة عنصراً أساسياً في مناظر المدينة اليوم في معظم أنحاء العالم. تعتبر هذه الكسوات الزجاجية بسطحها الأملس وتصاميمها المنسقة رمزاً للحداثة والأناقة المعمارية. يعكس الزجاج الشفافية ويسمح لضوء النهار الولوج بشكل واسع في المساحات الداخلية مما يُشكّل أساساً لمناخ عيش وعمل ممتع في الأماكن السكنية والمباني التجارية على حدٍ سواء. لقد تمكنا على مدى سنوات من مراقبة التوجه نحو اعتماد النوافذ الكبيرة والواجهات الزجاجية في هذا المجال. إن معايير الأداء للزجاج الوظيفي المستخدم وأبعاد الجزء المزجج من الواجهة هي من العوامل الحساسة في الكفاءة الطاقية للمباني سواء كانت تجارية أو سكنية. يضمن الصقل الحريص للبناء والتشغيل أثراً إيجابياً ذات حدٍ أقصى. كما وستؤدي طبيعة الحال الضرورة المتزايدة لتوفير المزيد من الطاقة في قطاع المباني في المستقبل غير البعيد جداً إلى زيادة في المطالب التي تركز على أداء أغلفة المباني. ونتيجة لذلك فإن موردي الزجاج الوظيفي للنوافذ وواجهات المباني سيكونون مضطرين للقيام بدورهم الذي يكمن في إبتكار منتجات زجاجية متعددة الوظائف وأكثر فعالية التي بدورها ستؤدي إلى زيادة شاملة في الكفاءة.

Going Up the Easy Way: Mission Building Maintenance

Since its founding in 1963, **HOU MANI** has grown to become a successful multi-industrial company. The company evolved from being a simply supplier of construction equipment into a business partner, which strives to add value for customers at every step. HOU-MANI is the main dealer for a multi-class manufactures in the world. **LIEBHERR** for Mobile-Telescopic and Lattice-boom crane, Tower cranes and earthmoving equipment - **AMMANN** Road and Asphalt equipment - **JASO** Tower cranes - **GOIAN** construction elevators and **MUBA** Debris Chute, in addition to a wide range of designed in Germany construction accessories. HOU MANI presented lately HCE-SAMI, a high quality modular suspended platform from above, designed in Germany and made from durable materials. It is used to support people and their tools in the construction and maintenance of buildings' facade and other large structures, like installing glass for buildings, steel structures, paints, and concrete maintenance. Its purpose is to provide a safe place of work with safe access suitable for the work being done, work at the optimal



HCE-SAMI, a high quality modular suspended platform from above

height and in the right position, and avoid the use of the crane. HCE-SAMI could be temporary or permanent platform, as it is assembled manually with two men and one wrench. Its hoist has non end rope length, in addition to the non-marking air tires to protect all kinds of facade. ■

Fire-Resistant FRP Cladding Frees Designers

Kreysler & Associates has developed a new, ultra-lightweight fiber-reinforced polymer (FRP) cladding panel system that brings fire safety to the extraordinary design versatility of FRP. The system - dubbed Fireshield 285 - is believed to be the first fire-resistant FRP cladding panel to pass the stringent NFPA 285 test. It allows designers to create large and high-rise



First FRP system to pass NFPA 285 fire test

facades of almost any shape, contour and texture that meet fire safety requirements under the International Building Code (IBC). For the first time, architects will be free to utilize fully the protean design potential and extreme light weight of customized, digitally-fabricated composite cladding.

William Kreysler, president of Bay-area-based Kreysler and Associates, describes the patent-pending process as "a proprietary blend of synthetic resins and natural aggregate that provides an attractive but extremely durable, environmentally efficient and highly fire-resistant product." The NFPA test involves construction of a full-scale mockup of a multistory façade system, which is then burned and tested for fire propagation characteristics.

This breakthrough fire-resistance technology makes it feasible to utilize the versatile formability of FRP for exterior cladding to an extent that was not previously possible, allowing designers to give their buildings shapes and textures that would be either too expensive or too heavy to execute with conventional construction materials. Using digital fabrication techniques, shapes that have never existed outside a computer model are possible, both unique and repetitive designs, and panels can be merged to create large, seamless facades. ■

Architecture with Rhythm

The "Titán Plaza", a shopping center in Columbia designed by the architects **Tamayo Montilla Arquitectos** has a facade which affords views toward the inside and outside at the same time. Despite its simple appearance, the project required complex analysis and execution design. The membrane fabricator therefore



One of the varied roof shapes: a crescent-shaped roof

called in the specialists of **formTL**. The team of experts from **Radolfzell** prides itself in rendering architectural visions possible. In an interactive process with the architects, sketches and ideas result in the creation of technically refined foil and membrane constructions. In Bogotá, the engineers performed the structural analysis and produced the cutting patterns for the foil and cushions of all the membrane roofs. The main dome presented a particular challenge. The team from **formTL** initially modified the architects' drafts into practicable arch segments. Because of the geometry in the main dome, no single steel arch is identical to any other and there are very few membrane and cushion cutting patterns which are identical. The supply of air to the cushions posed a further challenge. **formTL** managed to reduce the number of blower units to two. The years of experience gained by **formTL** once again brought positive benefits at the execution stage because the construction tolerances of the steel structure were exceeded by 20 cm and more. To keep to the deadline, the engineers at **formTL** devised a flexible solution to ensure the previously manufactured cushions did not have to be redone. ■

A Pavilion in the Park

The new indoor pool in Ismaning has a lot to offer – from fun in the water, to relaxation and wellness. Moreover, it has a very special ambience which comes from the free form of the swung glass façade with its interplay between transparent, translucent and opaque elements, including the capillary glass from **OKALUX**. The swung glass façade corresponds perfectly to its location in the park giving the pool the openness and lightness of a large pavilion. This effect is intensified in the interior through the column-free construction with wide span.

The surrounding glass façade of the indoor pool was carried out as a self-supporting steel construction. In addition to the swung form of the architecture, the pool's distinctiveness lies in its vivid structure. This comes from the glass elements with their various light translucencies and playful arrangement in the façade ensemble. A composition of transparent, translucent and opaque elements gives the surrounding building shell transparency and openness where desired. The light diffusing insulating glass **OKALUX K** from **OKALUX** provides the translucent element in this ensemble. The capillary glass not only guarantees an optimal distribution of light – it creates a very special atmosphere in the interior of the bath. This effect results from the capillary tubes inserted in the cavity



Swimming hall

of the **OKALUX** functional glass. They diffuse the incidental daylight evenly and glare-free deep into the room creating optimal light conditions in the building whatever the conditions of radiation. ■

Three in a Row for Italian Marble: Sector Exports Up for 3rd Year Running

Italy once again confirms its world leadership in natural stone processing and sales and has registered the third consecutive year of growth for the Italian natural stone industry. Marble and granite "Made in Italy" closed 2013 on a positive note again, on the strength of exports of unhewn and processed products worth 1 billion 880 million euros, an increase of 6.6 percent compared to 2012. This result emerges from Istat data analyzed by the Marmomacc Observatory. Positive results on international markets: good performance by exports of finished and semi-finished products to the American continent (+18.9 percent), countries in Eastern Europe (+12.1 percent), North Africa (26.6 percent) and the Middle East (+12.9 percent) which posted double-figure growth in demand. Slight fall in demand for marble made in Italy in Europe, on the other hand (-1.1 percent).



Overall import/export scenario for Italy in 2013

In 2013, overall Italian exports of finished and semi-finished marble and granite products, unhewn materials (decorative and dimension stone, limestone, chalk stone, clay and slate), came to 1 billion 880 million euros against 1 billion 764 million in 2012 (+6.6 percent). Total imports posted a turnaround, settling at 382 million euros against 401.2 million in 2012 (-4.8 percent). In more detail, exports of unhewn materials (decorative and dimension stone, limestone, chalk stone, clay and slate) came to 380.5 million euros compared to 359.3 million in 2012 (+5.9 percent). On the other hand, imports of unfinished material fell back to 274.6 million euros against 278.6 million last year (-1.5 percent). As regards processed and semi-finished materials, exports came to 1 billion 500 million euros against 1 billion 405 million (+6.7 percent); imports recorded 107.4 million euros against 122.6 million in 2012 (-12.4 percent).

Finished & semi-finished product details

Processed and semi-finished materials grew in 2013: exports came to 1 billion 500 million euros against 1 billion 405 million (+6.7 percent); on the other hand, imports fell back to 107.4 million euros against 122.6 million in

2012 (-12.4 percent). As regards macro-areas, exports to European markets fell back by 1.1 percent (625.6 million euros against 632.5 million); there was strong growth towards American countries for a total value of 439.7 million euros against 369.6 million (+18.9 percent); exports to Asian markets also improved by 6.2 percent (352.1 million euros against 331.5 millions) as well as to Africa (+16.3 percent, 60.6 million euros against 52.1 millions). Exports also grew to Oceania by 13 percent (22 million euros, against 19.4 millions). Turning to specific areas, special emphasis can be given to exports to the United States worth 357.7 million euros against 279.7 million (+27.9 percent); exports to the Canadian market dropped by 17.0 percent (43.6 million against 52.6 million). The Americas saw growth in Mexico, with imports worth 12.6 million euros against 11.1 million (+14.2 percent). Europe saw a setback for exports to Germany, worth 143.2 million euros against 161.6 million (-11.4 percent).

There was also a positive trend on other markets: exports to Switzerland improved by 1.3 percent (104.8 million euros against 103.5 million), to France by 4 percent (72.7 million euros against 70.0 million), the United Kingdom by 3.4 percent (50.5 million euros against 48.8 million); exports to Austria fell by 8.6 percent (32.8 million euros

"Processed and semi-finished materials grew in 2013"



against 35.9 million) as well to Spain by 34.2 percent (8.5 million euros against 12.9 million). The Netherlands also posted a downturn of 1.4 percent (11.9 million euros against 12.1 million), as well as Belgium by 10.9 percent (12.9 million euros against 14.5 million). Exports to countries in Eastern Europe improved in 2013: Turkey, Poland, Czech Republic, Slovakia, Hungary, Romania, Ukraine, Russia, Azerbaijan, Kazakhstan, Turkmenistan, Slovenia and Croatia took overall exports worth 166.4 million euros compared to 148.5 million (-12.1 percent); the Russian market is the landmark, with imports worth 57.0 million euros against 46.6 million (up by 22.3 percent).

Exports to the Mediterranean area also improved (Morocco, Algeria, Tunisia, Egypt, Libya) to 50.4 million euros against 39.8 million (+21 percent). The Moroccan market is the landmark in the area, with imports worth 27.0 million euros against 24.9 million (+8.4 percent); Libya achieved strong recovery in 2013 with a total value of 11.7 million euros against 3.9 million (+200 percent).

