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Lebanon’s New Emblem
(p.12)

The Future:
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(p.32)

Qatar Construction Sector
Resilient In Face of Global Economic Crisis
(p.46)
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Dear Readers,

Of all the major economies, China's extra investment in construction-focused package will be longer term. This investment of US$225 billion per year for two years is equivalent to an extra 7% on top of China's US$540 billion per year construction output.

This investment of US$225 billion per year for two years is equivalent to an extra +40% boost to China's US$540 billion per year construction output.

The total additional spending to shore-up economic growth in 2009 and 2010; however, schemes such as Brazil's housing-focused package will be longer term.

The government plans to increase public expenditure by 20 per cent this year, Dubai Department of Finance director general Nasser Al Sheikh told a national newspaper. The government plans to increase public expenditure by 20 per cent this year, according to arabianbusiness.com. From Qatar to Saudi Arabia, governments are increasingly beginning to play a bigger role in projects.

The Saudi Arabian government also announced its national budget for 2009, with a planned expenditure of US$127 billion at its center, an increase of US$17 billion on its 2008 budget. But the figure represents a decrease of US$9 billion on actual spending for 2008, which reached a sum of US$136 billion. The budgetary increase, marking the largest planned expenditure in the nation's history, comes despite a predicted fall in revenue for 2009 to US$109 billion, a result of tumbling oil prices from last summer's high of US$147 per barrel. The budget plans for a deficit of US$18 billion, and is intended to inject confidence into the faltering private sector, by communicating the public spending initiatives.

In case you have any remarks or comments, do not hesitate to send us your feedback to:

info@acwmag.com

Enjoy reading the issue.

Rawad Nassif
Associate Editor & Researcher
r.nassif@cphworldmedia.com

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March 2009 / Vol. XXVII Issue 03
A World of Business Opportunities

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Business Links:
Industry links: The section announces international and regional manufacturers and suppliers of particular equipment and products.

Agents and distributors available in the MENA: This section carries the contact details of agents and distributors as well as companies active in a certain sector in the Middle East and North Africa.

Representatives seekers: Service that provides companies seeking representation in the MENA food market with the opportunity to be out there. Complete contact details are listed as well as region(s) of interest.

Buyers’ Guide: This section features a 9 x 6 cm space where every company can include its logo, contact details and over 50 words introducing its products & services.
E-mail: businesslinks@cphservices.net

Career Center:
Career builder: Area opening up doors before employees and employers to find the right candidate to occupy the right job.
E-mail: careercenter@cphservices.net

Coming Events:
The Coming Events service offers a comprehensive listing of construction events, conferences, seminars, and workshops. It enables interested users to set their calendars ahead. Information includes name of exhibition, venue, date, organizers’ complete details and addresses.
E-mail: comingevents@cphservices.net

Project Monitor:
This section highlights the latest news about major projects in the MENA. It is divided into four subsections:
- Tenders announcements, requesting interested companies to make proposals, noting the deadline to do so;
- Biddings presented by the different interested parties;
- Awarded contracts with info about the company; and
- Latest updates about the projects status along with work progress.
E-mail: projectmonitor@cphservices.net

Promo Shots: Promo Shots is a new service serving to promote a company’s products and/or services through direct e-mail. A mail merge is sent to a vast number of regional and international decision-makers found in ACW’s database.
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CPH World Media s.a.r.l.
Team
Founders
Mr. Fathi Chatila
Mrs. Mona Chatila (1944 - 2006)

Management
President & CEO
Mohamad Rabih Chatila (B.Arch) / mr.chatila@cphworldmedia.com
Administrative Manager
Abdul Rahman Hallak / ar.hallak@cphworldmedia.com
Administrative Assistant
Rana Said / r.said@cphworldmedia.com

Editorial & Research / Content Writing
Editor-in-Chief
Mohamad Rabih Chatila (B.Arch) / mr.chatila@cphworldmedia.com
Editorial & Research Manager / Production Manager
Rodrigue El Balaa / r.elbalaa@cphworldmedia.com
Editor & Researcher / Content Writing Manager
Amer El Haddad / a.elhaddad@cphworldmedia.com
Associate Editor & Researcher / Content Writer
Rawad Nasser / r.nasser@cphworldmedia.com

Circulation & Marketing / Business Development
Circulation & Marketing Manager
Samah Dafre / s.dafre@cphworldmedia.com
Senior Circulation & Marketing Officers
Hanan Shoaib / h.shoaib@cphworldmedia.com
Ihsan Chehabeddine / i.chehabeddine@cphworldmedia.com

Information Technology
IT Operations Manager
Rana Said / r.said@cphworldmedia.com
Advanced IT Operators
Ali Zaraket / a.zaraket@cphworldmedia.com
Mazen Bou Diab / m.boudiab@cphworldmedia.com
Mohammad Shehab / m.shehab@cphworldmedia.com

Mail & Services
Mail & Service Manager
Abdul Rahman Hallak / ar.hallak@cphworldmedia.com
Mail & Service Officer
Ali Zaraket / a.zaraket@cphworldmedia.com

Graphic & Web Design
Acting Design Director
Samer Manasfi / s.manasfi@cphworldmedia.com
Senior Graphic & Web Designer
Zora H. Sleiman / z.sleiman@cphworldmedia.com

E-mail: editorial@acwmag.com
E-mail: careercenter@cphservices.net
E-mail: comingevents@cphservices.net
E-mail: projectmonitor@cphservices.net
E-mail: promoshots@cphservices.net
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Dear Editor,

... I was wondering whether you are planning to highlight the construction sector in Iran in any of your remaining issues for this year.

Aliakbar Salahi - Iran

Dear Mr. Salahi

We will be featuring a country report section on Iran in ACW’s September issue. For further details please take a look at ACW’s 2007 Media Info by visiting www.acwmag.com

Dear Editor,

I am a Russian architect working in Lebanon and I am currently doing studies on Trenchless Technology used in various construction fields. Would you be interested in publishing an introductory piece to my work as an article in ACW’s May issue?

A. Tiurin – Lebanon

Dear Mr. Tiurin,

We greatly appreciate your interest in ACW, please send your article (750-1500 words + high resolution photos) to editorial@acwmag.com and we will consider it for publication.

Dear Editor,

I was impressed by the Wave & Tidal Power report in January issue. I urge you to always bring in such special reports since it is of great interest for us.

H. Fathi - Oman

Dear Fathi,

Thank you for your positive feedback. It is one of our duties to provide our readership with beneficial and valuable information about the construction industry in the world in general and in the MENA region in particular. Serving this end, we will always seek such coverage.

Dear Editor,

Being one of ACW’s readers, I have been noticing the variety of topics that the “Word of The Expert” section deals with. On what basis do you usually choose these topics?

Miike - Japan

Dear Mr. Miike,

This section is a forum in which professionals from the Arab Region and the world express their point of view and communicate their experience in the construction and power sectors. You are welcome to state your own “word” in this section just send it to editorial@acwmag.com

Dear Editor,

I am a professor in the field of Mechanical Equipment with around 7 years experience in the field. I am interested in joining your Honorary Editorial Consultants (HEC) team. Would you please provide me with information on how to cooperate with you in this concern?

Prof. Jamal - Amman

Dear Prof. Jamal,

We are more than delighted to know of your interest in our HEC membership. You are kindly requested to send us your resume along with sample of your work to be reviewed before we respond to you in this regard.
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OMAN

Oman Pursues Big Port Despite Downturn

Oman will build a US$1.8-billion port at Duqm as part of its economic development plan despite a global downturn and a projected drop in oil revenue, Minister of National Economy Ahmed Mekki told Reuters on February 19.

The government expects “reasonable growth” for 2009 despite the financial crunch in part, because it aims to pursue all the major state-led development projects it has launched, using surplus oil revenue or state reserves, if needed, he said.

Oman plans to diversify its economy away from oil income dependency, which makes up about 75 percent of national revenue, and is pursuing a number of large-scale infrastructure projects.

The government has already awarded US$58.8 million worth of infrastructural projects since the beginning of the year, according to the state figures. Last week, Oman said it has shortlisted six companies for the construction of the US$1.5-billion Muscat airport terminal building.

The Duqm development in central-eastern Oman aims to create a new city to serve as a key administrative, industrial, and commercial center. The first phase of the Duqm project calls for the port and a dry dock expansion. Phase 2 includes an airport, an extensive road network and a free trade zone for industries.

GCC

Real Estate Projects under Construction in the GCC

More Than US$2.39 Trillion

The total value of real estate projects under construction in the GCC is more than US$2.39 trillion, reports FutureBrand, a REIDIN.com Information Partner. In addition, investments from across the GCC into the Dubai real estate market have crossed US$1.36 billion in 2008, thereby underlining the emirate’s strong pull among regional real estate players and its role in driving the UAE’s position in global land sales rankings, where it currently holds the fourth highest spot.

In 2008, the UAE has accounted for 5.8 percent of worldwide land sales, which also reflected an increase of 1.348 percent since 2007, according to FutureBrand. The highest total GCC investment into Dubai came from the Saudi Arabian investors, who pumped over US$544.6 million into the market, followed by Kuwaiti investors, who have shelled out more than US$272 million. Although a distant third, Omani investments into the Dubai real estate sector have topped US$222.7 million, which is followed by Bahraini and Qatari investors, who have injected US$167.4 million and US$31.8 million respectively into the emirate’s property market. Despite a projected slowdown on the UAE economy’s growth from an expected 7.7 percent in 2008 to 1.5 percent in 2009, real estate investments are still continuously being funneled from various GCC countries, which indicate strong consumer trust in the market. With an ever-growing repute as one of the top destinations for multibillion dollar developments, Dubai plays a pivotal role in the growth of the real estate market within the GCC. Although there are speculations of a drop on the GCC’s gross domestic product (GDP) in 2009 from 6 percent to a minimal 2.8 percent, continuous activity within Dubai’s real estate sector can still be expected due to the government’s efforts to soften the impact of the credit crunch by ensuring liquidity and supporting major developments.

According to information cited by REIDIN.com, the Dubai Government has spent about 33 percent of its budget or US$12 billion on infrastructure, with aims to cater to the emirate’s rapidly growing population, which welcomes a total of 25,000 people per month or 33 people per hour.

Demand for Steel Could Drop By 35% in GCC Area

The slump in the Gulf’s construction industry due to the economic slowdown could see the demand for steel drop by as much as 35 percent, according to analysts. The Dubai Multi Commodities Center (DMCC) estimated that steel consumption in the region could drop to 9 million tons this year - down from about 14 million tons in 2008.
Construction in parts of the region has slowed with projects delayed or even cancelled. A report by the research firm Proleads stated that US$582-billion worth of projects in the UAE are now on hold. However, this is not indicative of the entire region as countries like Abu Dhabi are continuing to see growth.

The construction industry accounted for more than 80% of Gulf steel demand. Steel rebar prices are now below US$500 a ton, down from the peak of around US$1200 a ton seen in the fourth quarter of 2008.

Qatar is set to become the newest member of the World Green Building Council (WGBC) with the formation a non-profit organization to promote sustainable development. The Qatar Green Building Council (QGBC) is being established by the Qatar Foundation (QF) and aims to encourage the construction industry to adopt environmentally friendly building practices. QGBC will also develop a green building model that will become the standard for all developers in Qatar, said QGBC founder Issa Mohamed Al Mohannadi in a report in the Gulf Times.

Qatar’s construction industry is growing at a phenomenal rate with 800 buildings planned for the capital Doha in the next few years. Establishing the QGBC is, therefore, a significant step towards Qatar becoming more environmentally friendly, he said.

Bahrain’s government has authorized the Ministry of Housing to issue bonds worth nearly US$800 million to finance housing projects in the Gulf state. Bahrain’s Minister of Housing, Sheikh Ibrahim bin Khalifa Al Khalifa, said that financial institutions will issue the bonds in segments over the next six months. The Ministry of Housing will use the bonds to fund projects in the housing sector, the recipient of the bulk of Bahrain’s capital investment budget over the next two years. He stressed that housing sector expenditures were a government priority and government spending was needed to break out of the global economic crisis. Bahrain’s Housing Bank will continue to provide housing loans to citizens, using the same criteria applied before September 2008, he added.

More than US$30-billion worth of major projects in property, infrastructure, and other industries are underway, in spite of the global financial crisis, according to the latest edition of Bahrain “Who’s Who Directory.” A spate of investor-friendly reforms and a privatization drive have spurred Kingdom of Bahrain’s growth as a preferred investment destination within the Gulf region, according to a comprehensive report in the directory titled “Bahrain enters a vibrant new era of growth.”

Fewer opportunities will be available for construction and real estate companies in the UAE during 2009, according to a new survey. MEED’s latest AWCS/MEED Gulf Construction Outlook Survey has also indicated that more contract business will shift from Dubai to countries such as Qatar and Saudi Arabia. Focusing on four key categories of market outlook, client/contractor relations, construction management, and construction costs, the closed-door survey was launched at the Arabian World Construction Summit 2009 held in Abu Dhabi earlier in February.

The findings of the survey are based on the responses of more than a third of senior representatives, including CEOs from leading construction companies in the GCC region. The survey also revealed 96 percent of respondents expect to see an increase in concerns between construction clients and contractors across the GCC in 2009.