Significant increases in exports were also achieved on Middle East markets (Lebanon, Saudi Arabia, Kuwait, Bahrain, Qatar, and United Arab Emirates) worth 222.8 million euros against 198.6 million (+12.9 percent). In particular, exports increased by 18.8 percent to the UAE (49.3 million euros against 41.5 million), by 190 percent to Qatar (45.6 million euros against 15.7 million) and by 9.8 percent to Kuwait (25.6 million euros against 23.3 million), thereby offsetting the sharp decline in Saudi

“... exports increased by 18.8 percent to the UAE (49.3 million euros against 41.5 million)”

Arabia (81.0 million euros against 103.4 million). Exports of finished products to China also fell in 2013 to 24.4 million euros against 25.3 million (-3.6 percent), while Italian imports of finished Chinese products also posted a downturn to 30.2 million euros from 35.1 million (-13.8 percent).

Exports to India fell to 15.0 million euros against 18.0 million (-16.6 percent) as well as Italian imports of finished product from India, coming to 23.5 million euros compared to 27.2 million (-13.6 percent). Exports to Hong Kong also fell back to a total of 11.4 million euros against 13.8 million (-17.4 percent).

Unhewn stone product details

This consolidation was also confirmed by positive results for unfinished product exports, up by 5.9 percent in 2013: exports of unhewn materials (decorative and dimension stone, limestone, chalk stone, clay and slate) came to 380.5 million Euros compared to 359.3 million in 2012 (+5.9 percent). In more detail, exports to Asia stand out, worth 253.5 million Euros, up by 6.7 percent compared to the same period last year. China: exports worth 109.9 million euros against 92.9 million in 2012 (+18.3 percent) were posted. India: exports of raw materials fell to 68.6 million euros against 72.7 million (-5.6 percent). Overall exports of unprocessed stone to European countries came to 66.9 million euros against 64.5 million euros (+3.7 percent); exports to Africa totaled 45.7 million euros against 43.7 million (+4.8 percent).

On the other hand, Italian imports of unfinished material fell back to 274.6 million euros against 278.6 million euros last year (-1.5 percent). Brazil is the top supplier for Italian companies with 55.9 million euros in 2013 against 52.8 million (-5.9 percent) in the same period last year. Imports of raw materials from India also fell back: 68.6 million euros against 72.7 million (-5.6 percent); a downturn was also seen for South Africa (19.4 million euros versus 22 millions). ■

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تؤكد إيطاليا مرة أخرى ريادتها العالمية في صناعة الحجر الطبيعي والمبيعات وقد سجلت للسنة الثالثة على التوالي نمواً في صناعة الحجر الطبيعي الإيطالية. وقد أقيمت مجدداً سوق الرخام والغرانيت “صنع في إيطاليا” العام ٢٠١٣ بشكل إيجابي بفضل قوة الصادرات من المنتجات المصنوع وغير المصنعة التي بلغت مليار و٨٨٠ مليون يورو، أي ما يعادل زيادة بنسبة ٦,٦ في المئة مقارنة بالعام ٢٠١٢ وهي أرقام صادرة وفقاً لمعطيات المحللة من قبل (مارموماك). أما النتائج الإيجابية في الأسواق العالمية فأنت كالتالي: أداء جيد من صادرات المنتجات المصنعة بالكامل أو النصف مصنعة إلى القارة الأمريكية (+١٨,٩ في المئة) ودول أوروبا الشرقية (+١٢,١ في المئة) وشمال أفريقيا (٢٦,٦ في المئة) ومنطقة الشرق الأوسط (+١٢,٩ في المئة) التي حققت نمواً مزدوجاً في الطلب. أما في أوروبا فقد عرف الرخام المصنوع في إيطاليا إنخفاضاً طفيفاً في الطلب مسجلاً -١,١ في المئة. إن الميزان التجاري الموجب بشكل كبير نحو التصدير بالإضافة إلى الركود في قطاع الإنشاء المحلي يفيد مجدداً أن واردات الرخام الإيطالية في العام ٢٠١٣ سواء كانت مصنعة بالكامل أو شبه مصنعة وكتل غير مصنعة قد انكسرت مرة أخرى بنسبة ٤,٨ في المئة لتسجل ٣٨٢ مليون يورو. أما فيما يتعلق بالموردين الرئيسيين للشركات الإيطالية من المواد غير المصنعة فهي الهند (٦٨,٦ مليون يورو أي -٥,٦ في المئة) والبرازيل (٥٥,٩ مليون يورو أي +٥,٩ في المئة).

New Holland B100C Backhoe Loader for Cutting Marble

A new star is making its debut in the marble quarry sector: a **New Holland Construction B100C** backhoe loader has been equipped with a support arm and chain cutter, mounted in place of the traditional backhoe that offers a new ingenious and simple method for cutting blocks of marble, which is both fast and efficient. The B100C was fitted with a chain cutter (CST 965) developed by **Benetti Macchine SpA**, who are based in Carrara and specialize in supplying marble-cutting machines. They worked in close collaboration with the New Holland Construction Engineering division in Lecce, which has the capability to produce bespoke machines, based on requests from its customers, for niche sectors. Fitting a backhoe loader with a chain cutter is an alternative to diamond wire cutting machines, normally used to cut large blocks of marble (or "bench walls"). However, the New Holland solution offers greater safety and a considerable reduction in working time. Diamond wire cutting machines do not move autonomously, but must be positioned on tracks that run next to the blocks to be cut. This op-



The NHC backhoe cutting marble

eration lengthens working time considerably. The New Holland Construction backhoe loader, however, is able to move up to the marble blocks autonomously and square them up, to allow them to then be transported by truck to the facilities dedicated to transforming them into slabs. ■

1st Whirlpool Bathtub in Marble or Natural Stone

Neutra introduces HYDROWELL the first whirlpool bathtub made from a single block of marble. It is the first company worldwide capable of combining the technical and mechanical requirements of a multi-



HYDROWELL by Neutra

function bathtub with the ambition of exclusively utilizing marble or natural stone. A testimony of Neutra's attention to everything related to quality of life and the definition of design furnishings, the all-marble or natural stone HYDROWELL whirlpool bathtub is an expression of Neutra's ability to design and create increasingly complex and unique products. Therefore it is designed to perfectly fit in private residential environments as well as in facilities aiming to provide the highest level of comfort to guests relaxing in a hotel or spa. A result of Neutra's Research and Development office, HYDROWELL responds to a specific demand of the contract sector but is ideally suited for any bathroom environment solution.

The decision to use marble or natural stone was not made casually. Sensory and tactile benefits of stone when it comes in contact with water and the human body have always been well known. The Neutra bathtub has the prerogative of enhancing this effect if combined with a whirlpool system. The stone's capability to retain heat helps maintain the water at the desired temperature for longer than traditional whirlpool bathtubs. ■



Arab Construction World

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World



Arab Construction World (ACW)

June 2014 / Vol. XXXII Issue 6

Serving the Building, Machinery, Roads & Power Sectors in MENA - Since 1983



A **New Holland Construction** B100C backhoe loader has been equipped with a support arm and chain cutter, mounted in place of the traditional backhoe that offers a new ingenious and simple method for cutting blocks of marble, which is both fast and efficient. The B100C was fitted with a chain cutter (CST 965) developed by **Benetti Macchine SpA**, who are based in Carrara and specialize in supplying marble-cutting machines.

Country/Regional Reports

France

Very Low Interest Rates Keep French Market Fairly Resilient.....	P.35
Will GE Acquire ALSTOM's Energy Activities.....	P.36
Bouygues Signs its First Contract in Ghana.....	P.37
New HA16 RTJ Range.....	P.37

Jordan

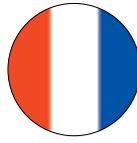
Jordan Real Estate Sector: Unstoppable Momentum.....	P.38
--	------

Russia

Russia's Construction Industry: A Hindered Growth.....	P.39
Potain Tower Cranes Building Europe's Largest Mall.....	P.40
Project Specific Climbing Solution with Practical Adaptation.....	P.40
Covering Russia Is No Problem for Volvo Penta Aftermarket.....	P.42
Linden Comansa & Bashkransnab Repeat at CTT Moscow Fair.....	P.42

United Arab Emirates

UAE: An Attractive Destination on All Fronts.....	P.43
Empower Inks Deal with TECOM Investments.....	P.45
Victaulic Introduces VicFlex™ for Cold Storage Applications.....	P.46
'ME by Melia' Hotel's Artist Renderings Unveiled.....	P.46



Very Low Interest Rates Keep French Market Fairly Resilient

House prices in many European markets may start to stabilize this year amid slowly improving economic conditions. Yet, a recovery is still a long way off for those housing markets worst hit by the downturn, such as Spain and the Netherlands, amid oversupply and still tight credit conditions. Only the United Kingdom housing market is staging a strong recovery, while German house prices look set to stay buoyant this year, as their economies are performing better than the European average. **Standard & Poor's Ratings Services** expect prices in France will continue to fall this year by 3 percent, but that they will rise again in 2015 by 2 percent, driven above all by a shortage of housing supply. A sharper than expected rise in long-term interest rates would precipitate a steeper price decline, but the research company views this as rather unlikely at this stage.

Recent trends

French housing prices continued on a modestly downward path through 2013. The latest read from **INSEE**, the French statistical office, points to a 1.5 percent decline in the third quarter from a year earlier. The number of transactions fell by 22 percent from its early 2012 peak through June 2013, but has since then showed signs of a revival. Housing loans were up 4 percent in the 12 months to October. Those indicators suggest that the market is experiencing a modest correction after its spectacular rise of 155 percent between 1997 and 2007. The French market remains fairly unique in the Eurozone in that the economic downturn of the past five years has hardly improved the market affordability ratio. The average price for a dwelling was equivalent to 3.8 years of income in November, which is still very close to its 2007 peak.

Several factors explain this situation. The market continues to suffer from a lack of supply. In 2013 as a whole, about 335,000 new homes will have been completed, representing a 10-year low, although the economic authorities' goal was to raise the number of new homes by 500,000. France currently has 33.3 million dwellings, of which 2.4 million are unoccupied. Given the population totals 64.6 million, this translates to an average 2.08 people per dwelling. However, INSEE estimates the population is growing by 464,000 a year, generating a need for an additional 223,000 dwellings per year. Added to this, sociological changes, such as an increasing divorce rate, are creating a need for an additional 229,000 dwellings per year. In total 452,000 new dwellings are needed every year. The gap between supply and demand will thus continue to widen. This is especially the case in the most attractive areas of the country, such as Provence-Cote d'Azur and in the main economic centers. In the greater Paris area, only about 35,000 new dwellings per year are created, representing one-half of that needed to balance demand.

In the face of a still tight and expensive market, buyers have taken advantage of very low interest rates.



"Housing loans were up 4 percent in the 12 months to October"

Borrowing rates averaged 3.11 percent in November 2013, which is close to all-time lows. Since the early part of the previous decade, the rise in house prices has no longer reflected the rise in household incomes. Between 2000 and 2010, the average price per square meter in Paris rose by 147 percent, while disposable incomes increased by just 33 percent. As a result, household debt associated with house purchases has doubled over the same period from 33 percent to 66 percent of disposable incomes.

Future trends

Standard & Poor's Ratings Services now forecast house prices will fall by 3 percent in 2014, compared with -4 percent in previous forecast. Two key factors continue to underpin house prices and contain the price slide, in its view. The first is a structural supply deficit. This is unlikely to go away any time soon. As noted above, the production of new homes remains insufficient, and the latest data on construction permits gives no grounds for optimism. They were down by 15 percent in the 12 months to October 2013. The second factor is cheap housing loans that are to some extent offsetting the continued deterioration in the market affordability ratio. This factor, however, may

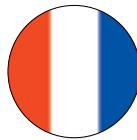


Table 1: French Housing Market Statistics

(%)	2009	2010	2011	2012	2013f	2014f	2015f
Nominal house prices, % change year on year	(4.2)	7.6	3.8	(2.1)	(2.0)	(3.0)	2.0
Real GDP, % change	(3.1)	1.7	2.0	0.0	0.2	0.6	1.4
CPI inflation	0.1	1.7	2.3	2.2	1.0	1.4	1.3
Unemployment rate	9.5	9.7	9.6	10.3	11.0	11.2	11.0

f--Forecast. Sources: S&P, Eurostat, OECD, INSEE

not last as long. The company expects that long-term interest rates will increase gradually. Of course, lend-

ers will be able to smooth this increase to make it less of a deterrent for potential borrowers. But continued weakness in the French economy this year could bring additional downward pressure on prices. French GDP is forecasted to rise by a modest 0.6 percent this year and by 1.4 percent in 2015, and that the unemployment rate will rise in 2014. ■

Source:

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من المحتمل أن تبدأ أسعار المنازل في الكثير من الأسواق الأوروبية بالاستقرار هذه السنة وسط تحسن الأوضاع الاقتصادية ببطء. لكن فترة الانتعاش لأسواق الإسكان الأكثر تضرراً من الأزمة لا تزال بعيدة المنال مثل أسبانيا وهولندا وذلك وسط زيادة المعروض وشروط الإئتمان التي لا تزال مشددة. وحدها سوق الإسكان في المملكة المتحدة تتحضر لانتعاش قوي بينما من المتوقع أن تبقى أسعار المنازل في ألمانيا نشطة هذا العام إذ أن أداء اقتصاد البلدين أفضل من المتوسط الأوروبي. تتوقع (Standard & Poor's Ratings Services) بأن تستمر الأسعار في فرنسا بالتدني هذا العام بنسبة 3 في المئة لكنها سترتفع مجدداً في العام 2015 بنسبة 2 في المئة مدفوعة بالدرجة الأولى بالنقص في المعروض من المساكن. من ناحية أخرى سيسرع ارتفاع أكثر حدة مما هو متوقع في أسعار الفائدة الطويلة الأجل من الانخفاض الحاد في الأسعار لكن شركة الأبحاث تجد هذا الأمر بعيد الاحتمال في هذه المرحلة. يقوم المقال أعلاه بعرض وضع سوق الإسكان في فرنسا وعرض آخر التوقعات فيما يتعلق بالعرض والطلب.

Will GE Acquire ALSTOM's Energy Activities

The Board of Directors of **Alstom** announced lately that it has received a binding offer from **General Electric (GE)** to acquire its Energy activities. The scope of the transaction includes the Thermal Power, Renewable Power and Grid Sectors, as well as corporate and shared services. With 65,000 employees, these businesses registered around USD20.16 billion in sales in fiscal year 2012/13. The proposed price is a fixed price representing an Equity Value of around 16.82 billion and an Enterprise Value of USD15.53 billion, or 12.2x FY13 EBIT. Should this offer be approved and completed, Alstom would refocus on its Transport activities.

The Board of Directors of Alstom, acknowledging unanimously the strategic and industrial merits of this offer and having noted the publicly announced undertakings by GE, has decided to set up a committee of independent directors, led by Jean-Martin Folz, to review before the end of May the proposed transaction, taking into consideration all stakeholders interests including the French State. Completion of the transaction would be subject to merger control and other regulatory clearances. In accordance with the AFEP-Medef code, the final approval of the transaction will be submitted to the shareholders.



Patrick Kron, Chairman and CEO of Alstom, commented: "The combination of the very complementary Energy businesses of Alstom and GE would create a more competitive entity to better service customer needs. Alstom's employees would join a well-known, major global player, with the means to invest in people and technology to support worldwide energy customers over the long term. The proposed transaction would allow Alstom to develop its Transport business as a standalone company, with a strong balance sheet to capitalize on opportunities in the dynamic rail transport market." ■

Bouygues Signs its First Contract in Ghana

Americaribe, an American subsidiary of **Bouygues Construction**, has just finalized signature of the contract for extending Accra's "Ridge Hospital" in Ghana, for 220 million dollars. "With this first contract in Ghana, Bouygues Construction is confirming its ambitions in Sub-Saharan Africa, with projects and infrastructures aimed at enhancing the quality of life for local populations", says *Olivier-Marie Racine*, Deputy Managing Director of Bouygues Construction. The contract will provide for a future turnkey regional healthcare hub of 5 levels, which, in particular, will include a new 420-bed building, several operating theatres and a maternity unit.

More modern and functional, the extended hospital will have the potential to become one of the most advanced, leading-edge medical facilities in West Africa, giving better access to healthcare for Ghanaians. For several years now, the ever-increasing number of consultations has been overstressing Ridge Hospital's capacity and in particular its maternity unit, which could no longer accommodate all patients. The new hospital will be delivered in 2017, after 3 years of construction which will mobilize 600 staff at peak period. The project will be following sustainable construction



©Perkins+Will

Ridge Hospital

lines and aiming at LEED® Healthcare certification, the first in the region, with electricity supply provided by solar energy. ■

New HA16 RTJ Range

From the very start of this project, **Haulotte** has developed this new range step by step with its customers' feedback. The result: a perfect combination of technical expertise and field experience. This new range has been designed to meet customers' requirements with a ma-



HA16 RTJ

chine that is simple, robust, reliable and easy to maintain with optimal performance and a high level of safety.

Best performance & productivity

The HA16 RTJ range has been designed to reach the most difficult working areas thanks to the best working envelope with a maximum outreach of 8.30 meters and an up & over clearance of 7.65 meters. The HA16 RTJ range offers the best lifting speed with less than 40 seconds saving time and increasing productivity. The HA16 RTJ range is unique on the market with the best proportional and simultaneous movement capability. The 16 meter range is able to simultaneously perform the following movements: Driving + Steering + Turret rotation; Turret rotation + Arm/Boom elevation + Telescope out + Jib. Along with this outstanding simultaneous movement capability, the hydraulic system additionally gives the best comfort and feeling of safety thanks to very smooth movements and the ability to reach the working area with maximum precision. Whatever the ground surface, the HA16 RTJ range has an excellent rough terrain capability thanks to the best ground clearance of the market, of 38cm, 40 percent gradeability and 4 wheel-drive on all models. ■



Jordan Real Estate Sector: Unstoppable Momentum

Stable economy and calm political arena improve market sentiment as apartment sales prices rise 14 percent year-on-year and apartment sales prices increase in prime locations, but stable overall, while rental rates remain relatively unchanged during first quarter of 2014 due to increased supply says **Asteco Q1 property report for Jordan**. Real estate trading in Jordan went up by 26 percent during the first four months of 2014 reaching USD3.5 billion (JD2.5 billion) compared to USD2.8 (JD2 billion) during the same period of 2013.

Although rental rates in Jordan experienced no significant changes during Q4 2013, apartment sales prices jumped 8 percent in the final quarter averaging 14 percent in certain areas over the past 12 months, says Asteco in its report. According to the Q4 2013 report however, increased supply matching demand resulted in apartment rental rates remaining relatively unchanged compared to Q3 2013, while year-on-year growth amounted to 2 percent on average. "Sales prices over the past year in areas such as Al-Rabiah (up 24 percent), Sweifieh (up 19 percent) Der Ghabar (up 14 percent) and Um Othainah (up 13 percent) witnessed strong growth predominantly from Jordanian nationals. Investors were primarily interested in smaller studio apartments, with good potential leasing prospects. Owner-occupiers preferred larger apartments ranging from 250 to 300 square meters," said *John Stevens*, Managing Director, **Asteco Property Management**.

Apartment rental rates remained relatively unchanged compared with Q4 2013, as demand levels were steady and no significant new supply was added to the real estate inventory in Amman, according to Asteco. Rental rates for a three-bedroom apartment in Abdoun saw a slight 2 percent increase compared with Q4 2013, while Um-Othainah witnessed a slight dip of 3 percent on rental yield during Q1 2014. "The limited availability of land in certain locations in Amman such as Abdoun, Sweifieh and Der Ghabar resulted in increased apartment sales prices with a quarter-on-quarter rise of 8 percent, on average, with strong demand for medium sized apartments of between 185 and 250 square meters," said *Hussein Safadi*, General Manager, Asteco Jordan.

According to a report released by the **Department of Land and Survey** in May 2014, government revenues from the property market increased by 25 percent to USD197 million (JD139.5 million) during the January-April period of this year. The value of exemptions related



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to apartments amounted to USD37.3 million (JD26.4 million), bringing the overall total of revenues and exemptions to USD234.4 million (JD166 million). The number of transactions rose by 24 percent reaching 33,998 deals during the first four months of this year. Out of the total, 14,438 transactions were in Amman alone, accounting for 42 percent, and 19,560 transactions were in other governorates, accounting for 58 percent.

In Amman, investors sought apartments as the number of transactions came at 7,994 whereas the number of land deals stood at 6,444, according to **SyndiGate Content**. The preference was more for land in governorates as the number of transactions was 16,081 deals compared to only 3,479 for apartments. The number of purchase transactions by non-Jordanians stood at 1,808 deals, of which 1,206 were contracts to buy apartments valued at USD154.5 million (JD109.4 million) (66 percent), and 602 transactions to purchase land valued at USD80 million (JD56.5 million) (34 percent). Combined, the total came at USD234.3 million (JD165.9 million), 25 percent higher than the revenues registered during the first four months of 2013. ■

Prepared by:

Soha Ghandour
Assistant Editor & Researcher

شهدت أسعار بيع الشقق في الأردن ارتفاعاً بنسبة ٨ في المئة خلال الربع الأخير من العام الماضي و١٤ في المئة في بعض المناطق خلال الإثني عشر شهراً الماضية مدفوعة بالاستقرار الاقتصادي والسياسي، فيما استقرت أسعار الإيجارات دون تغيير عند معدلات الربع الثالث بسبب زيادة المطروح وذلك وفقاً لتقرير صادر عن شركة أستيكو للخدمات العقارية. وأضافت أستيكو في تقرير آخر بأن أسعار إيجارات الشقق في الأردن قد استقرت في الربع الأول من العام ٢٠١٤ دون تغيير عند معدلات مثيلاتها في الربع الأخير من العام الماضي فيما شهدت السوق العقارية في عمان طرح كمية محدودة من الوحدات الجديدة. وقد صرح حسين صفدي، مدير عام أستيكو في الأردن بأن أسعار بيع الشقق في بعض المناطق في عمان، مثل مناطق عبدون والصويفية ودير غبار، قد ارتفعت بنسبة ٨ في المئة في الربع الأول مقارنة بالربع الأخير من العام ٢٠١٤ مدفوعة بمحدودية الأراضي المتوفرة في تلك المناطق مع ارتفاع الطلب على الشقق المتوسطة الحجم التي تتراوح مساحتها بين ١٨٥ و٢٥٠ متراً مربعاً.