QATAR

Qatar Green Building Council On The Way

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BAHRAIN

US$800-Million Bond Issue for Housing Projects in Bahrain Agreed

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UAE

Fewer UAE New Build Contracts In 2009

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**ACW 2008 Excellence Awards**

**Winners Announced**

Arab Construction World (ACW), the pioneering business-to-business magazine for the Building, Construction Machinery, Roads, & Power Generation sectors in the Middle East & North Africa, is proud to announce the winners of its 2008 Excellence Awards. The program aims to celebrate great innovations and exquisite achievements within the rapidly evolving construction industry in the Middle East & North Africa region. The judging panel was comprised of ACW’s Honorary Editorial Consultants (HEC) who worked together with the magazine’s editorial team. The HEC board is a group of renowned international professionals. Decisions were based upon the study and analysis of each company’s performance and activity documentation and the cyclic comparison of the observed results.

**Developer of the Year**

Nakheel is one of the world’s largest privately held real estate developers, and a key player in realizing the vision of Dubai for the 21st century: creating a world class destination for living, business, and tourism.

Nakheel is developing an iconic portfolio of innovative landmark projects in Dubai, and now in key markets around the globe, across a range of sectors: residential, commercial, hotels, retail, and leisure. Nakheel’s projects are conservatively estimated to be worth US$80 billion. Upon completion Nakheel’s waterfront projects will have added more than 1,000km of shoreline to Dubai’s coastline.

Nakheel’s Dubai portfolio currently includes Palm Jumeirah, Palm Jebel Ali, Palm Deira, The World, Waterfront, Jumeirah Islands, Jumeirah Village, Jumeirah Park, Jumeirah Heights, The Gardens, Discovery Gardens, Ibn Battuta Mall, Al Furjjan, International City, and Dragon Mart. Having already played a leading role in establishing Dubai as a leading tourism destination, Nakheel’s planned projects will include up to 250 new hotels - a 50-percent increase on the current number. The Palm Jumeirah alone is more than doubling the number of beachfront hotels in Dubai, with more than 30 hotels and 14,000 rooms.

Nakheel is a key entity within Dubai World. Dubai World is one of the world’s largest holding companies and supervises a portfolio of businesses and projects for the Dubai government across five continents and more than 100 countries. **RIN 88**

**Fastest developing company**

**CMCS**

Collaboration, Management, and Control Solutions (CMCS), a leading provider of Project and Portfolio Management solutions and an authorized representative of Primavera in the Middle East, is conducting a region-wide campaign to further strengthen its presence in the Middle East. The company is preparing the opening of new offices in KSA and Bahrain while broadening new operations in Jordan, Qatar, and Lebanon that it launched in 2008. This strategically follows a solid 50 percent revenue growth and a more than 25 percent increase in the number of employees in 2008 despite challenging regional and global economic conditions. CMCS started 2009 with the launch of a road show plan that will go throughout the entire region throughout the year: it will soon co-organize a major user event with Oracle Primavera as well. The company’s goal is to familiarize key sectors throughout the region with the best Project Management practices and their indispensable value amidst the current economic crisis.

In 2008, the company secured partnerships with major companies such as BARWA Real Estate and Al Habtoor Leighton Group, among others. It also conducted 95 public training courses attended by 953 delegates and organized 185 in-house training sessions for 1,707 trainees as part of its certified products and accredited project management & value engineering training programs, reinforcing its commitment to helping organizations maximize the potential of their personnel. CMCS’ inclusion of the Hard Dollar project cost management and Synchro 4-dimensional construction simulation software solutions to its product portfolio last year further increased demand for its services. **RIN 89**

**Health & Safety Award**

**Drake & Scull**

This award goes to Drake & Scull International PJSC (under incorporation) (DSI or the Company), a leading service provider of mechanical, electrical, and plumbing (MEP) contracting and civil contracting in the UAE. Drake & Scull joined “Build Safe Dubai” (BSD) in 2008, as part of its ongoing commitment to highest standards of health, safety, and welfare.

“BSD” is a not-for-profit organization consisting of major international and local companies in the construction industry that share a common cause: worker welfare and safety. BSD aims to promote an agreed minimum of health and safety standards for the benefit of all workers in the construction industry in Dubai and the UAE as a whole. The organization also seeks to communicate best practice and the importance of construction safety to all project stakeholders.

DSI has a dedicated quality, health & safety, and environment (QHSE) department which reviews, maintains and implements QHSE policies across all divisions in line with international standards and regulations, while promoting a positive health and safety culture.

Earlier in October, DSI also joined the Emirates Green Building Council (Emirates GBC), a not-for-profit organization formed in July 2006 with the goal of advancing green building principles for protecting the environment and ensuring sustainability in the UAE. To date, DSI has designed, constructed and maintains the district cooling plant and network at Jumeirah Beach Residence, the largest of its kind at the time of construction, Dubai Festival City, Saudi Iron & Steel Company (Hadeed), as well as many more around the GCC. **RIN 90**

**Innovation of the Year**

The Bobcat T2250 is a compact machine which combines for the first time the features and benefits of three different machine types— the telescopic handler (lifting height and reach), with the advantages of an articulated loader (loading ability), and those of a skid-steer loader (compactness, maneuverability, and —especially— versatility). All-new model, the smallest in the Bobcat range with maximum lift capacity of 2.2 ton and maximum lift height of 5.2 m complements the existing range of Bobcat telehandlers with lift capacities from 2.5 to 4 tons and maximum lift heights ranging from 5.6 to 17.4 m. With a height of 1970 mm, width of 1800 mm and length (without attachment) of 4190 mm, the 4.5 ton T2250 is as compact as Bobcat’s largest skid-steer loader models, and, yet, offers a loading performance comparable to that of an equivalently sized articulated wheeled loader.

Designed and tested to the level of a loader, the T2250 provides all the attributes expected of a compact jobsite telehandler, combining maneuverability, agility, and speed. But for the first time on a telehandler, there is a choice of quick-change attachment mounting systems: the traditional front carrier, either with manual or hydraulic locking, or the “Bob-Tach” system, with either mechanical or hydraulic locking, which takes the T2250 into places where no other telehandler has ventured to go. **RIN 91**
**Interior Design of the Year**

The winner in this category is **Neos**, the highest lounge in the city of Dubai, which is located at the Address, Downtown Burj Dubai - the newest hotel brand to enter the international luxury hospitality scene.

Visitors will find Neos on the hotel's 63rd floor where the panoramic 360 degree views across the city offer the ‘wow’ factor. The name Neos derives from the Greek word ‘neo’ meaning new and ‘eos’ meaning dawn, bringing a young and fresh venue to Dubai’s social scene. Here guests discover a glamorous and exciting destination where Dubai’s jet-set meet and mingle.

The hotel’s interior designers, WA International have taken an inspirational trip into the past and created in Neos a space that has its roots in Art Deco with a contemporary twist, the design concept encapsulating elegance, exclusivity and exquisiteness.

Exiting the lift at Neos, guests are immediately drawn to the floor-to-ceiling windows where the view encompasses Burj Dubai - the world’s tallest building - the nearby Burj Dubai Lake and spectacular sights of the city.

Neos offers a host of features which are both aesthetically pleasing as they are stimulatingly entertaining. Apart from the panoramic views outside, there are tasteful touches inside which provide a flow of movement: the beverage outlet provides a flow of movement: the beverage outlet surrounds the high gloss black lacquer lift case, adding to the dramatic shimmering 'feel'.

With a contemporary look and an elegant retro influence, Neos portrays a sense of relaxation and sophisticated lifestyle. The décor is enhanced by six-meter high columns made out of mirror polished stainless steel cladding which are down-lit, creating a highly striking effect.

Complementing the design features are furnishings which are understatedly elegant and in a monochromatic color palette with black, silver, and grey, enlivened with rich wine for contrast and warmth. **RIN 92**

**Product of the Year**

Traditional pool pumps are high energy consumers. In fact, it's not unusual for a pump to consume as much energy as all other home appliances combine. Fortunately, there is Pentair's IntelliFlo® VS-3050, a breakthrough innovation that's brimming with new technology to drastically reduce energy costs and provide many other benefits as well.

First, IntelliFlo® VS-3050 uses an exclusive permanent magnet motor (used in hybrid cars) that is fundamentally more energy efficient and typically accounts for "base energy savings" of 30%.

Second, the IntelliFlo® VS-3050 is a unique variable speed pump with four selectable pre-set speeds in the control panel. This allows customized programming of optimum pump speeds for specific tasks – filtering, heating, cleaning, spa jets, waterfalls, etc. Using slower speeds takes advantage of a fundamental pump law: by going slower, power consumption is reduced. The result is additional savings: potentially up to 90% compared to even so-called high efficiency single-speed or two-speed pumps. **RIN 94**

**Project of the Year**

Waterfront City is planned to become a lively city center 24 hours a day for a predicted residential population of 92,000 and a working population of approximately 310,000 people. Covering a land area of more than 330 hectares, Waterfront City comprises of a central island surrounded by four neighboring districts: the Boulevard, Madinat Al Soor, the Resort, and the Marina.

Located on the western shores of Dubai, the entire Waterfront development will transform 1.4 billion square feet of empty desert and sea into an international community for an estimated population of 1.5 million people that is twice the size of Hong Kong Island.

The Central Island district, a grid of five streets by five streets, is the defining element of the design of Waterfront City; it will create walkable distances between blocks, easing the flow of traffic passing through the city. To ensure maximum shading and climate control in the city, the higher building masses are concentrated on the south side also making efficient use of wind flows for cooling. To guarantee further protection from the sun each city block is lined with arcades and planted with trees.

All of the surrounding areas as well as the Central Island will be connected by a comprehensive public transport system, including Dubai’s new metro train system. Waterfront City will also have a direct link to the Al Maktoum International Airport, currently under construction and set to become Dubai’s main airport hub. **RIN 95**

**Sustainable Development of the Year**

Chicago architecture firm **Adrian Smith + Gordon Gill Architecture’s (AS + GG) design of Masdar’s headquarters in Abu Dhabi’s Masdar City, the world’s first zero-carbon, zero-waste city fully powered by renewable energy.**

Masdar’s headquarters, in Abu Dhabi’s Masdar City, the world’s first zero-carbon, zero-waste city fully powered by renewable energy, will be the world’s first large-scale, mixed-use “positive energy” building, producing more energy than it consumes. In addition to being the location of Masdar Headquarters, the building will accommodate private residences and ‘early bird’ businesses starting up in the city.

AS+GG teamed with Chicago-based MEP engineers Environmental Systems Design and structural engineers Thornton Tomasetti on the design, which includes numerous systems that will generate a surplus of the building’s energy, eliminate carbon emissions, and reduce liquid and solid waste.

The complex will utilize sustainable materials and feature integrated wind turbines, outdoor air quality monitors, and one of the world’s largest building-integrated solar energy arrays. Compared with typical mixed-use buildings of the same size, the Headquarters will consume 70 percent less water. **RIN 96**
The Cedar Island
Lebanon’s New Emblem

Noor International Holding is planning on building a massive island covering an area of around 331 square kilometers facing the coast of Lebanon. The Cedar Island lends itself as a luxurious residential, commercial, and touristic project; its geographical location along the Lebanese coast allows it to play a vital role in attracting tourists and savvy residents looking for an exotic lifestyle or escaping from the city.

Noor International Holding, located in Beirut, presented to the Lebanese official authorities the development of Lebanon’s Cedar Island project facing the Lebanese coast in order to get the approvals. The project is an artificial island in the sea, the largest artificial tree in history - portraying Lebanon’s national symbol: the cedar.

The idea originally occurred to Dr. Muhammed Saleh while in the plane hovering over the beautiful Lebanese greeneries and the blue azure sea. He thought of something original, unique that will attract Lebanese immigrants to invest in their homeland. He firmly believes that the Lebanese waves are ideal enough to support a floating/artificial island, and the Lebanese shore that witnessed the sail of the Phoenician ships with the first Alphabet to the world, deserves a tribute. This project is qualified enough to stand out as is the case worldwide with the Reef Island -Bahrain, the Pearl Qatar, Lusail City Qatar, the Eden Island-Seychelles…

The island will include service, entertaining, touristic, commercial, and residential compounds characterized by extreme luxuriousness that is in harmony with the modern lifestyle, in addition to the availability of the best accommodations.

Moreover, the company mentioned that it will be the main developer of the project and that it has started its calls with many Lebanese investors residing in Lebanon and abroad, Arabs, and other investment parties.

The chairman of the board of directors in Noor International Holding, Dr. Saleh, declared that the project aims at reinforcing Lebanon’s position as a pioneer touristic and investment figure at the international level and at attracting visitors and buyers from all over the world to visit Lebanon. Furthermore, Dr. Saleh clarified that the company’s board of directors visited some political leaders in order to get the “bless-
ing” regarding the idea of the project’s presentation and he confirmed that the idea was welcomed, yet not approved. The board of directors visited also the Investment Development Authority of Lebanon (IDAL), which is responsible for encouraging investments into Lebanon, in order to start the authorization’s procedures. He expressed his hope for getting the official approval related to the project, in addition to the issuance of the necessary authorizations as soon as possible due to the serious interest of investors in joining the giant “Cedar Island” project. Dr. Saleh added that the project would provide around 50,000 job opportunities, clarifying that the company’s strategy is to form alliances with the most important companies in this field to provide the best services for the project. In addition, he mentioned that further details would be announced regarding the Cedar Island as soon as necessary authorizations and decrees from the competent Lebanese parties are obtained. According to Dr. Saleh, it is expected that the accomplishment of this project will take 3 to 4 years. Dr. Saleh confirmed that the project, in its plans, takes into consideration the protection of the maritime environment without causing any damages to it due to the fact that some of the Island’s parts will be the cedar’s branches floating above the sea surface. Noor International Holding is committed to reclamation laws when selecting the project’s location, and is commencing comprehensive Environmental Impact Assessment (EIA) studies to get the final approval for the project. In addition, marine and topographical studies essential for the projects feasibility and sustainability are carried out, stressing the importance of both economical and environmental aspects of the project. He also mentioned that many investment companies showed their interest in investing in this project, among them are: Lebanese-Saudi Affairs Council, the Saudi-based company Al Hokair Group for Tourism and Development, Qatari and Bahraini companies, and El Bebehene Group in Kuwait. The company revealed that fast negotiations are taking place with several companies in order to present the consultative services, among these companies is the American company B.A., specialized in the water projects worldwide. In order to carry out construction works related to the project, the company made contracts with the biggest universal companies such as Panasonic Corporation, the universal Chinese Hawawi Corporation, the British Homes Express Corporation specialized in the real estate marketing, and Navy International Group specialized in controlling the environmental pollution. 