Russia's Construction Industry: A Hindered Growth

During the past several years, the Russian construction sector has witnessed a remarkable slowdown. As of 2013, the domestic construction sector declined by around 1.5 percent YoY, following a 2.4 percent increase in 2012, according to **PMR Research**. During 2010 and 2011, the industry grew at a CAGR of 5 percent. In 2013, its performance deteriorated considerably due to poor economic growth in the country, the lack of increase in fixed capital investments, and also a high base set after the industry strong resurgence during 2010-2011. As for 2014, **Business Monitor International (BMI)** forecast -0.5 percent real growth in the construction industry.

Although BMI had anticipated significant growth for the construction industry in 2014 as a result of the large investments made for the Winter Olympic Games, this seems to have failed to materialize. BMI estimate that the industry entered a period of contraction in 2013 at -1 percent and they only expect the industry to emerge from this downturn in 2015. According to PMR Research, around 2.5 percent of the country's GDP was spent in 2013 on the infrastructure development. The figure will likely remain unchanged in 2014 and 2015, and furthermore, it is expected to be reduced to nearly 2.4 percent in 2016. Total investments in transport infrastructure projects in Russia comprised around 1.1 percent to 1.5 percent of the country's GDP annually during 2002-2011, except the year 2008 when it stood at 1.7 percent.

The awarding of the long-awaited Public-Private Partnership (PPP) for the Lena bridge project confirms BMI's view that private interest in Russia's PPP market is likely to stem mainly from Russian companies. In addition, this USD1.7 billion project presents a considerable upside to our construction industry forecast for the country. Moreover, infrastructure associated with the export of commodities (pipelines, ports and transport infrastructure – to support oil and gas output east and west of the Urals) has a high growth potential - as development is predicated on growth in the natural resources sector. These projects have been prioritized by the government.

Accomplished & underway projects

In November 2013, **Avtodor** shortlisted four teams to bid for the M-11 highway. The four teams are **Corsan-Corviam Construction** and consortia **Stolichniy Tract OJSC, Roads Construction Corporation** and **Two Capitals Highway**. The concession agreement involves financing, constructing and operating the 543km-684km section of the toll road. In January 2014, Lithuania-



“... BMI forecast -0.5 percent real growth in the construction industry”

based company **Avia Solutions Group** and Russia's state-owned company **Rostec** signed a cooperation agreement to develop and management a new Moscow airport with a capacity of 12 million passengers per year, according to BMI's report. The new Russian airport, dubbed Ramenskoye International Airport, is designed to cater for low-cost airlines - a niche industry that has experienced slow growth in Russia as a result of insufficient infrastructure. In March 2014, 10 consortiums expressed interest in the Moscow-Kazan high-speed railway, which was presented to potential investors in Moscow. A number of global firms including French, Spanish and Italian companies expressed interest in the project. With regards to metros, new PPP legislation, expected to be approved by Q3 2014, will open the door for the private sector to participate in rail construction. The forecast spending on transport infrastructure in Russia from 2014 to 2016 was based on the country's GDP growth rates of more than 3 percent, added PMR Research in its report. ■

Prepared by:

Rawand Fakih
Editor & Researcher

شهد قطاع الإنشاء الروسي خلال السنوات القليلة الماضية تباطؤاً ملحوظاً. فقد تراجع قطاع الإنشاء المحلي في العام ٢٠١٣ بنحو ١.٥ في المئة على أساس سنوي بعد أن كان قد سجل في العام ٢٠١٢ نمواً بنسبة ٢.٤ في المئة وذلك وفقاً لتقرير صادر عن (PMR Research). نما قطاع الإنشاء خلال عامي ٢٠١٠ و٢٠١١ بمعدل نمو سنوي مركب بلغ ٥ في المئة إلا أن أداءه تدهور في العام ٢٠١٣ بشكل ملحوظ نظراً للنمو الاقتصادي الضعيف في البلاد وعدم وجود زيادة في استثمارات رأس المال الثابت بالإضافة إلى قاعدة أساسية مرتفعة بعد العودة القوية لهذا القطاع خلال الفترة الممتدة من ٢٠١٠ إلى ٢٠١١. تكشف مؤسسة (بيزنس مونيتور انترناشيونال) في أحد تقاريرها توقعاتها للعام ٢٠١٤ بأن يسجل النمو الحقيقي في قطاع الإنشاء -٠.٥ في المئة. يتطرق المقال أعلاه إلى قطاع الإنشاء في روسيا الذي يعاني من بعض العوائق بالإضافة إلى عرض آخر المشاريع المنجزة والجارية.



Potain Tower Cranes Building Europe's Largest Mall

A team of 11 Potain tower cranes are building the largest shopping mall in Europe. Covering an area the size of 65 football fields (463,000 m²), Avia Park will be an entertainment and shopping complex in the heart of Moscow, Russia. The Potain cranes will spend two years lifting general construction materials at the city center job site.

The Potain cranes, which are a mix of different top-slewing models, were supplied by Moscow-based crane rental company **Rentakran** to main contractor **Renaissance**. Potain cranes were chosen for the landmark project because of their reputation for quality and the wide variety of capabilities that its range has to offer, as *Serhan Arpacı* at Rentakran explains: "The project needed efficient cranes that can be individually configured and work for long hours without stoppages," he says. "We immediately thought of Potain, which continues to build its reputation for producing the best quality tower cranes available in Russia. We are confident that this project will run smoothly with these cranes."



Potain at Avia Park - Moscow

Building work at Avia Park began in November 2012 and the Potain cranes were erected at the job site in March 2013, where they will remain until the project nears completion towards the end of 2014. The Potain cranes are operating at varying heights between 45 meters and 66 meters, and are rigged with 45 meters to 70 meters jibs. ■

Project-Specific Climbing Solution with Practical Adaptation

A customized **PERI** climbing formwork solution has been supporting the rapid construction progress on the ISET Tower in Yekaterinburg. The formwork concept has taken into account the high wind loads as well as the variable number of elevator shafts with varying dimensions. The climbing formwork for the walls along with



With the **RCS rail-climbing** system, the external formwork safely climbs the circular building core from story to story using a rail-guided procedure

the climbing protection panel on the outer edges of the building can be adapted to suit the circular ground plan without requiring any special components. After its scheduled completion in summer 2014, the ISET tower will reach a height of 209 meters above sea level.

Premiere for the self-climbing shaft formwork in Russia

In the lower stories, there are six centrally-arranged elevator shafts in the circular building with minimum internal dimensions of 2.30 meters x 3.00 meters. For this, the construction crew has used the self-climbing ACS S shaft formwork which was specially developed for this area of application – this was the first use of the system in Russia. With this self-climbing version, the ACS 100 climbing unit is arranged centrally in the shaft; it lifts the climbing frame together with the suspended TRIO panel formwork and trailing working platform to the next casting section. From floor 28 onwards, the geometries change in the core of the building – six smaller elevator shafts merge into four larger ones. At this point, the shaft formwork is quickly coupled together and a multi-unit aggregate simultaneously lifts the complete sets of formwork upwards. ■

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Covering Russia Is No Problem for Volvo Penta Aftermarket

For **Volvo Penta**, the Russian market has grown or held steady over the past decade — even in the years since the global recession. But while engines are selling well there, the big story is the aftermarket. In the Industrial segment, there are few Russian-based OEMs for Volvo Penta to sell to, but with hundreds of Volvo Penta-powered gensets and machines operating across the country, the aftermarket and customer service account for more than half of the Russian business. But in a country as vast as Russia, providing adequate aftermarket coverage can present a challenge.

Dealer network

With head offices in Moscow and St. Petersburg, Volvo Penta Russia has an extensive 18-year-old network of 30 dealers across the country — as well as a budding partnership with **Ferronordic**, Russia's **Volvo Construction Equipment** dealer. Around the world, Volvo Penta is utilizing the Volvo Group's existing dealer network, and Russia is no exception. "Why not use our diversity in a positive way?" *Vsevolod Gavrilov*, head of Volvo Penta Russia, says. "We have the same values and the



Mechanics from Volvo Penta Center Kvartet dismantle a genset case and disassemble a Volvo Penta engine for further repairs in the workshop

same synergies. We can find ways to develop our businesses together."

Over the next few years, Volvo Penta Russia's focus won't be on recruiting any new dealers but rather on integrating more fully with Ferronordic and strengthening its existing network with comprehensive training. ■

Linden Comansa & Bashkransnab Repeat at CTT Moscow Fair

Tower crane manufacturer **Linden Comansa** and its Russian distributor **Bashkransnab** will jointly exhibit again at the construction machinery fair CTT in Moscow. The 2012 edition was the first in which they participated together and the experience was so positive



21LC550 at Ensenada, Mexico

that both companies decided to repeat since then. The tradeshow, the most important of Russia and its neighboring countries, will be held from June 3rd to 7th at the International Exhibition Centre Crocus Expo of the Russian capital.

The exhibited tower cranes in previous editions were a 11LC150 8 tons in 2012, and a 16LC185 10 tons in 2013. For this edition, a larger crane has been chosen by Bashkransnab and Linden Comansa: a 21LC550 in its version of 24 tons of maximum load capacity. In addition to residential / commercial building and high rise construction, this crane is designed to offer maximum performance in public works and infrastructure projects such as bridges, power plants, ports, etc.

The exposed model will not have its maximum jib length, 80 meters, but will be erected with a 40 meter reach. With this configuration, the 21LC550 can load up to load 12,000 kilos at the jib end, 13,030 by using the PowerLift system, which comes standard on all tower cranes from Linden Comansa. ■



UAE: An Attractive Destination On All Fronts

The United Arab Emirates (UAE) is one of the fastest growing economies relying on the construction sector boom and support from the oil & gas sector in the country. The UAE has also been a pioneer in the adoption of state of the art technologies and introduction of sustainable green building and energy initiatives. In line with Vision 2030, Abu Dhabi government has a long term investment program to upgrade its national infrastructure, airports, seaports and public transport system to cater to the growing population. Following an exceptional year in 2013, Dubai's residential property market is showing signs of more modest growth in the first quarter of 2014, as regulations begin to take effect, according to the latest research consultancy Cluttons. As for Abu Dhabi, **Cluttons** stated that its gradual economic diversification is helping to deliver long term sustainability to the emirate's residential market.