**ACW Staff**
Solar-Cell Glass
Glass with Super Powers

Glass is now being considered as one of a number of practical technologies that would help combat global warming, and so there’s, at present, fierce competition among researchers and glass manufacturers to come up with a marketable, cost-efficient solar-cell glass that could provide houses and buildings with a good share of clean, inexhaustible energy from the sun. Below, we present two recent works conducted by one of the world’s leading research centers, each working on the integration of solar cells into the process of glassmaking.

New Windows Could Halve Carbon Emissions
People could live in glass houses and look at the world through rose-tinted windows while reducing their carbon emissions by 50 percent, thanks to QUT Institute of Sustainable Resources (ISR) research, Australia.

Professor John Bell said QUT had worked with a Canberra-based company Dyesol, which is developing transparent solar cells that act as both windows and energy generators in houses or commercial buildings. He said the solar-cell glass would make a significant difference to home and building owners’ energy costs, and could, in fact, generate excess energy that could be stored or on sold. Professor Bell said the glass was one of a number of practical technologies that would help combat global warming which was a focus of research at the ISR.

"The transparent solar cells have a faint reddish hue, but are completely see-through," Professor Bell said. "The solar cells contain titanium dioxide coated in a dye that increases light absorption. The glass captures solar energy that can be used to power the house, but can also reduce overheating of the house, reducing, thus, the need for cooling."

Professor Bell said it would be possible to build houses made entirely of the transparent solar cells.

"As long as a house is designed throughout for energy efficiency, with low-energy appliances it is conceivable it could be self-sustaining in its power requirements using the solar-cell glass," he said. He said the glass would be on the market in a few years. Professor Bell said the solar-cell glass was the subject of two Australian Research Council Linkage grants to QUT researchers to investigate ways to increase its energy absorption and to reduce the effects of "shadowing", where overcast skies and shadows from trees or other buildings can cause loss of collected power.

Screen-Printed Solar Cells in Many Colors and Designs, Even Used In Windows
Newly designed solar cells can be screen-printed in a wide array of colors and patterns to allow them to be attractively incorporated into building design. The solar cells also can be used on windows, providing shading from glare while generating electricity. The new solar cells were developed by the Fraunhofer Institute for Solar Energy Systems ISE (Germany), who presented their new technology in Tokyo at Nanotech 2008, the world’s largest trade fair for nanotechnology.

The key component of the new modules is an organic dye which in combination with nano-particles converts sunlight into electricity. Due to the small size of the nano-particles, the modules are semi-transparent. This aspect makes them well suited for façade integration. The solar module prototype is amber in color. It is possible, however, to produce the modules in other colors, or even to print images or text on the module so that it serves as a decorative element. These design options open up an entirely new range of possible applications. Instead of mounting the solar module on the roof of a building, the electricity producer could be integrated into windows. Used in this way, the new technology not only prohibits direct sunlight from entering the building interior but also generates electricity at the same time.

"We don’t see the dye solar cell as being a rival to the conventional silicon cell," says Fraunhofer ISE physicist Andreas Hinsch. The module prototypes only achieve an efficiency of four percent, which is not sufficient for rooftop applications in comparison to the performance of crystalline silicon solar cells. On the other hand, dye solar cells have a clear advantage when it comes to façade integration. The wafer-thin electricity-generating film, which lies between two glass panes, is produced from nano-particles and applied using screen printing technique. This technique makes it possible to integrate any desired image on the module. A glass façade made of this material can be given a decorative and promotionally effective design, such as a colorful company logo, and delivers electricity into the bargain.

The dye solar module is still a prototype. The Fraunhofer researchers have developed it together with industry partners in the ColorSol project funded by the German Federal Ministry of Education and Research BMBF. One particular challenge posed by the new technology is that the narrow gap between the two glass panes must be hermetically sealed so that no air can get in and destroy the reactive substances inside. The Fraunhofer experts have come up with a special solution to this problem. Instead of using polymeric glue like their competitors, they have decided to work with glass frit. To this end, glass powder is screen-printed onto the panes, and fused with them at a temperature of around 600°C.

Fatigue tests under various weather conditions have shown that the solar cells still function properly even after several thousand hours. The long-term stability as such, however, has yet to be officially certified.
Jotun Paints proudly presents the first-ever superior technology in the Middle East to protect property against harsh weather conditions experienced in the region. Jotashield SuperDurable, built on a Hybrid Technology binder, offers UV and weather protection for up to 20 years. Every molecule of paint has a hard shell that protects the surface from wear and tear, and a soft core that gives flexibility against hairline cracks. This acts as a vital component to fight water and humidity and to avoid carbonation of the concrete. Jotashield SuperDurable offers the ultimate protection and unmatched peace of mind.

Cross section of a Hybrid Binder Molecule

Hard shell
Acrylic polymer
Silicon polymer
Soft core

20 YEARS PROTECTION
New Regional Market Director for Europe, the Middle East, and Africa

At the beginning of January 2009, Giuseppe Viggiani became responsible for the market region of Europe, the Middle East, and Africa (EMA) in the company management of the Bystromic Glass Group. He replaces Martin Heim, who chose to leave the group at the end of last year.

An Italian native and skilled in mechanical engineering, Giuseppe Viggiani brings extensive sales experience to his new position. His previous assignments include Area Sales Manager for Latin America with Siemens as well as company management positions with elevator manufacturer Schindler and most recently with SBB Cargo, the Swiss Railway. “For me, the customer is king,” says Giuseppe Viggiani, who considers the presence of sales personnel enormously important. The first trade fairs of the year will give him the opportunity to familiarise himself intensively with the glass industry.

HAWA-Telescopic 80/G: Move Two Glass Doors Simultaneously

Elegant sliding solutions for glass doors in confined spaces are no longer a problem. Hawa has launched its new sliding hardware system HAWA-Telescopic 80/G. The system is designed to move two glass sliding doors simultaneously. This space-saving hardware system is particularly recommendable for installations in narrow alcoves to separate small rooms such as kitchens, bathrooms, or offices. It received its premiere at the glasstec trade show in Düsseldorf in October 2008. The advantage of the HAWA-Telescopic 80/G: both glass door panels slide telescopically, as the name implies. They only need half the closing width when open – an ideal solution when a trendy, transparent sliding solution is in demand even though space is rather limited. The sliding hardware systems opens up a whole realm of new room design options for interior designers, glaziers and metal workers, architects and planners.

Telescopic technique and HAWA-Junior technology in one package

The new telescopic sliding hardware system is based on the HAWA-Junior 80, proven a million-fold and renowned around the world. Its parentage guarantees first-class technological quality which is reflected not least in superior running smoothness and a long lifespan. The HAWA-Junior trolley with its plastic rollers and maintenance-free slide bearings keeps things quiet when sliding.

Telescopic technology does away with troublesome guiding elements in the walk-through area as the two glass sliding doors weighing up to 80kg each mutually guide one another. Track stops with steplessly adjustable retention springs hold the doors firmly in position when open and closed. The retention spring is adjustable to suit each particular door weight.

A fiberglass-reinforced toothed belt provides positive traction transmission to the glass doors. This technology is maintenance-free and characterized by a high degree of resistance: the belt shows no sign of undesirable stretching even after heavy use. The toothed belt system has another advantage: it effectively prevents slippage.

Guide channel and HAWA-Toplock optional

Hawa offers a guide channel which can be fitted into the floor to provide a flush finish for use with the telescopic hardware. The front glass panel runs in the channel, effectively preventing any rattling caused by sliding or draught. The HAWA-Toplock locking system with wall profile is also easily integrated.

Glass retainer profiles are available in a plain anodized finish or untreated for customized painting. Four drill holes ensure the glass panel is fixed securely to the profile. This mechanical connection prevents the glass from slipping after assembly even when subject to heavy use or extreme climatic conditions.

Hawa AG has added another trendy glass hardware system to its Junior sliding hardware family in the shape of the new HAWA-Telescopic 80/G.
It has over 10,000 customers and exports its products over 50 countries.

PREFABRIK YAPI
PREFABRICATED BUILDINGS, CONTAINERS, UNWELDED STRUCTURE TECHNOLOGY, FIBERCEMENT BOARD.

Prefabrik Yapı established in Istanbul, Turkey in 1989, is a leading company of Hexim Holding. It is among the biggest companies in Turkey and around the world with its technology, capacity and high quality products. It has over 10,000 customers and exports its products over 50 countries. The production is occurred 70,000 m² open and 30,000 m² closed area. All architectural designs and engineering calculations are done by our specialized technical department by using SAP 2000, X-Steel, StruCAD, AutoCAD and ArchiCAD 9TR programmes.

PRODUCTION FIELDS:
1) Light weight steel structure prefabricated buildings; (Modular panel system)
   a) Modular constructions with fiber cement (cement with natural fiber) board coated,
   b) Modular constructions with furnace painted galvanized steel sheet coated,
   • Prefabricated office buildings
   • Prefabricated dining-hall buildings
   • Prefabricated dormitory buildings
   • Prefabricated wc-shower buildings
   • Prefabricated social institution buildings (residences, inrirmaries, hospitals, military buildings, guesthouses, schools, nurseries, showrooms, etc.)
2) Containers
   • Flat pack containers (Demountable)
   • Portacabins
   • Mobile containers, (with trailer)
3) Steel Constructions - Pre Engineered Buildings
   • Factory buildings, storage buildings, industry establishments
4) Steel Sinks

CERTIFICATES
• ISO 9001:2000 (Quality management system certification)
• GOST Certificate
• Russia Fire Safety Certificate
• Russia Health Certificate
• Ukraine Hygiene Certificate
• Russia Harmful Material Emission Certificate
• Ukraine quality certificate
• Certificate of compatibility to Turkish Standards (fiber cement)
• EN 13501-1A1 Class Fire Resistance Certificate
• CE Certificate of Fiber cement

CAPACITY
For Prefabricated Buildings: 40,000 m²/month.
For Containers: 1,500 pcs/month.
For Steel Constructions: 15,000 m²/month.

SERVICES:
• Planning and design,
• Building manufacturing facility,
• Loading,
• Transportation organization,
• Assembly
• Electrical and sanitary installation process inside the building,
• Painting facility,
• De-mounting and mounting facility,
• After-sale services,
Introduction

Modeling utilizing simulation can be applied either in general- or specific-purpose simulation environment. General-Purpose Simulation (GPS) is based on formulating a simulation model, of the system under study, using simulation language software by using simple programming coding statements. GPS model is developed by formulating the problem based on the collected information. Then, construction of the conceptual model takes place, and, finally, the model is programmed. GPS software systems have been developed for a wide range of strategies such as: AweSim (Pritsker et al 1997) and GPSS/H (Crain 1997). In construction, several GPS programming languages have been developed including Micro-CYCLONE (Halpin and Riggs 1992) and STROBOSCOPE (Martinez 1996).

On the other hand, special-purpose simulation (SPS) is a creation of work platform or template for specific domain of application. In this case, the modification, by the end-user, is limited to the input parameter(s) of a predefined system without changing its characteristics. Several computer simulation applications in construction have been introduced such as: resolving construction disputes (AbouRizk and Dozzi 1993), earthmoving operations (Marzouk and Moselhi 2004), construction of incremental launching bridges framework (Marzouk et. al. 2007), and concrete-paving operations on Interstate-74 (Hassan and Grouber 2008). This paper presents a special purpose simulation model that aids contractors in planning cut-and-cover tunnels using secant pile walls. This model has developed using STROPO-SECOPE (Martinez 1996) as a general purpose simulation language to mimic tasks involved in the construction operations. The proposed model has been coded using Microsoft Visual Basic 6.0 to facilitate data entry.

Cut-and-cover using Secant Pile Walls

The secant piles are large diameter bored piles which overlapped at a close centers (concreted in situ) and can be used to form a wall. The piles may be taken down to any required foundation level and it can be reinforced. The secant piles are driven first (without reinforced) since they are sliced down in boring intermediate piles (see Figure 1). With good workmanship considerable water tightness is possible. The concrete at the top of the piles can be finished to support the roof structure covering them. The advantages of secant pile walls are: increased construction alignment flexibility; increased wall stiffness compared to sheet piles; Can be installed in difficult ground conditions; and Less noisy construction. On the other hand, the main disadvantages of secant pile walls are: verticality tolerances may be hard to achieve for deep piles, and total waterproofing is very difficult to obtain in joints.

The tunnel construction with cut-and-cover method using secant pile walls is divided into equal segments (20–30m) along the tunnel length. It involves nine main processes: 1) segments preparation, 2) construction of secant pile walls, 3) construction of capping beams, 4) construction of plug and dewatering, 5) construction of anchors and installing of steel anchors' connecting beams, 6) construction of bottom slab segments, 7) construction of side walls segments, 8) construction of top slab segments, and 9) Segments backfilling (see Figure 2). The first process, segments preparation, is executed in two tasks: i) survey, and ii) general excavation and leveling.

The first task is executed to coordinate the position of each segment according to the tunnel path while, the second task includes excavating and leveling the soil till the top level of secant pile walls. This process is repeated for each segment. The second process, construction of secant pile walls, involves the construction of plastic piles (primary piles) and construction of reinforced concrete pile (secondary pile). The reinforced concrete piles are constructed between every two plastic piles. The plastic pile can be constructed by first locating and positioning of temporary casing using survey and pile drilling rig machine. Then, the pile drilling machine drills the ground till the required depth. Finally, pouring of plastic concrete and removal of casing take place. On the other hand, the reinforced concrete pile can be constructed by first locating and position of temporary casing using survey and pile drilling rig machine. Then, the pile drilling...
Machine drills the ground till the required depth. During pile excavation, a steel cage should be prepared and fixed. After drilling of pile and preparing of steel cage, the steel cage is installed into pile hole. Finally, pouring concrete into pile hole and removing of casing take place (see Figure 3). This process is repeated for each primary and secondary pile in tunnel construction. The third process, construction of capping beam, is executed after constructing the number of piles that one capping beam responsible for. Given the fact that each capping beam is responsible for a number of reinforced concrete piles (e.g., 20 piles), the capping beam is constructed after the construction of these piles. The capping beam is constructed to connect piles together and, subsequently, the piles act as a wall. The capping beam can be constructed by first excavating soil to the base of the capping beam and trimming the piles head. Then, preparing and fixing of reinforcement take place. After that, the formwork can be assembled. At this stage, concrete can be poured and cured and finally, forms can be removed. The fourth process, construction of plug and dewatering, is executed when the surrounding structures is sensitive to dewatering works. In this case, a plug should be constructed. It is constructed by first locating of injecting points. Then, injecting of cement underground, at a known depth according to design, to build the plug layer. After settlement of cement, the dewatering works can be started by drilling of dewatering wells to get water out and have a dry area for construction. It should be noted that, plug is not constructed if the surrounding structures are not sensitive to water since it is constructed with long duration and high cost. The fifth process, construction of anchors and installing of steel anchors’ connecting beams, is started after completion of capping beams and dewatering works for one segment. So, the soil can be excavated to anchor design depth. The anchor is constructed by first drilling the anchor hole using the anchor drilling rig machine. Then, a wire bundle is installed into the anchor hole to fill it with cement. Once the cement is settled, the grout can be pumped into soil behind the anchor to stick it with soil and increase its strength. The steel anchors’ connecting beam can be installed after grouting a set of anchors (3-6). Once the steel anchors’ connecting beam is installed and grout is settled, the anchors in this beam can be tensioned (see Figure 4). The sixth process, construction of the bottom slab segments, is started by excavating the soil till the base of the plain concrete. Then, pouring of plain concrete takes place. After settlement of the plain concrete, the insulation layer can be placed. After that, the reinforcement bars, which are either fabricated in site or in outer workshop, are placed to form the reinforcement cage of the bottom slab segment of the tunnel. Then, forms can be erected and water-stop can be installed. At this stage, concrete is ready to be poured and cured, and finally, forms can be removed. The seventh process, construction of side walls segments, is started after removal of forms of the bottom slab. The side walls segment is constructed by fixing the steel reinforcements which are either fabricated in site or in outer workshop in the tunnel’s sides to form the steel cage of the tunnel’s wall segment. Once the steel is fixed, the forms of the tunnel’s wall segment can be erected as shown in Figure 5. After assembling of forms, the concrete can be poured and cured, and forms can be removed when concrete gains enough strength that allows the construction of next process. The eighth process, construction of top slab segments, is started by shuttering of forms for the top slab to provide support for concrete until it achieves sufficient strength to support its own weight and loads. Then, fixing of steel bars takes place; subsequently, concrete pouring can be performed. Finally, forms can be removed to start the next process. The final process, segments backfilling, is executed after removing the segment’s forms of the tunnel’s top slab. The tunnel may be backfilled with clean soil or by the excavated soil according to its quality and specifications. This process is executed for each segment.
Case Study
This case study presents El-Giza tunnel which is constructed in El-Giza governorate, Egypt (Marzouk et. al. 2008-a, Marzouk et. al. 2008-b). This tunnel aims at solving a traffic jam problem existing in Giza square by eliminating a traffic signal at the intersection of Morad Street and El-Giza Street (see Figure 6). The tunnel has a total length of 450 meters with an average width of 8.5 meters. The tunnel is constructed using open cut method with secant pile wall except for the mid part (Zone III) which is constructed using cut-and-cover method with secant pile wall.

Figure 7 depicts the construction of open cut method with secant pile in El-Giza tunnel. This case considers the construction of the tunnel’s zone III using simulation network shown in Figure 8. Table 1 lists the input data and the assigned resources. The remaining input data for the considered case study can be found elsewhere (Marzouk et. al. 2008-a, Abdallah 2008).

The data were fed to the simulation model using 1,000 simulation replications in order to calculate time of execution. The model provided the finish time of Zone III to be 113.7 and 115.7 working days, corresponding to 50% and 85% probabilities as shown in Figure 9.

Summary
This paper presented a model for construction of tunnels using cut-and-cover method with secant pile walls. The model accounts for uncertainties and interaction between tasks and resources that occurs in the construction operations. The construction of tunnels using secant pile walls involves nine processes: segments preparation, construction of secant pile walls, construction of capping beams, construction of plug and dewatering, construction of anchors and installing of steel anchors’ connecting beams, construction of bottom slab segments, construction of side walls segments, construction of top slab segments, and backfilling. A case study was presented to demonstrate the practicality of the proposed simulation model.

Authors:
1 Associate Professor, Structural Engineering Department, Faculty of Engineering, Cairo University, Egypt.
2 PhD. Candidate, Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign (UIUC), Illinois, U.S
3 Professor of Construction Engineering and Management, Structural Engineering Department, Faculty of Engineering, Cairo University, Egypt.

References could be provided upon request
Delivery of TBM to China Railway Tunnel Group (CRTG) For the Shenzen & Guangzhou Metro Projects, China

The China Railway Tunnel Group (CRTG) has accepted delivery of the first of two Lovat RME246SE EPB TBMs. The TBMs will be utilized in the construction of the Shenzen Metro and Guangzhou Metro projects located in Guangdong Province, China.

Following the signing of the plant acceptance, the first TBM (RME246SE Series 24600) arrived at the Guangzhou jobsite on January 12. The site assembly has begun and excavation commenced on January 31, 2009. CRTGs second Lovat TBM (RME246SE Series 24700) is nearly complete. Once complete, the TBM will be disassembled and delivered to the Shenzen jobsite in mid-March. The 6.3-meter diameter TBM (series 24600) will bore 2500 meters of tunnel. Geology along the tunnel alignment is characterized by soft ground and soft to hard conglomerates (including limestone and granite, up to 150MPa). The soft grounds are expected to consist of clay, mucky soil, silt, and medium-to-coarse sands. The tunnel will be driven entirely under the groundwater level, (above the tunnel invert) varying from 7 to 16 meters. Maximum EPB pressure is anticipated to reach up to 4bar.
Lovat will continue to provide after-sales assistance and on-site support.

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Design and Construction:
- **Foundations:** bored cast-in-situ piles, post grouted piles, caissons, driven piles, minipiles, jet grouting.
- **Deep excavations:** diaphragm walls, bored pile walls, soldier pile walls, grouted anchors.
- **Ground improvement:** vibro flotation, CSV, vibro replacement, dynamic compaction, wick drains, jet grouting.
- **Ground water control:** deep wells, cut-off walls, soft gel and jet grouting.

Bauer International Abu Dhabi
Tel.: +971-(0)-2-6721405
Fax: +971-(0)-2-6725994

Bauer Spezialtiefbau Dubai
Tel.: +971-(0)-2-6725994
Fax: +971-(0)-2-6725994

Bauer Spezialtiefbau Sharjah
Tel.: +971-(0)-6-5744740
Fax: +971-(0)-6-5744744

Bauer Spezialtiefbau GmbH
86522 Schrobenhausen, Germany
Tel.: +49 8252 97-1178
Fax: +49 8252 97-1496
Visit our website: www.bauer.de

visit us at: www.acwmag.com
Using Superkites and Winches to Generate Electric Power

By Harry Valentine

Kites may generate electric power from high-altitude winds in many ways. They may carry generation equipment at a high altitude and transmit power to the ground via insulated cables. The kite technology may also generate cyclic tensile forces on the cable and transmit those forces to ground level to generate electrical power. It may also be possible to coordinate multiple parallel groups of such kites to generate electrical power in a single installation.

Two cable winches may be mounted on the same driveshaft and operate back-to-back. The driveshaft would drive electrical generation equipment and as one winch reels out, the other winch would reel in. The cables of each winch would lead outward at an angle of 180 degrees to pulleys located 50 to 100 meters apart. Each cable would loop around the pulley to a sled on rails. The system of winches, cables, pulleys, and two sleds on rails may all be mounted on a single structure placed on a circular rail.

Each sled would serve as the mounting point for three to six control cables of superkites. Up to 10 superkites, at progressively higher elevation, may be mounted in a series on each system of control cables and to each sled, giving 20 superkites. One sled would be at maximum outer extension, while the other sled would be at minimum inward retraction. The control cables of the kites at maximum outward extension would re-adjust to provide minimal coefficient of drag, while maintaining sufficient coefficient of lift to keep the kites aloft. The adjacent set of control cables would reset to provide maximum coefficient of drag at sufficient coefficient of lift to keep those kites aloft.

Each set of kites would alternately pull on a set of cables to move a sled, activating one side of the winch system and driving electrical generation equipment. The winch driveshaft may drive two independent flywheel-equipped alternators in opposite directions using one-way clutches. Each alternator would only produce electricity when a tension load exists on the cable driving it, and would, otherwise, run freewheel awaiting its next generation cycle. Instead of electrical generation equipment, the winch-driveshaft may alternately drive water pumps (hydraulic storage) or air pumps (pneumatic storage).

It would be possible to employ two parallel batteries of superkites and two pairs of winch-driveshafts to drive one pair of counter-rotating alternators. One driveshaft would be hollow and contain a smaller concentric driveshaft that would be driven from the companion winch-driveshaft and drive the alternators through a second set of one-way clutches. The two sets of parallel superkites would operate 90 degrees out phase with each other. When one set of kites on one cable system reaches the end of the travel cycle, the other set of kites on the companion cable system would be in the middle of the travel cycle and would keep the electrical alternators continually rotating and producing electrical output. The rail-mounted sleds of each set of kites could be staggered at intervals of 50 meters to 100 meters.

It is possible to use two parallel sets of superkites to pull on two bidirectional winch sets that are mounted in-line (collinearly). The winch sets will drive through two sets of one-way clutches to rotate a single alternator in one direction. The cables on one winch set would pull from the bottom side. An observer standing upwind of the installation would see the right-hand kites pulling cables that drive the winch sets. The main tension load on one of the cables
Several researchers have theorized on the optimal flight path of kites used to generate electrical power at ground level. The discussion revolves around oval flight paths in both the longitudinal and transverse direction as well a figure-8 flight path in these directions. A battery of superkites with multiple control lines attached to a single sled could fly either an oval path or a figure-8 path in either the longitudinal or transverse direction. The flight paths of several parallel batteries of such kites would have to be restricted to the longitudinal or fore-and-aft directions and may likely be an oval flight path.

Abu Dhabi and Seychelles Partner to Develop Wind Power on Mahé

Masdar, Abu Dhabi’s multi-faceted future energy initiative, and the Seychelles government have recently announced a collaborative agreement to develop renewable energy in the Seychelles.

Preliminary studies have indicated that wind energy, solar energy, and waste-to-energy options will be able to supply the pristine island of Mahé with clean, renewable power. Under this collaborative agreement, it is expected that feasibility studies and the required environmental assessment will be undertaken to determine the positioning of wind turbines in several locations around Mahé Island.

An initial target of 18 megawatts of electricity generated from wind power is envisaged, which could initially supply at least 10 to 15 percent of Mahé Island’s total energy demand, offsetting the need for expensive imports of traditional diesel and heavy fuel oil.

“This collaboration is a direct result of our leadership’s mandate of diversifying our renewable energy portfolio through strategic international partnerships,” said Sultan Al Jaber, Chief Executive Officer of Masdar. “This wind power project reflects the commitment to sustainability by both the Abu Dhabi and Seychelles governments.”

“Wind power is a viable, clean and renewable energy resource that must be harnessed to reduce our dependence on imported fuel and ensure the preservation of the Seychelles’ stunning natural beauty for future generations,” said James Alix Michel, President of the Republic of Seychelles.

“We have been working closely with Masdar for several months to identify the most effective renewable energy solution for our island nation with the least environmental and visual impact.”

Emission reductions resulting from the project will be monetized under the Clean Development Mechanism (CDM) framework of the Kyoto Protocol as Certified Emission Reduction (CER) credits.
Demand for wind power is increasing around the world, and so is the need for wind turbine installations. With supply chain shortages and other issues hampering construction, companies are under increased pressure to work faster and smarter to fulfill the growing backlog. The Power Team brand of SPX Hydraulic Technologies is helping wind tower contractors construction speed up. Their Predator Series of hydraulic power tools improves work productivity and accelerates wind turbine installation by increasing the efficiency of bolting tasks on the construction site.