Dubai Marina as seen from Shams 1 at Jumeirah Beach Residence

A frenzy building sector

The UAE's construction sector appears set to return to near optimum capacity, with the government announcing a number of major development projects and stepping up spending on social infrastructure development. While Abu Dhabi and Dubai governments led the revival in 2012, infrastructure and tourism proved to be the primary key to speed up the uptrend in 2013, especially the upgrades in airports, ports and roadways. Recently the UAE has won the prestigious bid to host the World Expo 2020 in Dubai with the aim of attracting visitors and collaborators worldwide and boost domestic construction, tourism and industry in the bargain. A number of formerly stalled projects raced towards completion in 2013 or continue to forge ahead on the fresh impetus provided by the World Expo 2020. Tourism activities fuel the demand across the real estate, infrastructure and utilities segments of the market. As per **IMF**, the GDP of UAE was around USD390 billion in 2013, and it is anticipated to grow at 4 percent in 2014 to reach USD404 billion. The population of UAE was around 8.7 million in 2012 and expected to reach 9.3 million by end of 2014.

"The UAE has witnessed sizeable investments in the construction industry"

The value of the building construction sector comprises around 59 percent of the total projects value in the construction industry. Infrastructure, Oil & Gas and Power & Water together contribute around 34 percent of the total construction project values in 2013. The spillover effects of the growing population and the need to increase the supporting infrastructure to meet the rising demand for housing, office and retail space, the burgeoning tourism and hospitality sectors have continued to feed the growth in building construction sector. The successful bid to host the World Expo 2020 and the expected preparations for the event have boosted the investors' confidence with numerous mega projects expected to be announced, significantly across the hospitality and tourism sectors.

The UAE has witnessed sizeable investments in the construction industry from both public and private enterprises. The country began to draw investments from around the world which has started to perceive UAE as a safe investment haven amid the global and regional turmoil of the Arab Spring. Most of the investments are mainly focused on the development of infrastructure



for hospitality, retail, real estate, and healthcare industry. Moreover, the government's efforts to diversify its economy from oil to other industries will boost the infrastructure investments in future. The total construction projects awarded in UAE totaled USD38 billion in 2013 and the projects expected to be awarded is anticipated to reach USD46 billion in 2014.

Owing to significant investments in tourism and cultural development, the government is developing a number of islands such as Sadiyat, Al Reem Island and Yas Island. The related infrastructure in these islands with respect to residential and commercial developments is also driving the building construction sector in the emirate.

Modest growth for Dubai's residential property market Cluttons Dubai Spring 2014 Residential Market Outlook report highlights how, post the positive outcome of Dubai's 2020 bid, we are seeing a return to a more moderate pace of growth, as previously anticipated. The economic growth and frenzy in the lead up to the bid announcement, led to strong demand for residen-

“Residential values expanded by 3 percent in Q1, after rising by almost 6 percent in Q4 2013”

tial property in 2013 and helped lift average values by 51 percent during the course of the year. But a slew of regulations aimed at cooling the pace of growth are starting to peg back rate acceleration. Residential values expanded by 3 percent in Q1, after rising by almost 6 percent in Q4 2013.

Demand for “desirable” vistas and high rise living in Dubai drives interest from both domestic and international buyers, resulting in a continued effort by developers to position buildings in areas that optimize views of the Gulf or the sweeping skylines that crisscross the city. Dubai continues to add to its tremendous skyline with several 300m+ buildings already under construction across the city. These include Damac Residence (335 meters), The Address The Boulevard (370 meters), Dream Dubai Marina (432 meters), Al Habtoor City Towers (300 meters) and Al Attar Tower (342 meters). Most of these will be additions to Downtown Dubai and Dubai Marina skylines, helping to add ‘vista-values’ to those submarkets and offering more options for buyers in search of a home with a view.

A sustainable residential property market in Abu Dhabi

Cluttons points to Abu Dhabi's strong economy, which is showing significant signs of change. The non-oil sector continued to expand its share of the economy, accounting for 45 percent of total GDP in 2013 and up from 43 percent in the previous year, which is helping to ensure the sustainability of growth in the residential market by aiding in the long term diversification of the buyer and tenant demand base. Key sectors driving growth in the housing market are the tourism, hospitality, education and healthcare sectors, which is translating into robust population growth and demand in terms of the volume and nature of property requirements. This resurgence in demand is coupled with a market that has been depleted of new supply for a number of years and this is driving values, while also stimulating a widespread return to development. ■



Photo taken in Abu Dhabi

Prepared by:

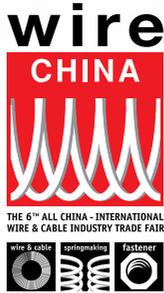
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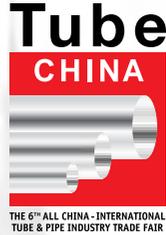
تعتبر الإمارات العربية المتحدة إحدى أسرع الإقتصادات نمواً التي تعتمد على ازدهار قطاع الإنشاء والدعم الآتي من قطاع الغاز والنفط في البلاد. كما وتعتبر الإمارات العربية المتحدة رائدة في اعتماد أحدث التقنيات وتطبيق مبادرات الأبنية الخضراء والطاقة المستدامة. وتماشياً مع رؤيتها للعام ٢٠٣٠، تضع الحكومة أمام ناظرها برنامج استثمار طويل الأمد من أجل تحسين بنية البلاد التحتية ومطاراتها ومرافئها ونظام النقل العام وذلك لتلبية احتياجات النمو السكاني الهائل. وبعد أن شهدت سوق العقارات السكنية في دبي سنة استثنائية في العام ٢٠١٣، تظهر حالياً علامات لنمو أكثر اعتدالاً في الربع الأول من العام ٢٠١٤ وذلك بينما تدخل القوانين الجديدة مرحلة التنفيذ وذلك وفقاً لآخر تقرير صادر عن شركة (كلاتونز) العاملة في مجال الاستشارات العقارية. أما بالنسبة لأبو ظبي فقد أشارت (كلاتونز) إلى أن سوقها العقارية قد أصبحت أكثر نضجاً وأن مسؤولي القطاع قد اتخذوا نهجاً مقاساً بشكل أدق بعد ازدهار الذي عرفته في الفترة الممتدة من ٢٠٠٦ إلى ٢٠٠٨ وذلك في الوقت الذي تتوجه فيه الإمارة نحو تحقيق رؤيتها عام ٢٠٣٠. وأضافت بأن التنوع الاقتصادي التدريجي في الإمارة يساعد في توفير استدامة للسوق السكنية في الإمارات على المدى الطويل.



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Empower Inks Deal with TECOM Investments

Empower, the world's largest district cooling services provider, is set to provide 120,000 Refrigeration Tons (RT) district cooling services for **TECOM Investments'** Dubai Design District (d3) project, it was announced last month. The total value of the project is estimated at around USD204.19 million, and will be financed through Empower's revenues.

d3's district cooling network will be implemented in several phases. The first phase is expected to begin in the fourth quarter of this year, with a capacity of 10,000 RT. "This deal reflects the strategic relationship we have with Tecom Investments. This project is one of the largest and most important projects ever undertaken by Empower, as it demonstrates the sophistication of our world-class technology that services the Emirate's landmark real estate developments," said *Ahmad Bin Shafar*, Chief Executive Officer, Empower. "d3 will be an interesting and vibrant addition to our unrivaled networks across Dubai."

He continued, "Two plants, which will be following the latest standards in the district cooling industry, will



A photo taken during the agreement of D3 project

be built to supply the requested load. The plants will include Thermal Storage and will use TSE (Treated Sewage Effluent) to be aligned with the company's strategy of sustainability and saving natural resources."

Located close to Downtown Dubai and Business Bay, d3 is expected to be the creative hub in the Emirate's flourishing design scene, with spaces for art, fashion and luxury outlets. ■

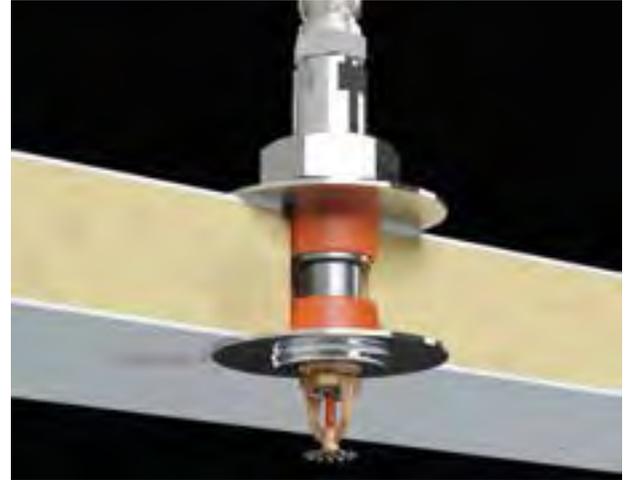


Victaulic Introduces VicFlex™ for Cold Storage Applications

Victaulic introduces the new VicFlex™ Style AB6 Bracket for cold storage applications – reducing hands-on installation time by as much as 75 percent. The new bracket is part of the VicFlex range of innovative flexible drops and patented fitting brackets designed to install more easily than traditional rigid piping systems whilst delivering more durable performance. VicFlex offers a convenient and safe solution, requires fewer man-hours to install, is cost effective for maintenance and retrofit applications, and lowers shipping costs with a more compact form.

“The new VicFlex Style AB6 Bracket for cold storage applications is going to revolutionize the way cold storage units are protected, installing up to four times faster than rigid pipe,” says James Keown, Victaulic Fire Protection Sales Engineer for the Middle East. “With this new technology you will no longer have to wrestle with rubber boots or messy foam sprays, or wait for glue to dry. There also is no need to cut and measure hard pipe, saving contractors precious time.”

In addition, the new VicFlex Style AB6 Bracket eliminates condensation making it a safer option for cold



The Victaulic VicFlex AB6 Bracket fits up to four times faster than rigid pipe

storage applications. If openings in the freezer wall are not sealed air-tight, condensation can drip down the sprinkler barrel and freeze, interrupting the sprinkler's spray patterns, which can be dangerous in the case of a hazard; with this new Victaulic technology you don't have to worry about that happening. ■

'ME by Melia' Hotel's Artist Renderings Unveiled

Omnibat unveiled last month the artist renderings of the Middle East's first 'ME by Melia' hotel, designed by renowned architect, *Dame Zaha Hadid*, in its flagship project The Opus. Located in Burj Khalifa District, The Opus will feature signature limited edition furniture pieces designed by Hadid. Each individual



The over USD0.7 billion Opus project is more than halfway complete

piece is significant, but should be considered within the overall ensemble of Hadid's architecture. The renderings unveiled by Omnibat detail the unique interiors of the ME Hotel lobby, the vertical café, the lounges and the reception area. “We are delighted to reveal today the interiors of the first 'ME by Melia' hotel in Asia,” said Mahdi Amjad, Omnibat Executive Chairman and CEO. “These images convey the remarkably inventive quality of Zaha's work; expressing a sculptural sensibility that reinvents the balance between solid and void, opaque and transparent, interior and exterior.”