**Tightening Up Schedules and Costs**
Bolting is a key component in the construction of wind turbines. For every wind turbine, hundreds of bolts are required for fastening the foundation, tower sections, and blades. With the majority of bolting done on the tower worksite, tightening and applying final torque settings to the bolts quickly and precisely is crucial to maintaining schedules, keeping labor costs down and generating cost savings when deadlines are beat.

**Faster, Continuous Operation**
The Predator Series facilitates the bolting process by providing up to twice the tool speed of conventional two-stage hydraulic pumps, and offers lightweight for portability and low-sound levels for minimized worker fatigue. The Predator pumps are rated for continuous operation, so there is no downtime to let tools cool off to resume work tasks. The key to the Predator’s speed is in the pump design. Employing constant horsepower technology, the pump increases the hydraulic flow rate continuously across the flow curve.

- A typical two-stage pump flow curve transitions high to low flow around 700 psi.
- Predator pumps have much higher, smoother flow throughout the pressure curve.
- Flow continually changes based on pressure, making maximum horsepower and flow at all pressures.
- The largest flow increase is between 1,000 & 5,000 psi, where torque wrenches normally operate, dramatically increasing productivity.

The result is faster tool operation and improved installation efficiency — more bolts tightened per hour. “The bolting process typically includes the requirement to torque hundreds of bolts at a time. The Predator pump has the ability to run continually throughout the day to accomplish this task,” explains brand manager Leah Strohman. An added productivity enhancement is the auto-cycle feature allows the torque sequence to automatically cycle the wrench until the desired torque value is reached.

“Workers can tighten bolts to preset torque values by simply holding a button down during the tightening process,” Ms. Strohman says. “This allows them to reach the torque setpoint faster, further increasing efficiency.”

**Designed for Flexibility**
The Predator constant horsepower hydraulic torque wrench pump comes in two power configurations: electric and air, depending on what power source is available. Both are built to withstand harsh environments. The electric/hydraulic Predator pump has a soft start feature that enables reliable start-up in marginal power source conditions and requires up to 40 percent less amp draw than other pumps. The air/hydraulic Predator pump is ideal for hazardous environments and can be used where no electricity is available. It operates quieter than most competitive products and meets OSHA and EU-legislated noise abatement requirements. Quick-connect coupling systems make the pump quick to set up and to move around construction sites.

The Predator Series torque wrenches provide more efficient, faster operation as well — all in two-thirds the size of aluminum torque wrenches. The low-clearance wrench can be used in applications where space is limited. They can also be operated in a vertical or horizontal orientation.

“This is an extremely flexible, time-saving tool on the job site,” says Strohman. “For example, the same tool can be used to quickly tighten the nut to the desired preload and to perform the final torque quickly and accurately. Anything that speeds up the wind turbine bolting process translates into time and cost savings for contractors, and ultimately, quicker access for all of us to high-demand wind power.”

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The Region’s Premier Destination for Wood Businesses
Lifting Equipment

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How to Inspect Used Equipment: Assess a Machine’s True Condition Before Buying

By Randy Berry, VP Inspection and Appraisal Services, IronPlanet

When purchasing any used construction equipment, the buyer must do their homework to assess the item’s true condition and therefore its true value. As with purchasing a used car, once a machine has been used, any range of problems can start to develop; problems that can diminish your investment and the yield from the machine. Therefore, it is vital that you conduct an inspection before you buy. However, many buyers just don’t know where to start!

IronPlanet’s team of professional inspectors have years of heavy equipment experience and follow a standardized, reliable and consistent method of evaluation. It is so robust, in fact, that IronPlanet guarantees that the machines will arrive in the condition detailed in their inspection reports. The reports include ratings and comments for key systems and components, functional test results and anywhere from 15-75 photographs. IronPlanet is happy to share best practices for inspecting and buying construction machinery – and some specifics relating to Lifting Machinery - to help buyers get started.

Best Practices for Inspecting Construction Equipment

When conducting an inspection, there are a range of considerations that are applicable and should be taken into account in all machines – whether it is a 100 ton-crane or a mini-excavator. When and where possible, you will want to power up any machine to make sure it is fully operational to meet your specific needs. However, you may not always be able to do this. As a complement or an alternative, to an operational check, you should look closely at as many of the items on the check list below as possible. Items one to four are checks that you can usually perform yourself if you are reasonably familiar with machines. However, items five to eight require a mechanic’s expertise, more extensive equipment knowledge and, in some instances, the ability to get inside the engine.

- Review the general appearance of the machine such as paint and metal work as well as serial numbers.
- Take meter and hour readings.
- Look at the cab or control station condition including ladders, rails, glass/windscreen, steering, dashboard meters, and seats.
- Ideally, it is advisable to start up the machine to check on engine status to test the starter, exhaust system, and radiator, as well as check for any oil, fuel and cooling system leaks.
- Inspect the drive-train to gain insight into travel speeds, clutch, and brakes.
- Review the hydraulics including pumps, motors, valves, hoses, and a functional check to make sure the machine is operational.
- Look at the undercarriage to assess the overall width, track tensioners, shoe width, grouser height and wear on vari-d
ous areas like track links, carrier rollers, track rollers, and front and rear idler.
• Take fluid samples (IronPlanet recommends engine, transmission, and hydraulic) to gain the necessary insights, including any filings coming from the engine which indicate wear and tear as well as whether the oil has been changed regularly.

In addition to these basic and general checks, a variety of unit-specific checks should also be performed, depending on the specialities of machines - as differences occur between buckets, blades, tires, tracks, chassis, and more.

If you anticipate using a machine in Europe, be sure to look for “CE marking”. You can validate this by checking the marking serial number plate, paying attention to ensure it has not been tampered with or replaced. Further, you may validate the number against a database to confirm its authenticity.

What to Look for in Lifting Equipment

The first priority is to make sure that all lifting equipment will meet health and safety requirements, which typically drive the use of the machine in the first instance. In addition to health and safety requirements, focus on functional checks specific to lifting equipment such as the booms and lattice sections, rope, drums, owner’s manual and lifting chart, AIIB system as well as the baskets and the hydraulic system.

Check for cracks in the boom and lattice section to ensure that the machine is rigid and will not “crack under pressure”. In addition to your own visual check, you’ll be glad to know that cranes are usually certified by an external private crane inspection company that also checks for cracks. Ask the owner to refer you to the inspection company when looking at a machine. You’ll also know it was inspected by looking for a logo or decal which will date the inspection and provide contact details for any questions.

The rope and drum will be your next priority. You are looking for breaks, kinks, or threads sticking out in the rope. These will impede the rope wrapping smoothly around the drum as it winds up. When testing the winding, be sure to double-check the AIIB system (the safety device at the end of the boom) to ensure that the rope is not wound too tight.

The next priority is to review the owner’s manual and lifting chart as this indicates the capacity of the machine. While you may well know this from experience, it makes sense to validate that your crane can lift your required weights. The LMI (Load Moment Indicator) will help to test real-life functionality. If it cannot be tested with something to lift, IronPlanet recommends looking at the over haul ball and testing for operability with that.

Core to the operation of any lifting equipment is a smooth and responsive hydraulic system. The two main elements include looking at the telescopic boom and Rotec bearing. On a telescopic boom, check for bends and twists which would make it “jump” as opposed to extending and retracting smoothly. The boom must be fully extended to properly test for functionality. Rotec bearings should also be checked for smoothness while swinging and braking, which indicates wear.

Finally, there is one very important item to check and that is the basket. Be sure to check for cracks that may indicate accidents or crashes which would weaken it.

How to Estimate Machine Values

Machine values are estimated using a variety of factors. You can estimate a “base price” by looking at year, make, model, hours, machine specifications, and the overall condition of the machine. After this, value will increase or decrease based on attachments offered and machine wear.

The first step in estimating value is to research recent historical sale prices – if they are available – focusing on comparable machine sales over the past 90 days. Recent data is important, because the used equipment market can change very quickly, as evidenced by the current global financial crisis and its impact on used equipment market demand, volume of machines available, and other important factors. Pricing indications may be learned through contacts in the trade, reviewing online listing sites for “asking” prices and even through researching auction prices for recent sales (on IronPlanet.com for example).

If it is difficult to find any recent prices on machines, refer to new machine prices and deduct on a depreciated value basis.

One note of caution on pricing: most of this information will enable you to get a general price, but does not always provide the most accurate information needed to price a machine. In order to get that, a full inspection should be carried out.

The Life Expectancy of Construction Equipment

A machine can expire after 5,000 hours in a tough environment with little care or last up to 20 years if treated well. When considering the life expectancy of a machine, you won’t be surprised to hear that this again depends on a number of factors in relation to its longevity and the value of your investment. There are options:

• With the right preventive maintenance, equipment has been known to last up to 20 years.

Ask the seller to show you maintenance records

In more modern machines (i.e. from the past 7 years), the onboard computer would typically have limited service records. You would need the machine manufacturer’s dealer to help you access these and again, the information is limited.

• A machine’s work environment is key! An abrasive environment such as a quarry or sand will incur more wear. Ask about the machine’s current and prior work environments.

• The manufacturer’s brand can be a big indicator of longevity as manufacturers vary the quality of steel, hydraulics and overall parts.

• The operator impacts durability as they know the machine and its capabilities, they know if there are problems and they know any specific nuances of the machine. You may want to ask how many different operators a machine has had in its lifetime.

• And finally, machine specifications play a part. For example, an automatic grease gun will prolong the life exponentially as you don’t require a maintenance person to grease it, it happens automatically.

In conclusion, inspecting a used machine is a sizeable responsibility. Numerous conditions influence making the correct purchase decision and getting the value for your investment. However, the check lists and considerations above should help you make an informed decision that will help safeguard your investment.
Genie Introduces New Model of its Popular S™-80 and S™-85 Telescopic Booms

To optimize value in terms of greater uptime and cost of ownership, Genie has introduced the newly redesigned versions of its popular S™-80 and S™-85 telescopic booms. The significant changes on the S™-80 and S™-85 booms include: fixed width axles; an exclusive virtual pivot boom assembly; faster elevation time; improved software design for smoother, more comfortable operation; and intuitive operator and serviceability features.

The fixed width axles on the redesigned S™-80 and S™-85 booms give the machines an 8’2” total width both on the trailer and on the jobsite. They can be easily transported over the road without a special permit on a standard equipment trailer. Because the axles are fixed, the boom is ready to drive right off the trailer, maximizing productivity at the jobsite. The fixed axle system improves the machine’s durability and efficiency, as serviceability is easier and less costly by having fewer hydraulic components and moving parts.

New to the S™-80 and S™-85 telescopic booms is the exclusive virtual pivot boom design which Genie introduced in 2003 on the S™-60 and S™-65 booms. The primary benefit of a virtual pivot boom is its ability to keep the weight of the boom over the chassis’ center of gravity as it elevates. This eliminates the need for extra counterweight and keeps the overall weight of the machine down for better use in more sensitive terrains.

To enhance operator efficiency, the elevation time on the S™-80 and S™-85, from fully stowed to fully elevated, is significantly decreased to 68 seconds. An improved control system with boom angle sensors gives operators a comfortable feel with smooth action, especially at the top height of elevation. The only 80-foot boom in the industry with a patented active oscillating axle, it provides better traction in rough terrain for a smoother ride for the operator. Redesigned control box labels on both the top and bottom panels of the boom provide a more intuitive interface for operators.
New Holland Introduces the LM 133 & LM 732 Telescopic Handlers

Telescopic handlers are a key product in construction and New Holland has lately introduced 2 completely new models. The previous range from 13 to 17 meters is now extended thanks to the models LM1133 (11m - 3,3 tons max load) and LM 732 (7m - 3,2 tons max load). The cab is completely independent and insulated from the engine, granting low vibrations, low noise and low warm coming from engine.

Working activities are even easier for the operator thanks to the curved windscreen; this feature allows a perfect view of the attachments in any condition up to the maximum loading height.

The low profile of the machine and the boom in a low position allows the operator to have an excellent 360° all around visibility. The controllability is a key feature: with just one joystick (standard on all models) it is possible to control all hydraulic and electric functions of the boom.

Besides, the electro-hydraulic joystick control, through a system of load sensing valves, allows the operator to have simultaneous movements of all the functions of the machine for a perfect and precise controllability.

Engine, radiator, power shift transmission, filters, and all main mechanical components are easy to reach thanks to the easy maintenance design concept for an excellent accessibility and serviceability.

The engine is longitudinal, and it has a parallel coupling with the transmission system (without any 90° coupling) which gives better mechanical efficiency and as consequence excellent traction force. The patented compensation cylinder allows self-leveling of attachment. During boom lifting it ensures that attachments such as pallet forks are kept parallel to the ground.

A wide range of attachments available factory fitted (forks, bucket, man platform etc.) makes this unit a multipurpose machine, suitable for many different applications.

Bauer Drilling Rig is Lifted into Former High-Rise Bunker

Hovering at a height of 22 meters is something rarely experienced by a drilling rig, but that is exactly what happened in the Ruhr District city of Bochum, where a Bauer BG 28 was lifted into a former high-rise bunker on behalf of BAUER Spezialtiefbau GmbH of Bavaria. Inside the bunker the rig installed the foundation piles required for the construction on top of the bunker of the “Exzenterhaus” – already made famous through the internet.

The 90-meter tall office building designed by the Berlin Architect Gerhard Spangenberg is to be constructed on top of a listed circular high-rise bunker from the Second World War, which towers on a central island of the southern approach road to the city and appears more boring than exciting. Yet its future use is quite exciting, as the Exzenterhaus is to become a new icon for the city of Bochum.

As the former bunker has a diameter of just 15 meters, the inside is too small for the mast of the drilling rig to be attached there. This meant that the machine had to be lifted into the bunker fully rigged apart from the counterweight, kelly bar and drilling tools. The lift was carried out with one of the most powerful telescopic cranes in Europe, and executed by a specialist company operating whose services are in great demand throughout Europe.

The machine with a weight of 98 tons was first raised off the ground and then lifted up and over the wall of the bunker. Lowering the machine inside the concrete cylinder of the bunker meant the crane driver had to operate blind, receiving instructions only by radio.
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The Future: Advanced Sustainable and Entertaining Façade Technologies

Our today’s world is in the process of a radical change, which requires creativity in order to adapt to the new challenges. Far-sighted people create new ideas, just to have the answers in time to new requirements. One of the most important challenges in nowadays world is certainly a sustainable energy policy as an answer to the drastic climate change. This is definitely a challenge, which highly affects the construction sector, especially a building’s curtain wall that can be much more than just a building skin: it can be considered as a source of energy as well as a means for communication.

12.12 Million tons of oil, 8.46 Million tons of pit coal, and 7.7 m3 of natural gas are currently consumed per day! In one day, we use up natural resources which needed 500.000 days to develop! It is common sense by now that alternative energy resources have to be found. Therefore, innovative, economical, and, above all, sustainable solutions in every sector are highly demanded.

Solar energy is one of the main renewable energy sources in the future. The sun will provide us with unlimited resources of free energy for the next five billion years – the Middle East being one of the favored places on earth to make the best out of this inexhaustible source of power. By using photovoltaics, the energy of the sun can be transformed into electric energy. Installations on building roofs as well as solar power plants are already producing electricity in many countries of the world. The usage of photovoltaics in curtain walls of high-rise buildings, so far, was treated like an orphan. There are various reasons to this: the cost of photovoltaic cells in the façade still is relatively high, while the efficiency of the energy production is lower, when used in the façade, due to the angle in which the sun reaches the surface of the panel. Permanent cleaning is necessary in order to keep the efficiency of the cells. The extreme heat, especially in Middle East Countries, further worsens the efficiency in energy production. From an architectural point of view the traditional photovoltaic panels are not always appreciated.

However, while conventional electricity continues to get more expensive, the costs for electricity generated by photovoltaics keep falling. In just a few years, PV electricity will be less expensive in many parts of the world than electricity from fossil fuels or nuclear sources. Intelligent façades, which integrate cutting-edge solutions for the efficient use of solar panels, are therefore becoming a challenge to be solved in façade business. A façade with integrated photovoltaics and solar panels can be regarded as an integrated powerhouse for tenants and users of the building, offering continuous and stable supply of electricity, which in many regions is an additional problem. The dependence on instable electric supply and rising energy costs in a building therefore belong to the past.

Intelligent façade systems, using self-cleaning mechanisms, further offer the advantage that the water spraying system can be used to cool the façade in an easy way, solving two of the major problems of using photovoltaics at a blow - cleaning the photovoltaic cells and keeping them cool. New glass technologies, with imprinted photovoltaic cells offer an attractive solution to the consultants as well.

It is just a question of time before modern technologies like these increasingly find their way in the façades of modern buildings. Countries, which promote the green environment and the sustainable use of energy resources, will be pioneers if they decide to take the advantage of these state-of-the-art technologies in using and promoting them. Last but not least, clean and modern buildings support the image of cities and the community. This will be a major benefit for the future, where alternative energy production and sustainable buildings are becoming a must-have.

But the current status quo in the use of photovoltaic technol-
ogy, in combination with intelligent façade solutions, integrating automatic cleaning in the façade, is more than unsatisfying. There is much more potential in collaboration among all specialists involved in the construction of a façade. Especially the technical dialogue between the consultant, the system suppliers, the manufacturer and most importantly the building owner has to be improved in order to understand the major benefits of using cutting edge technologies. The long term benefit for the building owner and the user, from the economical as well as from the comfort and security point of view, finally has to succeed over the short-term savings in first-time investment.

Nevertheless, there are some projects worldwide, where these visions partly found their way already. The Austrian architect’s group Coop Himmelblau for instance won the first prize for new “Headquarter of China Insurance Group” in Shenzhen. It is not only recognizable, because of its significant form, but also because of the design of the façade. The second skin of the façade includes photovoltaic cells to gain electricity, as well as cells to shade the sun and create multimedia displays. Such strategies to employ façades for the use of renewable energy sources will be a good alternative for the consumption of fossil-fuel energy sources in the future.

Looking into the Middle East, projects like “AL Jawhara” in Kuwait integrate new technologies in maintaining the façade easily - like the integrated self-cleaning with IQ, just at the touch of a button.

Bringing these solutions together the ultimate solution could be found, delivering sustainability in the façade.

A façade - a platform for entertainment and information

High-rise buildings are not only platforms for power generation, but also platforms for entertainment and information. The steadily rise of high-rise towers as landmarks in cities, enable the use of a façade for this purpose. Whether advertising, art, or just information, there is no comparable way to get the attraction of passersby.

As traditional blow-ups remain as a static content, the possibilities of multimedia façades are much more multiplex and flexible. In time, the provider is able to react to current happenings. Not to forget the additional source of income for the building owner by letting the surface to companies.

All in all, a state-of-the-art façade in a modern advanced building complex is like a promise for the future: sustainable, multitasking, and simply beautiful!

About the author
Julius Thurnher, Inventor & Director of Technology, iku®windows,
Email: julius.thurnher@iku-windows.com,
Tel: 0043 1 616 58 58-25
At Home in the Office: Light, Airy, and Contemporary

Buildings talk. Their very outline, shape, their color and the materials they are made from speak volumes about the people living and working in them, about the people who designed them, and about the orientations and aspirations of the companies they are home to. AFG’s (Arbonia-Forster-Holding AG) new Corporate Center is yet another one of those rare buildings that really express the message they were built to convey, and that make explicit the values held and, of course, pursued by Dr Edgar Oehler, Chairman of the Board of Directors and CEO of AFG.

AFG’s new Corporate Center is located at the edge of Arbon, in the midst of a landscape of gently rolling hills and in view of Lake Constance. It, just like the person who built it, seems to form an integral part of the surrounding landscape, and gives the impression of being firmly rooted within and of naturally arising from the very ground it stands on. It thus only reveals the elaborateness and many facets of its design upon closer inspection.

On entering its grounds, the first view the visitor is presented with is that of a monumental cascade of water issuing from Switzerland’s largest fountain, right in front the Corporate Center’s streamlined and straight-lined outline. This fountain is highly evocative of dynamism, of flexibility, creativity and innovative thinking. The sophisticated lighting technology incorporated into the fountain furthermore adds an element of beauty and glamour that makes this fountain truly unique.

Light – Creating atmosphere, inciting passion

At night, when illuminated by nothing else but the vast number of small LED lights fitted inside the fountain, on the panels on its façade and on its internal ceilings, AFG’s Corporate Center turns into the kind of building made of the stuff of dreams – it becomes magical. To Dr. Oehler, all of these various aspects of the Corporate Center’s design and architecture are representative of a unique corporate culture. “Light is incredible,” were the 66-year old entrepreneur’s words on the subject, “it can be put to so many uses – including to create atmosphere and incite passion, create positive and negative environments.” The former of which being his clear preference, nearly every room in the building has been equipped with LED lights - although with less of a concern regarding the building’s lighting design than the evenness of its distribution over the entire building. During the day, AFG’s new Corporate Center is drenched in natural light that finds its way into the building through its large windows and ceiling openings. This, coupled with the building’s overall aesthetics, elegance, contemporary, and understated interior, gives it an extremely comfortable and luxurious ambience.

Sophisticated surfaces

The subtle interplay of light and the different color-nuances used throughout the building give it a sense of vitality that is carried over to the outside as well as finding its continuation in the Center’s grounds. This sense of vitality arises predominantly from the building’s monumental glass and aluminum façade, which – depending on the time of day and weather - gives rise to the most fantastic displays of light and shade - making it seem blue at one point, pale grey at another, and even silver or orange under certain conditions. This mirror-effect is generated by the special surface of the Reynobond® Architecture aluminum composite panels used on the building’s exterior. The special sheen of these brushed aluminum panels are achieved with a special high-quality coating. “The difference between Reynobond and other products is that Reynobond is extremely easy to use, durable and has extremely high color-fidelity. And this is precisely what is behind the fantastically uniform look of our Corporate Center”, was Dr. Oehler’s explanation of why he had chosen Reynobond® Architecture Natural Aluminium Brushed panels for the Center’s exterior. However, he was not only already familiar with this product from AFG’s production plant in the neighboring town of Steinach, but was also extremely taken by these panels’ brushed surface structure, which absorbs and reflects light in a myriad of different ways, thus creating an appealing interplay of light, color, and texture. The Reynobond panels were furthermore attached to the building using a cassette system that effectively covers all installation fittings and creates a smooth, uniform exterior. “There is nothing more elegant”- An elegance, he says, that is set to stay with the building for its entire life, because Reynobond is resistant and immune both to rain and solar radiation. This not only speaks volumes about its quality, but also contributes to the unique ambience these panels create.

Communicating without barriers

However, this brainchild of Dr. Oehler’s – who not only planned the entire building, from its very first to its very last construction phase, chose the materials for its various structures, the design of the offices for the Center’s 250 staff, the conference room, staff canteen, three-storey underground car park and landscaped grounds – was also built in order to create a working environment that would positively influence and facilitate communication between the company’s different staff, as well as their perfor-
Handover of iku® windows facade for prestigious project in Kuwait

The Austrian company iku® intelligente Fenstersysteme AG, specialist for self-cleaning façade systems, has recently finalized its prestigious project in Kuwait city. The Al Jawhara Tower, with a height of 135 m and 32 floors, has been equipped completely with the iku® windows Unitized façade. All in all, 8000 m² aluminium glass façade, totally 2000 Unitized façade panels, has been fabricated and installed on site.

The rise of a jewel
The office tower is a new landmark of Kuwait city. “Al Jawhara” standing for “Jewel”, now is perfectly shining always and in all, a must in the countries of the golf region with its hot, humid and sandy air, the amortisation of the additional investment is reached already after 1.9 years. From this time on the owner makes a profit. Some owners are performing cleaning cycles once a week, as the use of the system is very simple – at the touch of a button. The running cost for one cleaning cycle is very low – only about US$12.6- in the case of Al Jawhara Tower. And there are no additional costs for cleaning personnel. This way the running costs for a building can be reduced significantly. Not to forget the permanently rising personnel and maintenance costs for traditional BMU systems, which are important factors within the running costs.

Finalization of the power and water feed lines, 100 motors, which are carrying the wipers as well as the electronic units for the controlling of the cleaning cycles, have been installed. Till the end of 2008 the final test with numerous washing cycles have been conducted, which caused astonishment by the local construction companies and passing by pedestrians.

Clear arguments for iku®windows in comparison with traditional cleaning methods
There are many advantages of iku® windows system for the building owner compared to traditional BMU systems: The cleaning of the whole façade, e.g. the Al Jawhara Tower, could take several months, depending on the weather conditions. Only seven hours will be needed to clean the whole façade with iku®windows – self-cleaning façade systems. The investment for a traditional BMU system is about US$251,844,-. For the solution with iku®windows the investment is around US$377,766. Given the building is cleaned 12 times a year, which is a must in the countries of the golf region with its hot, humid and sandy air, the amortisation of the additional investment is reached already after 1.9 years. From this time on the owner makes a profit. Some owners are performing cleaning cycles once a week, as the use of the system is very simple – at the touch of a button. The running cost for one cleaning cycle is very low – only about US$12.6- in the case of Al Jawhara Tower. And there are no additional costs for cleaning personnel. This way the running costs for a building can be reduced significantly. Not to forget the permanently rising personnel and maintenance costs for traditional BMU systems, which are important factors within the running costs.

Arbonia-Forster-Holding AG
A Formwork Safety Checklist for Contractors

By Amer Araji

The Middle East’s huge construction market means that contractors and formwork companies must constantly push towards improvements in formwork systems and more organized procedures for the use of formwork to keep up with ever-tightening project schedules and avoid losses / penalties. This means introducing new systems that are safe and easy to use, and that makes it faster to erect and dismantle formwork without any injuries or delays. Therefore, a greater involvement of the contractor is required in managing the formwork on site to the extent that it is he/she who appoints the temporary works’ co-ordinator. The contractor has to take all the responsibility for the safety and overall operation of the formwork erection, unless it is being erected by an independent contractor or rental company. Therefore, it is logical that he/she takes responsibility for coordinating the temporary works.

I believe that a widespread adoption of a Checklist should lead to quicker and safer construction, of buildings in addition to providing cost savings. The research carried out at the European Concrete Building Project proved that it is within the process - and not the hardware - where the opportunities for increased buildability and economy lie. The following is the Process / Checklist for Formwork to be used at every project. It has been developed to provide information for engineers, contractors, and others involved in the design, erection, and use of false-work and formwork.