Hadid has designed a sequence of dramatic event spaces for the ME Hotel. Shaped by functional and programmatic considerations, yet dependent on the overriding formal language of the design, the interiors express Hadid's investigations into the concepts of fluidity and of seamless spatial flow. The ME by Melia hotel will feature Michelin star restaurants, lounges and cafes across an area of 250,000 square feet, with entertainment options selected from the best in the Middle East, New York, Miami, London and Las Vegas, according to Amjad. ■

Departments

Corporate Happenings

- Gresam: An Eminent Acoustical Solution Provider.....P.48
- ADSC's Michael W. O'Neill Lecture Award Announced.....P.48

E-News

- Steel Industry Related App Launched.....P.49
- Wilks Launches New Website.....P.49

Interviews & Profiles

- ALYAF: Middle East's Expert in Geosynthetic.....P.50

Products & Services

- IROCK Track Jaw-3046 Crushing Plant.....P.51
- Flowcrete Soars at Mumbai International Airport's T2.....P.51
- Reinvented & Launched: Konecranes' New BOXHUNTER.....P.52
- The Truck-Mounted Lone Star LS T1 Geotechnical Drill.....P.52

Projects & Developments

- Accenture & Sadara Signed a Multi-Year Agreement.....P.53
- "Wessal Bouregreg": The USD1056 Million Project.....P.53

Gresam: An Eminent Acoustical Solution Provider

Gresam Company Ltd, established in 1986, member of **GRESAM Group of Companies**, and certified ISO 9001:2008, is specialized in Acoustic and Vibration Engineering Solutions, Products, Systems, and Applications. For more than twenty five years, Gresam has been actively involved in the reconstruction of Lebanon, and has proven to be one of the fastest growing, and highly professional suppliers of noise, vibration, and seismic control products and solutions in Lebanon and the Middle East.

The company provides a complete line of Architectural acoustics, soundproofing, noise control products, systems and solutions. It also supplies Mountings, special isolators, Seismic Restraints, PUR Elastomeric pads, and Neoprene Mounting pads to reduce and dampen vibration and structure-borne noise, as well as seismic isolators, restraints and systems. Experience and success have allowed Gresam to grow and expand its core capabilities to provide a complete package from design all the way to execution. Many of company products are ecologically friendly and may provide contribution points in several LEED categories.



Gresam for acoustics & vibration engineering solutions & applications

Gresam works with the client to plan the most effective sound and noise control treatment for his specific applications. With the wide variety of acoustical products available, it is critically important to choose the right products for your facility and your budget. ■

ADSC's Michael W. O'Neill Lecture Award Announced

The **International Association of Foundation Drilling, ADSC**, has announced the "ADSC Michael W. O'Neill Lecture Award". This Lecture Award honors Dr. O'Neill, one of the world's prominent experts in deep foundations, who passed away in 2003 leaving a legacy of exceptional contributions to the deep foundation industry both in academia and in prac-

tice. The inaugural Lecture Award will be presented in San Antonio, Texas at the 2015 International Foundation Congress and Equipment Exposition (IFCEE, which is sponsored by ADSC, the Deep Foundations Institute, the Geo-Institute of ASCE and the Pile Driving Contractor's Association) to *Jerry A. DiMaggio*, P.E., retired Principal Bridge Engineer and Geotechnical and National Program Manager with the Federal Highway Administration of the United States Department of Transportation. The ADSC Michael W. O'Neill Lecture Award will then be presented triennially at each future IFCEE "for outstanding contributions to the advancement of the state-of-the-practice in the design and construction of deep foundations through practical, applied research and/or through recommended improvements to design and/or construction methodologies." The establishment of an international lecture and award to honor Dr. O'Neill is the brainchild of Dr. *Anna Sellountou*, who studied under Dr. O'Neill and is now with **Pile Dynamics, Inc.** The idea was fully supported by ADSC, the sole underwriter of the lecture award. ■



Steel Industry Related App Launched

Robor is proud and excited to be the first South African steel tube and pipe manufacturer to announce the launch of an industry related “app” compatible with Android and iOS smartphones. The app (short for application) can be downloaded for free and offers users readily available information regarding the full Robor offering, as well as other useful information and tools applicable to steel products and services.

This app enables people out in the field, to have easy access, through a mobile device, to Robor’s steel products and services, as well as other useful industry related offerings, such as Steel Calculations, Steel Specifications and Smart Tools. The app will undergo continuous improvements and updates to remain the main app in the industry.

Established in 1922, Robor is a world-class manufacturer and supplier of welded steel tube and pipe, cold formed steel profiles and associated value added products. The company also supplies, distributes and adds value to carbon steel coil, sheet and plate and structural profiles. As one of the largest steel tube and pipe manufacturers



Robor’s “app” compatible with Android & iOS smartphones

in Southern Africa, Robor is active in most industries, including mining, transport - rail and road, construction, engineering, manufacturing, agriculture, energy, water and automotive. It also has the capability to manufacture specialized items suited to the unique requirements of these markets. ■

Wilks Launches New Website

Wilks – A Spectro Scientific Company is pleased to announce a new website focused on providing users with easy-to-use, portable analyzers for a variety of practical on-site measurements. The website features a tab format making it easy to access technical and reference information including application notes,



New WilksIR.com website

White Papers, videos and published articles that will assist customers in selecting the right product for their analysis requirements.

The website features application-specific, mid-infrared (mid-IR) analytical instruments – both for qualitative and quantitative measurements – that are ideal for use by non-technical personnel. While all Wilks instruments are specifically designed for easy, on-site field or at-line use, they are equally as useful in a testing laboratory - virtually anywhere repetitive measurements are needed - and they require little or no maintenance.

Wilks analyzers and spectrometers are the ideal analytical solution for a wide variety of measurement applications in the biofuels, petrochemical, environmental, quality control, and manufacturing industries. Easy-to-use operator interfaces allow for non-technical users to quickly and accurately obtain measurement results. They allow the analysis to be cost-effectively moved to the analysis location eliminating the wait for off-site lab results.

At company’s website, customers can browse detailed information by product, application, or industry – making it easier than ever to find the right product for their particular application requirements. ■

ALYAF: Middle East's Expert in Geosynthetic

ALYAF is a Saudi Arabian company established in 1992 as a specialized manufacturer of technical nonwoven geotextiles for a wide range of civil engineering applications including: soil stabilization for road and rail construction; pavement overlay; filters for sub-surface water drainage, shore protection and landscaping; and membrane protection for waterproofing, tunnel and landfill. **Arab Construction World (ACW)** magazine has conducted an interview with Mr. Eyad Al-Hasan, General Sales & Marketing Manager, to shed the light on company's activity in the Middle East in general and in Saudi Arabia in particular.

Q. What has ALYAF brought to Saudi Arabia?

Eyad Al-Hasan: ALYAF being the first and largest manufacturer in the Middle East has pioneered the development of nonwoven geotextile having supplied more than 300 million square meters to major and prestigious projects through active interaction with engineering consultants, project owners and contractors. ALYAF through its knowledge of the local conditions and its technical support division has provided engineered solutions to satisfy site specific and project requirement.

Q. What are your thoughts and insights on the geotextiles industry in the Middle East?

Al-Hasan: The geotextile industry in the Middle East continues to gain momentum as a result of the widespread acceptance of geotextile by the engineering community which has revitalized over the past two decades the benefits of geotextile as cost effective tools to many of the civil and environmental engineering problems.



Q. What are your current projects in the region?

Al-Hasan: ALYAF is actively involved in many projects and works closely with government ministries, municipalities throughout the Kingdom as well as with Aramco and the Royal Commission in Jubail and Yanbu.

Q. What new product ranges, innovations does ALYAF have?

Al-Hasan: ALYAF has embarked on an aggressive expansion plan to better respond to the increasing market need for quality geosynthetic products and has established a joint venture with UK based GEOfabrics to manufacture a new range of high quality geocomposite products at its production facility in Dammam. ALYAF also supply a range of high quality geogrid and geosynthetic clay liners offering customers a unique opportunity a comprehensive range of geosynthetic products from a single source.

Q. What sort of competition exists in this sector?

Al-Hasan: ALYAF has been operating in the Kingdom for nearly 20 years without peers and has established unparalleled reputation for offering products and services that exceed customer expectation. ALYAF is also well known in the market for its technical capability in terms of providing engineered solutions to meet project requirements. New comers into the Saudi market emerged during the last 12 months offering geotextile at low prices thereby causing the market prices to plummet to unprecedented levels. ■



Eyad Al-Hasan, General Sales & Marketing Manager, ALYAF

IROCK Track Jaw-3046 Crushing Plant

In response to customer demand, **IROCK Crushers** has expanded its product line to include the TJ-3046 Tracked Jaw Crusher. This high performance primary jaw crushing plant is designed for medium-scale operators in quarrying, demolition, recycling and mining applications. The TJ-3046 features a 13-cubic-yard feeder and includes a grizzly pre-screening grid. The feeder drive features a load control system to ensure continuous, uninterrupted crushing. An optional level sensor can be fitted to the jaw and control the feed rate to the crusher, therefore maximizing production. The jaw crusher has an inlet opening of 46 inches by 30 inches and is equipped with a hydraulic wedge adjustment to give operators total control of product size down to 2 inches.



TJ-3046 Tracked Jaw Crusher features high output

TJ-3046's high swing jaw generates an aggressive crushing action and accelerates movement of material into the crushing chamber. The 48-inch crusher discharge conveyor can stockpile up to 11 feet, 6 inches. A dirt conveyor is standard on the machine. The 110,250-pound TJ-3046 can be equipped with a wireless remote control and features track mobility for relocation around a jobsite or onto a heavy-haul

trailer and its hydraulic folding sides make for easier set up and tear down. The TJC-3046 is designed with easy operation, durability and efficiency in mind. A user-friendly electronic crusher control system with touch screen display is easy to operate and simplifies crushing, service and maintenance. ■

Flowcrete Soars at Mumbai International Airport's T2

Flowcrete has been involved in a major construction project at Mumbai's Chhatrapati Shivaji International Airport, which has seen a second terminal, Terminal 2 (T2), built on site in order to cope with huge increases in aviation traffic. The new four-level terminal sits on an impressive 439,000 square meter plot and can accommodate over 40 million passengers annually. The structure has been applauded for its ability to combine

state-of-the-art design and architecture with infrastructure and operational efficiency all the while ensuring environmental sustainability recognized through its LEED® GOLD Certification.