1. Has the formwork system been properly designed?

A competent formwork designer and/or formwork manufacturer/supplier should design the site’s formwork system. The formwork contractor should have erection design, drawings, and specifications for the particular formwork system to be constructed. Ensure a copy of the design drawings and loading calculations are available on site. The design engineer must authorize any revisions or changes to a false-work’s structure. The engineer should ensure that written authorization is immediately available at the job-site, to be followed by proper documentation as soon as possible and make sure the building’s design engineer specifies when the formwork can be dismantled (concrete cure requirement).

2. Has the formwork been properly constructed?

All modular or framed formwork components, support timbers, and structural ply need to be in a serviceable condition. Check if the constructed formwork is on firm foundations (suitable soleplates, hardness of ground or adequacy of support structure). Make sure the formwork system is of the same type and capacity as specified in the design drawing and is erected in accordance with the design. Ensure any adjustable building props are tied to each other or to the shoring frames so they cannot collapse when released.

3. Is the formwork deck being laid safely?

The work method used to lay out formwork ply must protect the workers from falling. When required to work from the formwork itself, make sure they have a full deck of scaffold planks and safe access. When laying additional sheets from the formwork deck, workers should stay clear of the leading edge, pushing out the sheets as they go. Perimeter edge protection (temporary guardrails or scaffolding) needs to be provided. Ensure workers have safe and secure access and egress to and from all the formwork areas, including deck.

4. Is steel fixing being done safely?

Make sure plastic protective caps are always placed on the ends of starter
bars to safeguard workers. When fixing steel for concrete walls and columns, steel fixers will need properly constructed scaffolds. Steel fixers need protective glasses when using bolt cutters to stop steel fragments from wounding their eyes.

5. Is the formwork structurally adequate?

Before pouring concrete, use an experienced structural engineer to inspect the erected formwork system. This inspection should also include any supporting structure the formwork is constructed upon; for adequacy and the ability to take the loads of the new suspended concrete floor or beam. The engineer should supply an inspection certificate to verify the structural integrity of the support structure and formwork system.

Proper Foundation is very important. Contractors must give attention to mudslides, splicing, and connections between members. A proper foundation is essential to ensure necessary support of false-work/form-work.

6. Are wall and column shutters safely lifted and properly secured?

Formwork shutters need to be securely slung and controlled with a tagline when they are being crane-lifted. Do not allow large shutters to be lifted in strong winds. Where possible, push-pull angled props should be fixed to cast-in anchors. Workers installing she-bolts need to work from properly constructed scaffolds or other safe temporary work platforms.

7. Are workers prevented from accessing the area underneath the concrete pour?

Ensure that no worker is allowed to access the immediate area beneath the section of formwork where the concrete is being poured. If an observer is to be positioned at a lower level during the pouring operation, they must be located in a position that will safe guard them from injury if the formwork fails during concrete placement. Generally, neither the observer nor any other worker should be permitted to access the area below the pour once concrete placement has commenced, even to rectify problems.

8. Are concrete pumps being used safely?

Concrete pumps must be well-maintained, fully serviceable and should comply with the requirements of the Industry Standard for Concrete Pumping. The operator of a truck-mounted concrete placing boom must hold a work-safe certificate of competency. Ensure mobile boom-type units are set up correctly and fully comply with the no-go-zone rules for overhead power lines. Concrete pumping lines need cleaning out after each use.

9. Are kibbles being used safely?

Crane-lifted concrete kibbles normally require a person with a work-safe dogging or rigging certificate to operate them and direct their movement. Make sure the dogman understands the need to release the concrete gradually from the kibble so as not to overload the formwork and risk structural failure. The sudden release of concrete from the kibble can also make the crane boom whip upwards, causing the kibble to bounce dangerously. Never allow workers to “ride the load” by standing on a kibble while it is being lifted.

10. Are concrete vibrators being used safely?

Check that vibrators are well maintained and fully serviceable. Residual Current Devices (RCDs) must be fitted for the protection of all electrical power leads and electric vibrators. Do not use petrol-driven vibrators in cellars or other poorly ventilated areas.

11. Are the concreters working safely?

Make sure there are no open sides or penetrations where a worker could fall.

12. Is formwork being dismantled safely?

Do not allow formwork to be removed prior to the concrete reaching its required strength. When stripping the underside of a suspended floor slab, barricade the area off from other workers. Make sure people dismantling the formwork are working from properly constructed scaffolds or properly planked shoring frames. Never allow “drop stripping” of form-ply and falsework.

Where required, provide temporary guardrails or a heavy duty perimeter scaffold.
Customized and Safe: Four Pylons Formed In Weekly Cycles without a Crane

At intervals of 242 meters each, four bridge pylons grew steadily up to heights of 86 meters with the help of PERI ACS self-climbing technology. With a length of 970 meters, this cable-stayed bridge crosses the Fraser River and is the core element of the around 13-kilometer long six-lane highway project located near the Canadian west coast. The Golden Ears Bridge has been designed as a so-called extra-dosed bridge which is a cross between a girder bridge and a cable-stayed bridge. Here, the inclined cables function like a pre-stressing, which are installed outside of the superstructure and are positioned at an extremely flat angle.

Thus, in spite of the large spans, the pylons with a maximum height of 86 meters are much lower than a traditional cable-stayed bridge. The new route will be open to traffic in the middle of 2009 – in time for the 2010 Winter Olympic Games in Vancouver.

Customized for maximum building adjustment

The PERI formwork and scaffolding solution for the four H-shaped pylons is based on the modular-designed ACS (Automatic Climbing System) self-climbing technology and VARIO girder wall formwork. As a result, the continuously changing pylon cross-sections could be cost-effectively and safely constructed using 4-meter concreting cycle heights and without requiring any crane support. The formwork concept takes into consideration here the continuous cross-sectional changes due to tapering on all sides. In addition, the pylon legs underneath the carriageway deck were to be constructed as double piers in a longitudinal direction, and as individual piers in the form of a composite construction with prefabricated steel cores for the upper half. In both the longitudinal and transverse directions, the pylons are hoisted between 1.0 and 1.2 degrees. The cross-sections themselves change from a dispersed trapezoidal form measuring 5.26 m by 1.40 m and opening dimensions of 5 meters at the base to a single cross-section with external dimensions of 2.46 m by 5.00 m at the top of the pylon.

For anchoring the ACS units to the pylon’s slanted edges, the PERI ACS system with its pivotable climbing shoe provided an extremely flexible system component. Through this, the ACS platforms can be fixed in position up to 15 degrees from the vertical axis. The PERI formwork planning for the double piers took into consideration that the 5-meter opening would be reduced to around 4 meters. Offset ACS brackets ensure that the platforms of the four different working levels could still be securely interlocked. This means that site personnel are able to move safely between both climbing units at all heights. Formwork elements for the 1.40-meter wide, inclined front ends are mounted on climbing platforms, which are positioned on the longitudinal sides - the complete construction is suspended on rollers, which ensures a simple and easy moving process. This means that climbing brackets are not required on the front ends and, consequently, only two climbing units are needed per individual pier. Material requirements are thus reduced and every climbing operation can be accelerated.

In weekly cycles to the top

In order to ensure efficient construction progress, PERI engineers included two separate ACS/VARIO sets of formwork, one set for the top and bottom halves of the pylon respectively. This avoids any time-consuming adjustment work having to be carried out on the climbing platforms and formwork. At the same time, on-site material requirements are kept to a minimum. Climbing has taken place every Monday: initially, the pylon legs with around 4-meter concreting cycle heights in eight climbing stages up to the level of the carriageway. After the cross-member had been concreted, eleven additional climbing cycles using the second set of climbing formwork were required for the top half of the pylon.

Crane-free climbing during wind and poor weather conditions

The Golden Ears Bridge crosses the Fraser River about 30 kilometers before it flows into the Pacific. Due to the close proximity of the coastal region and the resulting higher wind speeds, the ACS climbing system was designed by PERI engineers to ensure that climbing could still take place safely even during stormy conditions with winds reaching up to 80 kilometers per hour. This is never a problem as PERI self-climbing formwork is always securely connected to the structure at all times.

VARIOKIT modular system for engineering structures

PERI’s Canadian engineers also designed efficient solutions for the approach bridges and elevations which are part of the overall project. For this, the broad PERI product range could optimally fulfill the requirements. With standardized modular construction systems, the best-suited formwork and scaffold solution has been able to be developed for each construction task. Through this, the contractor has realized time and cost advantages for the benefit of overall site operations.

PERI system brackets from the VARIOKIT engineering construction kit reliably transferred concreting and live loads during construction of the carriageway slab, which included in-situ concreting, into the T-beams that were delivered and installed as partly prefabricated sections. In the process, generously-sized working widths of 2.50 meters were made available for site personnel. For the composite between the prefabricated...
Arkan and Urbina Create New Joint Venture Company to Manufacture and Supply Scaffolding in the UAE

Arkan Building Materials PJSC of Abu Dhabi and Urbina SA of Spain have incorporated a new joint-venture company to supply scaffolding and related products to the Gulf region. The new company, which is called Arkan Urbina LLC, will initially supply materials imported from Spain but will soon start building a scaffolding factory at the Arkan Industrial Park, Al Ain. Based in Abu Dhabi, Arkan Urbina LLC will supply high-performance equipment to serve the construction, petrochemical, and aeronautical industries throughout the Gulf region. The company will provide high-quality products and services whilst offering a variety of solutions to meet the exacting requirements of its customers. Arkan Building Materials PJSC is a public joint stock company based in Abu Dhabi, UAE. A government-controlled industrial development company, Arkan Building Materials PJSC focuses on the building materials sector and is a leading supplier of cement and other construction products in the UAE. Arkan is developing an industrial complex covering 15 square kilometres near Al Ain which will be devoted to manufacturing building materials. Urbina SA is a multinational company based in Spain with over 50 years’ experience in supplying construction equipment, paint, and related products. Besides the joint venture Arkan Urbina LLC in Abu Dhabi, Urbina also operates in Spain, Brazil, Morocco, Mexico, Colombia, and Romania, and is regarded as one of the most innovative developers of scaffolding systems in the world. Urbina’s high technical standards enable it to manufacture competitively priced, high-quality products that fully comply with European standards.

Golden Ears Crossing
The altogether 13-kilometre long “Golden Ears Crossing” infrastructure project, with an investment volume of US$759 million, is one of the largest public-private partnership projects in Canada, which Bilfinger Berger has planned, financed, and built. In summer 2009, the six-lane route is to be officially opened for traffic.

It will greatly relieve conditions on the main road into the city centre and considerably shorten the travelling time for commuters. The name has been taken from nearby Golden Ears Mountains. “Golden Ears” is derived from “eyries”, which refers to the eagles nests found in the mountains – for this reason, stylized eagles made of steel will be placed on the top of the pylons.
Burj Dubai, the world’s tallest building developed by Emaar Properties, set several global milestones in high-rise construction in 2008, an epoch-making year for the tower. Currently, some 8,500 professionals and skilled workers are employed on-site at Burj Dubai. Cladding work is nearing completion and work on interiors, spire, and other support systems is progressing. We take a look, in this article, at the concrete pumping techniques and the concrete mixtures’ specifications, which were specially developed for this larger-than-life project.

Burj Dubai is being constructed by a South Korean company, Samsung Engineering & Construction which also built the Petronas Twin Towers and the Taipei 101. Samsung Engineering & Construction is building the tower in a joint venture with Besix from Belgium and Arabtec from UAE. Turner is the Project Manager on the main construction contract.

The primary structural system of Burj Dubai is reinforced concrete. Over 45,000 m³ of concrete, weighing more than 110,000 tons (120,000 ST; 110,000 LT) were used to construct the concrete and steel foundation, which features 192 piles, buried more than 50-m deep. When completed, Burj Dubai’s construction will have used 330,000 m³ of concrete and 39,000 tons (43,000 ST; 38,000 LT) of steel rebar (enough to extend over a quarter of the way around the world if laid end-to-end); and construction will have taken 22 million man-hours.

As construction of the tower progressed, it became increasingly difficult to vertically pump the thousands of cubic meters of concrete that are required. The previous record for pumping concrete on any project was set during the extension of the Riva del Garda Hydroelectric Power Plant in Italy in 1994, when concrete was pumped to a height of 532 m. Burj Dubai held this record as of August 19, 2007, as it had a height of 536.1 m, to hold the record for concrete pumping on any project; and as of November 8, 2007 concrete was pumped to a delivery height of 601 m. On course to open in 2009, Burj Dubai had reached a record 780 meters of height by early 2009, and has over 160 storeys, the most number of floors in any building.

Special mixes of concrete are made to withstand the extreme pressures of the massive weight of the tower; as typical with reinforced concrete construction, each batch of concrete is tested and checked to see whether it can withstand certain pressures. The head of Concrete Quality Checking on the Burj Dubai project is Alam Feroze, who is in charge of concrete on the whole project. The concrete pumps, pipelines, and booms are provided by Putzmeister, of Aichtal, Germany.

The consistency of the concrete on the project is essential. It was difficult to create a concrete that could withstand the thousands of tons bearing down on it and withstand Persian Gulf temperatures that can reach 50 °C (122 °F). To combat this problem, the concrete was not poured during the day. Instead, ice was added to the mixture and concrete was poured at night when it is cooler and the humidity is higher. A cooler concrete mixture cures evenly throughout, and, therefore, is less likely to set too quickly and crack. Any significant cracks could put the whole project in jeopardy.