Following a rigorous tendering, evaluation and trial process, Flowcrete India's polyurethane car park coating system, Deckshield ID was selected for application across all of the facility's intermediate decks with a second system, Deckshield UV specified for peripheral areas exposed to direct sunlight. The material was installed by **Flowcrete India's** licensed applicator network in a phased project spanning over seven months and involving a 150-strong workforce. One of the greatest challenges throughout the installation process was the surface preparation phase. In total, 154,000 square meters of Deckshield ID and 7,500 square metres of Deckshield UV were installed on site, representing one of Flowcrete India's largest projects to date. The material was laid in a range of colors including dark grey on drive ways and light grey on parking bays with colored navigational markings and signage using Flowcrete India's Deckshield Linemarker. ■



Mumbai Airport India

Reinvented & Launched: Konecranes' New BOXHUNTER

After several studies, and backed by a thorough understanding of customer needs, **Konecranes** launched the BOXHUNTER and reinvented the RTG crane. The innovations at a glance: the operator has been brought down to earth. The cabin has been brought down to the truck lane, the heart of container handling action. The BOXHUNTER operating concept is unique: a complete re-thinking of RTG operation and operator ergonomics. "We are very pleased to announce the launch of the BOXHUNTER and are very much looking forward to offering this innovative crane to our customers in Middle East", says *Andreas Falk*, Port Cranes & Lifttrucks Sales Director **Konecranes Middle East**. "We are confident that this outstanding container crane that is an excellent value for money that will meet the needs of our clients", he adds.

BOXHUNTER is the outcome of an intense product development effort that reinvented the Rubber Tired Gantry (RTG) crane. The BOXHUNTER operating concept is based on advanced video and laser technology that Konecranes has developed for its top-of-the-line Automated Stacking Cranes (ASCs). Video cameras located at strategic points around the crane and a sophisticated



Konecranes' new BOXHUNTER will interest container terminal operators in different markets

Graphical User Interface in the cab give the operator excellent visibility everywhere he needs it. BOXHUNTER maintains a steady level of performance, around 15+ container movements an hour, while still offering the high reliability and low downtime that lie at the heart of the Konecranes philosophy and brand. ■

The Truck-Mounted Lone Star LS T1 Geotechnical Drill

Little Beaver makes transportation from site to site faster and easier with its Lone Star truck-mounted LS T1



The heavy-duty Lone Star LS T1 comes with Little Beaver's SSK1 soil sampling kit

geotechnical drill rig. It gives engineers and soil technicians an efficient, rugged and dependable drill for standard penetration tests (SPT) and sampling through tough soils in nearly any environment. The heavy-duty LS T1 comes with Little Beaver's SSK1 soil sampling kit, which includes a tower, pulley, third hydraulic valve and steel cathead. The kit allows users to perform standard penetration tests with Little Beaver's optional 140-pound safety hammer, split spoon samplers and AWJ drilling rod. Solid stem augers are available in 3- to 8-inch diameters, and the unit is capable of drilling 6-inch boreholes down to 100 feet.

The LS T1 drills can be mounted to the bed of a small truck or flatbed with Little Beaver's specially designed frames. It also can be mounted on a rugged, lightweight, single-axle trailer that is equipped with a 2-inch hitch, three leveling jacks and a spare tire. The frames on the truck-mounted models also feature jacklegs that stabilize the drill when it's mounted to a truck with a softer suspension. The LS T1 geotechnical drill has a hydraulic lift cylinder that raises and lowers the mast and can be folded down when the unit is moved. ■

Accenture & Sadara Signed a Multi-Year Agreement

Accenture and **Sadara Chemical Company**, a joint venture developed by the **Saudi Arabian Oil Company** and **The Dow Chemical Company**, have signed a multi-year agreement to help Sadara provide business and IT support services across the organization leading to the opening of Sadara's integrated chemicals complex in Jubail, which will be the largest petrochemical facility ever built in a single phase.

Accenture will help Sadara operate world-class technology practices across the enterprise including corporate and manufacturing applications and infrastructure services. Accenture will also help Sadara manage services for helpdesk, field support, workstation services and computer platform and network support, including data center operations. In addition, Accenture will work with Sadara to support the company's Saudization strategy, a government initiative designed to encourage employment of Saudi nationals.

"Following a rigorous evaluation and assessment process, Accenture was selected to support our drive in building Sadara as a best-in-class organization that is agile and poised to address both the current and future needs with leading edge technology and second-



to-none support and services," said *Ziad Al-Labban*, Chief Executive Officer of Sadara. "We look forward to working with Accenture and achieving our goals."

Sadara is building a fully integrated chemicals complex in Jubail Industrial City II, located in the Eastern Province of the Kingdom of Saudi Arabia. The complex will be one of the world's largest integrated chemical facilities, and the largest ever built in a single phase. Construction of the complex began in the fourth quarter of 2011 with the first plant start-up and first product expected by the second half of 2015, and with the site in full production by 2016. ■

"Wessal Bouregreg": The USD1056 Million Project

Wessal Capital, an investment fund initiated by His Majesty King *Mohammed VI* and which brings together five sovereign wealth funds, announces the launch of "Wessal Bouregreg", its second large-scale investment project. Focused on the cities of Rabat and Salé, the project aims to create a new cultural and leisure center designed for local residents and tourists alike.



The Wessal Bouregreg project represents a link between the river & the city

The framework agreements for this USD1056 million project were signed in Rabat last month, in the presence of His Majesty King Mohammed VI. The project is part of a national plan to position Morocco as a gateway to Africa.

Wessal Bouregreg: a major, large-scale development project aiming to create a new urban center

In conjunction with other projects that aim to enhance the region's social and environmental development, Wessal Bouregreg is Wessal Capital's second major investment project: it follows "Wessal Casa-Port", the USD722 million project launched in April to transform Casablanca's port area. Designed for local residents and tourists alike, Wessal Bouregreg will enhance both the cultural and tourist attractions of the Rabat and Salé metropolitan areas. By 2020, the country's ambition is to host 4 million tourists and create 63,000 jobs in this area.

Wessal Bouregreg reflects the Moroccan State's determination to support the economic and social development of the Rabat and Salé twin cities, and Morocco in general. Morocco offers unrivalled opportunities for investors. ■



Events

Event Preview

The International Supply Chain Excellence Program,
Gulf Edition 2014.....P.55

Event Review

Another Successful Year for Project Qatar 2014.....P.56
Building Industry Makes Important Contacts at
BATIMAT RUSSIA.....P.57
wire 2014 und Tube 2014 in Düsseldorf:
Strong Together for Future Markets.....P.57

15-17



Photo Courtesy of wire 2014 and Tube 2014

The International Supply Chain Excellence Program, Gulf Edition 2014

With increasing focus on diversification from being an oil-dependent economy to achieve sustained economic development, the Middle East is going through a significant transformative phase. With a significantly potential demand on its manufacturing supply base, excelling in manufacturing and supply chain practices could very well decide on future corporate struggles. To address this rising necessity, **Frost & Sullivan** brings forth the International Supply Chain Excellence Program, Gulf Edition 2014. Keeping in congruence with Frost & Sullivan's program, currently running in India, Thailand, and Turkey, the Gulf Edition aims to assist companies in adopting supply chain excellence practices across industries through assessments, feedback, and benchmarking. The Gulf Edition of this program will be primarily covering the Gulf Co-Operation Council (GCC) countries with special focus on Bahrain, Oman, the Kingdom of Saudi Arabia and the United Arab Emirates (UAE). As part of this program, while the top performing companies would be recognized, all the assessed companies would be handed over a scorecard and an evaluation feedback would be shared. The sectorial benchmarking against



An Integrated Model: Testing Beyond Compliance on Nine Parameters

global peers will be included in the feedback with more focus into the operational plans / projects of the participants. This, when integrated into the business plans in the subsequent years, would deliver maximum leverage and a clear value benefit to the participating company. ■

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Another Successful Year for Project Qatar 2014



His Excellency Sheikh Ahmed Bin Jassim Al Thani, Minister of Economy & Commerce, inaugurated Project Qatar 2014

Project Qatar 2014 welcomed in its first day's attendance different ministries, government sector officials, embassies, decision-makers and industry professionals in the construction sector. A number of high-profile dignitaries attended the opening ceremony including, His Excellency the Italian Deputy Minister of Foreign Affairs, Mr. *Lapo Pistelli* and Mr. *Andrea Ferrari*, Trade Commissioner of the Embassy of Italy in Qatar. Exhibitors and visitors alike are delighted at the prospect of meeting industry leaders to discuss over USD200 billion worth of projects that are in the pipeline to be completed in Qatar in the lead up to the 2022 FIFA World Cup and achieving the Qatar National Vision 2030.

His Excellency Sheikh *Ahmed Bin Jassim Al Thani*, Minister of Economy and Commerce, representing His Excellency Sheikh *Abdullah Bin Nasser Bin Khalifa Al Thani*, the Prime Minister and Minister of Interior, officially inaugurated Project Qatar 2014 at the Qatar National Convention Centre (QNCC). Mr. *Rashid Nasser Sraiya Al Kaabi*, Chairman, **IFP Qatar**, said: "We are honored by the support of the Prime Minister and Minister of Interior, HE Sheikh Abdullah Bin Nasser Bin Khalifa Al Thani. We would also like to express our gratitude to His Excellency Sheikh Ahmed Bin Jassim Al Thani, Minister of Economy and Commerce, for the privilege to inaugurate Project Qatar 2014 and we also deeply thank the Qatari government, our esteemed exhibitors and sponsors for their unlimited support and generosity since the inception of Project Qatar in 2004."

Early public reaction highlighted the importance of the exhibition for Qatar's construction industry with particular comment on the diverse range and professionalism of exhibitors, products and services.

Rawad Sleem, Project Manager of Project Qatar, said: "The initial opening numbers have exceeded 11,500 visitors, and are likely to exceed 45,000 visitors by the end of the exhibition. Moreover, we are thrilled to hear early positive feedback from participants exploring new partnerships and discussing potential lucrative business deals. Industry professionals such as architects, contractors, consultants, designers, construction professionals, as well as government officials and regulators, project owners and project managers, are able to connect and discuss the most innovative projects, high-profile case studies and solutions from across the regional and international markets."

Ayman Ladkani, Sales and Marketing Manager of **United International Co.**, said: "We have had a very productive first day at Project Qatar. It is a unique platform in the region and we have been fortunate to hold many fruitful discussions involving potential deals from both local and international participants. Leading companies from across the globe are here at the QNCC and are ready to do business. It is an excellent indication of what is to come in the next few days ahead."

An enthusiastic visitor attending Project Qatar noted that: "As a first time visitor to Project Qatar, it has totally exceeded my expectations. I am amazed at the size and diversity of the exhibition as well as the volume of industry professionals and businesspersons here. I am delighted to have been able to access such a diverse range of companies from across the globe as well as SMEs from the region, especially through the B2B matchmaking platform for which I registered on the Project Qatar website; it has allowed me to make appointments with several exhibitors that match my interests and work profile." ■

Building Industry Makes Important Contacts at BATIMAT RUSSIA

At BATIMAT RUSSIA 2014 a total of 327 exhibitors from Russia, the CIS and Europe presented products and services from across the building sector. 52,315 visitors came to this approximately 30,000 square-meter exhibition, to review all the latest developments in facade solutions, construction materials, architecture, design and interiors. The show, which took place for the first time under its new name, also featured a program of 30 specialist lectures at which attendees were able to update their own expertise.

The exhibitors regard BATIMAT RUSSIA as an important networking platform and a gateway to the Russian market. That was underlined by *Heiko Faust*, Sales Manager at **DTS-Systemoberflächen GmbH**, an important manufacturer of electron beam-cured surfaces: "With the diversity of building trades represented here and the international spread among the exhibitors, this year's BATIMAT RUSSIA has met our expectations in full. We were particularly pleased that we were able to pave the way for new business in Russia."



Over 300 exhibitors & approx. 53,000 visitors attended BATIMAT RUSSIA

Hans-Werner Carl, Area Sales Manager at **Sauerländer Spanplatten GmbH & Co. KG**, commented: "At our stand in the exhibition section on doors and locks we welcomed more visitors than at last year's event. We made new contacts with prospective customers in Russia and Belarus. For us, Crocus Expo is the most suitable exhibition venue in Moscow." ■

wire 2014 und Tube 2014 in Düsseldorf: Strong Together for Future Markets

The upward trend continues: The more than 2,500 international exhibitors from the wire, cable and tube industries can look back on five successful trade fair days. Inspired by the upswing of the steel market, the exhibiting companies presented their product innovations at the Düsseldorf Exhibition Centre during the two trade fairs, wire 2014 and Tube 2014. "The trade fairs took place at exactly the right time. Now several companies are planning on investing in order to position themselves for continued competition," explained *Joachim Schäfer*,



wire und Tube 2014 recorded exhibitor growth

Managing Director accountable for the fairs at Messe Düsseldorf. "Once again, wire and Tube recorded exhibitor growth as well as a significant increase in booked exhibition space," he continued with satisfaction. Networked worldwide and globally active, the exhibitors presented themselves to the 72,000 trade visitors that travelled to the exhibition halls on the Rhine from 104 different countries. They came to learn about the latest machines, equipment and products for the wire, cable and tube processing industries at the no. 1 international trade fairs, wire – International Wire and Cable Trade Fair and Tube – International Tube Trade Fair. "As world market leader in the steel tube industry with two plants in Düsseldorf, we believe it was the right decision to participate at Tube 2014 – for the second time in a row now after a long break," summarizes *Norbert Keusen*, CEO of **Vallourec Deutschland GmbH**, quite satisfied after five trade fair days. "Our customers were especially interested in the offshore foundation system PREON marine, with which wind turbines can be anchored in the ocean significantly more quickly, cost-effectively and environmentally-friendly than with the methods commonly used today," Keusen continued. ■

2014

June

 Lebanon

Project Lebanon 2014

The 19th International Construction Trade Exhibition for Lebanon & the Middle East
03 - 06
BIEL
Beirut – Lebanon

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 Qatar

4th Annual Underground Infrastructure & Deep Foundations Qatar

Boosting underground infrastructure development through implementation of effective tunneling & piling technologies
08 - 11
InterContinental Hotel
Doha – Qatar

Info:

Tarannum Syeeda
IQPC Middle East
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September

 Kuwait

The Big 5 Kuwait

International Building & Construction Show
22 - 24
Kuwait International Fair
Kuwait – Kuwait

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 China

Wire & Tube China 2014

The 6th All China International Wire, Cable, Tube & Pipe Industry Trade Fair
24 - 27
Shanghai New International Expo Center (SNIEC)
Shanghai – China

Info:

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Web: www.mds.cn

October

 UAE

POWER-GEN Middle East

The Event Focusing on Power Generation, T&D & Water
12 - 14
Abu Dhabi National Exhibition Center (ADNEC)
Abu Dhabi – UAE

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 Saudi Arabia

Saudi Rail

The International Exhibition for Rail, Metro Lines & Urban Transportation
27 - 29
Riyadh International Convention & Exhibition Center (RICEC)
Riyadh – Saudi Arabia

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Riyadh Exhibitions Company (REC)
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Fax: +966 11 229 5612

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Web: www.recexpo.com

November

 Saudi Arabia

Saudi Build 2014

The 26th International Construction Technology & Building Materials Exhibition
10 - 13
Riyadh International Convention & Exhibition Center (RICEC)
Riyadh – Saudi Arabia

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 UAE

The Big 5

The largest construction exhibition in the Middle East
17 - 20
Dubai World Trade Center
Dubai – UAE

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December

 Saudi Arabia

Saudi Water & Power Forum (SWPF)

The Leading Water & Power Exhibition in Saudi Arabia
1 - 3
Al Faisaliah Hotel
Riyadh - Saudi Arabia

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Arab Construction World (ACW) (ISSN 1015-8316) published monthly by:

CPH World Media s.a.r.l.

Courier Address: Hamra, Commodore, barouk St., Chatila Bldg (Above Commodore Laundry), 2nd Fl. Beirut-Lebanon,

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عالم الإنشاءات العربي (ISSN 1990-3936) تصدر شهرياً عن:

سي بي أتش وركلد ميديا ش.م.م.

عنوان البريد السريع: الحمرا، الكومودور، شارع الباروك، بناية شاتلا (فوق مصبغة الكومودور)، الطابق الثاني

العنوان البريدي: ص.ب: 13-5121 شوران، الرمز البريدي: ٢٨٠٢-١١٠٢ بيروت-لبنان

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تمت الطباعة عند شمس للطباعة والنشر

جميع حقوق النشر محفوظة لسي بي أتش وركلد ميديا، لا يسمح بإعادة نشر المعلومات الإلكترونية أو المطبوعة في مجلة "عالم الإنشاءات العربي" إلا بإذن مسبق من سي بي أتش وركلد ميديا

Addressing Saudi Arabia's High Housing Demand Through Private Sector



الحلّ لأزمة الإسكان في السعودية تكمن في القطاع الخاص

Best Choice Real Estate Development underscored the role of the private sector in addressing the housing shortage in Saudi Arabia during its participation at the recently concluded 5th Jeddah Urban Development and Real Estate Investment Event – Cityscape Jeddah 2014. During the conference, *Samer Choucair*, Best Choice's Deputy Chief Executive Officer and Head of Investment, pointed out that, while the Saudi Government has made major progress towards meeting the high demand for affordable houses, private real estate developers must do its part and work alongside the public sector to find realistic long-term solutions to the housing shortage. He noted that some developers have already been engaged in a series of meetings with the Housing Ministry for possible partnerships.

"It is also good to note that regional real estate developers used to focus on luxury housing, but many developers are now shifting their gaze to affordable housing units amidst the high demand from low-income and middle-income families. We understand that the challenge of narrowing the gap between the lack of supply and the high demand is enormous, and Best Choice fully supports the government in its efforts to address the problem," he said.

Currently, most Saudi nationals still continue to live in rented accommodations. Rising rents and failure to meet bank qualifications for housing loans are making it difficult for many Saudi citizens to own a house. High land prices and high construction costs are also compounding the housing shortage. The government moved to address the housing deficit through implementation of reforms and policies.

Amidst strong public-private partnership and government-led initiatives, industry experts say real estate activity in the Kingdom is expected to grow by 5.8 percent and its share to the Gross Domestic Product is poised to hit 7.2 percent in 2014 compared to 6.8 percent in 2013.

Choucair concluded: "These are indeed exciting times for the housing industry in the Kingdom, which is the region's biggest real estate market. The high demand is fueling the steady market growth. Best Choice capitalizes on this by offering sustainable and high quality housing solutions in the Kingdom and beyond, reaching other key areas in the region."

Samer Choucair

Deputy Chief Executive Officer and Head of Investment
Best Choice Real Estate Development Company

شدّدت «الإختبار الأفضل للتطوير العقاري» على أهمية دور القطاع الخاص في سدّ النقص الحاصل في عدد الوحدات السكنية في مختلف أنحاء المملكة العربية السعودية. وجاء ذلك خلال مشاركتها في معرض جدة لتطوير المدن والإستثمار العقاري الخامس (سيتي سكيب جدّة ٢٠١٤). وقدم سامر شقير، نائب الرئيس التنفيذي ومدير قسم الإستثمار لـ «الإختبار الأفضل»، خلال الحدث عرضاً تقديمياً لفت فيه أنه على الرغم من التقدّم الملحوظ الذي أحرزته الحكومة السعودية في تلبية الطلب المتنامي على المساكن الاقتصادية في السوق المحلية، لا بد من العمل على ترسيخ علاقات التعاون بين شركات التطوير العقاري الخاصة ومؤسسات القطاع العام في سبيل إيجاد حلول عملية وطويلة الأمد لأزمة الإسكان في السعودية، مشيراً إلى أن بعض هذه الشركات أجرت مفاوضات مع وزارة الإسكان السعودية لبحث سبل التعاون في هذا المجال.

وأضاف شقير: «نلاحظ أن العديد من شركات التطوير العقاري القائمة في المنطقة قد انتقلت في أعمالها من التركيز على المشاريع السكنية الفاخرة إلى التركيز على الوحدات السكنية الاقتصادية في سبيل تلبية الإحتياجات والمتطلبات المتنامية للأسر ذات الدخل المنخفض أو المتوسط. ونحن ندرك أن تقليص الفجوة بين العرض والطلب على الوحدات السكنية في السعودية يشكّل تحدياً كبيراً، ولذلك نقدم الدعم الكامل للحكومة السعودية في جهودها الحثيثة للتغلب على هذه المشكلة.»

وتشير الإحصائيات الأخيرة إلى أن معظم المواطنين السعوديين لا يمتلكون شققاً سكنية خاصة بهم بل يقيمون في مساكن مستأجرة، نظراً لإرتفاع أسعار إيجارات الوحدات السكنية وعدم قدرتهم المالية على إستيفاء الشروط المطبقة للحصول على قروض سكنية؛ إضافة إلى إرتفاع أسعار الأراضي وتكاليف الإنشاء. وعكفت الحكومة على معالجة مشكلة النقص في المعروض السكني من خلال تنفيذ سياسات وإصلاحات هيكلية متعدّدة.

وبالنظر إلى الشراكات الإستراتيجية بين القطاعين العام والخاص، إضافة إلى المبادرات الحكومية الموجهة، يتوقع الخبراء أن ينمو قطاع العقارات في المملكة العربية السعودية بنسبة ٥.٨ في المئة خلال العام الجاري. كما يُتوقع أن ترتفع نسبة مساهمته في إجمالي الناتج المحلي بواقع ٧.٢ في المئة بالمقارنة مع ٦.٨ في المئة العام السابق.

وإختتم شقير: «دخل قطاع العقارات السعودي والذي يعد أكبر سوق عقارات في المنطقة، مرحلة من النمو والإزدهار في ظل تزايد الطلب على الوحدات السكنية. وتوسعي «الإختبار الأفضل» إلى الإستفادة من هذه الطفرة العقارية من خلال توفير أفضل الحلول السكنية المستدامة وعالية الجودة في السوق المحلية وسائر الأسواق الإقليمية الأخرى.»

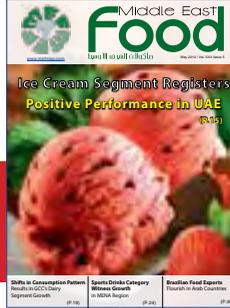
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* MHW magazine is currently suspended due to restructuring; we will resume publishing it later this year.

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