Emaar Properties announced on June 9, 2008, that construction of Burj Dubai was delayed by upgraded finishes and that will only be completed in September 2009. An Emaar spokesperson said, «The luxury finishes that were decided on in 2004, when the tower was initially conceptualized, is now being replaced by upgraded finishes. The design of the apartments has also been enhanced to make them more aesthetically attractive and functionally superior».  ■
Omran Announces Major Progress on Asian Beach Games Site

Omran, the Oman Government’s tourism development and investment arm, has recently announced that it had completed a crucial first phase of construction of the 2nd Asian Beach Games site, and renewed its pledge to ensure the site would be fully functional in time for the games in December 2010. The announcement came as the company prepares to celebrate the Muscat Festival with a major campaign to build awareness of the Games and work on the site.

Omran is developing the purpose-built site in Musannah to feature the very best sporting facilities and facilities for visitors and participants in the Games. The project is being built on behalf of the Ministry of Sports Affairs and the Oman Olympic Committee. The first phase of development is now complete, and includes the construction of platforms for the Athlete Village, games court, hotel, Marina Apartments, car parks, and the main entrance area.

Work has also progressed on the waterfront elements, including the sailing park and swimming area, the platforms for which are now complete pending dredging work on the marina. The marina itself is nearing completion, and has seen some 200,000 tons of rock delivered to the site for the construction of the breakwater.

Omran announced this progress as celebrations for the Muscat Festival get underway in the capital. In its capacity as Gold Sponsor of the Muscat Festival, the company applauded celebrations of the city’s heritage and tradition, and urged citizens to get involved in preparations for the 2010 Muscat Asian Beach Games. To promote the Games and raise awareness of work on the site, Omran has initiated an advertising campaign in strategic locations around Muscat during the Festival, while stalls have been set up in co-operation with Muscat Asian Beach Games Organizing Committee (MABGOC) for the duration of the Festival to educate the public and athletes interested in signing up for the Games.

The Muscat Festival, of which Omran is Gold Sponsor, is held for a month from mid-January each year around Oman’s capital city. It showcases traditional Omani culture with poetry recitals, traditional dancing and craft displays. These appear alongside dance and acrobatic events from around the world, attracted by the Festival’s profile and popularity.

The Asian Beach Games were established by the Olympic Council of Asia, and are held every two years. The 2010 Muscat Asian Beach Games will be the second event, following the inaugural games in Bali last year. The overarching aim is to strengthen relations and understanding between participating Asian nations in a friendly competitive environment.
Foundation Works Completed on Schön Business Park: 2010 Delivery on Schedule

Construction on the Schön Business Park project advanced this January as a 250 man on-site crew laid down 300 tons of steel and poured 1,900 cubic meters of concrete to complete first phase foundation works on the US$202.5 million development in Dubai Investment Park, scheduled for completion Q1 2010.

United Engineering Construction LLC (UNEC), the project’s prime contractor took 17 hours to complete the foundation pouring using 3 constantly running cement pumps. Construction on the 106,372 square meters Schön Business Park project was fast-tracked through 2008 by the developer’s strategic decision to split the enabling and main construction works. Ground Engineering specialists NSCC (National Services and Contracting Est.) were contracted to handle all enabling works, including 350 meters of open excavation, which involved removing 200,000 cubic meters of earth, and 360 meters of shoring, which were completed within 8 months. UNEC was awarded the US$102 million construction contract for Schön Business Park, which includes completion of the substructure, superstructure, external envelope, shell and core office and retail spaces as well as electro-mechanical works throughout the development.

Upon completion of the enabling works, UNEC took over the site in December 2008. Overall construction of foundations and framework will use a total of 8,175 tons of steel and 53,944 cubic meters of concrete, requiring an average of 165 cubic meters of concrete and 31 tons of steel per day. Divided into two wings of shell and core office space and featuring two levels of underground car parking, a ground level filled with Individual office units, restaurants, coffee shops, banks, ATM machines, travel centre and prayer rooms as well as three levels of office space, Schön Business Park is designed to fill the need for flexible and cost effective office space.

Enabling Works Completed at Another of DAMAC Properties’ Developments

Luxury lifestyle provider DAMAC Properties Dubai has announced that enabling works have been completed on site at its Executive Bay development at Business Bay in Dubai.

Tenders to commence the main construction work on the twin tower project (one 18-storey high and the other at 20 storeys) are currently underway with construction expected to commence shortly. Executive Bay is one of eleven properties that DAMAC Properties has planned for the Business Bay area. The site has been shored and excavation for basements has been completed by the enabling works contractor Al Habtoor STFA for the development, which will include a shopping arcade on the ground floor together with state-of-the-art office space over looking a waterfront location.

DAMAC Properties’ eye catching Executive Bay towers will feature hi-speed internet connectivity, security, and recreational facilities, such as a gymnasium, health club facilities, and swimming pool. Each tower comprises a series of three interconnected triangular buildings and will have a common landscaped courtyard and café.

Welcoming the progress on site at Executive Bay, CEO of DAMAC Properties Mr. Peter Riddoch said that the next stage of construction would begin as soon as tenders had been assessed.

Business Bay will eventually cover an area of 64m square feet along the banks of the extended Dubai Creek and is expected to attract a number of regional and international companies. It has been designed as a commercial and business cluster in line with Dubai’s growing global business community base, and will be similar in nature to Manhattan in New York with upscale residential complexes available on site.
PERFECTLY SET TO SERVE THE CONSTRUCTION NEEDS OF LEBANON & THE REGION

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16 - 19 JUNE 2009
BIEL - BEIRUT, LEBANON
Qatar Construction Sector Resilient
In Face of Global Economic Crisis

The frantic pace of construction is continuing in Qatar despite the global drying up of credit - and despite the forced merger of two of the largest property companies in Qatar, Barwa and Qatar Real Estate. Qatar is one of the few countries in the world where construction projects carry on, seemingly unaffected by the raging financial storm.

Contractors in Qatar are cautiously optimistic about 2009, and their outlook appears justified. State infrastructure spending continues to drive the development of the country’s megaprojects, and the difficult global credit conditions have had little impact. Doha’s ability to invest is underpinned by a current account balance that stood at more than US$50 billion in 2008.

Qatar’s construction sector is set to reach US$9.06 billion by 2012, according to studies conducted by Business Monitor, and with over 800 new towers slated to go up in Doha over the next 10 years, the market has been identified as one of the busiest construction areas in the world.

The booming economy is the key factor underpinning the real estate, construction, and housing demand in Qatar. High growth in population, high per-capita GDP and abundant resources entailing rapid industrial expansion have all been vital to the growth of the real estate sector in Qatar. As per the data from the Planning Council, the building and construction sector’s contribution to the GDP was 6.3 percent in 2007 as compared to 5.8 percent recorded in the previous year.

The sector’s growth rate was about 21.8 percent in 2007 which is higher as compared to the previous year’s growth rate of 17.7 percent. Government expenditure has been very important factor driving the economy. Due to the realization of budgetary surpluses since last several years, the level of government spending has increased significantly.

Qatar’s latest budget is characterized by allocating sizable amounts of money for infrastructure projects besides education and health. The allocated amount of US$8.4 billion constitutes some 76.0 percent of total funds allocated for development projects and 32.0 percent of total budgetary spending.

According to Gulf project tracker MEED Projects, Qatar’s construction sector is now worth US$119 billion. Projects include:

New Doha International Airport
Reclamation work on the multi-billion dollar New Doha International Airport project has been completed. 60.0 percent of the site will be built on land dredged from the sea. Both runways are taking shape and terminal infrastructure is well under construction. The airport is due to open in 2010 with an initial capacity of 24 million passengers a year, rising to 50 million during the final development phase from 2015 onwards.

The airport is set to become a regional transfer hub competing with other major international airports of the Middle East and Asia regions. Designed and built by construction giant Bechtel, the airport will be on the so-called midfield model, featuring two runways with the supporting facilities in the middle. The hub will have a runway of 4.2 km and a second one with a 4.8 km length, one of the longest in the world designed to accommodate the A380. Built over 22 square km, half of which is reclaimed land, the airport will feature some 40 contact gates, 22 remote gates, 82 parking positions, a cargo facility with a capacity of 750,000 tons of cargo per year, a cargo aircraft maintenance center, and maintenance centers capable of hosting aircraft the size of the A380. The airport will also feature a 100-room hotel, a catering facility capable of providing 75,000 meals a day, ground service equipment facilities, an 80-meter high air traffic control tower, a village with administration facilities and mosque.

RAF-C Power and Water Project
QEW along with the consortium partners is implementing the largest power generation and water desalination project in Qatar. The facility will be owned and operated by Ras Girtas Power Company (RGPC). The project is estimated to cost around US$3.8 billion and will have a capacity of 2,730-MW of power generation and 63 MIGD of water. The project will be commissioned in phases, 1,600 MW of power generating capacity will be commissioned by
Mesaieed – A Project
QEWC, along with the consortium partners, is implementing power generation project at Mesaieed Industrial City in Qatar. A jointly controlled entity named Mesaieed Power Company Limited was incorporated in January 2007 for executing this project. The project is estimated to cost around US$2 billion and will have power generation capacity of 2,000 MW. The project will be commissioned in phases during April 2008 and April 2010.

Energy City Qatar
Energy City Qatar (ECQ) is a pioneering development and will be the Gulf’s first hydrocarbon industry business center. ECQ will be a single point of access to markets and expertise, the Middle East home for global players in the hydrocarbon value chain. Envisaged by Gulf Energy, ECQ aims to attract the international leaders in oil and gas production, international oil companies, national oil companies, support services, infrastructure and downstream activities, shipping and trading, market and resource data, intellectual property and energy trading. ECQ forms part of the major new city development, Lusail, which in addition to major business and entertainment districts, will be home to up to 200,000 residents. The US$2.6-billion Energy City Qatar (ECQ) project was launched in March 2006, with the aim of making Qatar as an energy business hub.

Two fertilizers projects worth US$3.5bn
Qatar Fertilizer Company and its unit, Qatar Melamine Company, laid the foundation stone for two projects having a combined cost of US$3.5 billion. The melamine project has a total cost of US$250 million while Qatar Fertilizer’s Qafco 5 expansion project has a total cost of US$3.2 billion and is expected to be completed by 2011. When completed, Qafco 5 will boost Qatar Fertilizer’s production capacity of ammonia by 73.0 percent to 3.8 million tons and its urea capacity by 43.0 percent to 4.3 million tons making Qatar Fertilizer the largest producer of ammonia and urea in the world.

May 2010 and 20 MIGD of water desalination capacity will be implemented by August 2010. In the second and final phase, the rest 1,130 MW of power capacity will be commissioned in April 2011 and 43 MIGD of water desalination capacity will be implemented in the same year.

Late in 2008, Linden Comansa and Nasser Bin Khaled and Sons signed an agreement through which the Qatari company will become the exclusive distributor of Linden Comansa’s cranes in Qatar, via its division of heavy machinery.

Nasser Bin Khaled Heavy Equipment, with headquarters in the capital, Doha, relies on a team of great experience in the sector and works with highly esteemed brands in the construction market, such as Kohler, Ausa, Bomag, Elgi, Geda, Case, and Terex mobile cranes. Fouad Hijazi, Division Manager of Nasser Bin Khaled Heavy Equipment, culminated the agreement with the signing of the contract, which included the sale of the first cranes: four 11 LC 160, which will be delivered from the factory of Linden Comansa in Huarte-Pamplona (Spain) in the few coming weeks.

Founded in the early 1950s, Nasser Bin Khaled and Sons is one of the most important holding companies of Qatar. It is divided to many managerial divisions and maintains an irreproachable reputation as a leading company in the Gulf Area in its line of business.
Bobcat® S130 Skid-Steer Loader

Market Leader in Qatar

Obaikan Equipment & Services W.L.L., a joint venture between OITC Group (Qatar) and The Kanoo Group (U.A.E.), has been the Authorized Bobcat Dealer in Qatar since 2003. Obaikan Equipment & Services provides dedicated sales and aftermarket support for the complete range of Bobcat skid-steer loaders, telescopic handlers, mini-excavators, compact tracked loaders, and attachments in Qatar.

For Mohamed Zanaty Diab, Manager for Obaikan Equipment & Services, the skid-steer loader range from Bobcat, which had celebrated its 50th anniversary last year, has been particularly successful in Qatar. According to Mr. Diab, the Bobcat S130 skid-steer loader model has been the most popular product in the country, representing state-of-the-art technology in a market which Bobcat gave birth to and where Bobcat has been providing market leadership for over 50 years.

The Bobcat S130 model is powered by the 34.3-kW Kubota V2203 4-cylinder diesel engine. The S130 has an operating weight of 2263kg, a rated operating capacity of 600kg, a tipping load of 1200kg and a lift height of 2781mm. The strong lift arms, short wheelbase, and compact design of the S130 offer superior maneuverability for work in tight spaces. The 1964-mm height of the spacious operator cab allows the operator to complete their work in less time, and allowing the operator to complete more work in less time.

The benefits offered by the S130 design are acknowledged by William Grant, the Senior Plant Manager at Gulf Contracting Co. WLL - a customer of Obaikan Equipment & Services. He said, “We have a fleet of over 50 skid-steer loaders achieving in excess of 12,000 operating hours per month. The S130 provides us with excellent, cost-effective solutions in material handling, rock breaking, and excavating in tight confined spaces. Coupled with the technical and service backup provided locally by Obaikan Equipment & Services, the S130 is our Number One skid-steer loader.”

With a high hydraulic pump capacity and an impressive hydraulic flow of 63 l/min, the S130 is an excellent tool carrier for the 43 different attachments designed for use with this machine. With 43 different tools to choose from, the S130 can work in demolition, public works, renovation, and landscaping. The S130 is equipped as standard with the quick-change Bob-Tach attachment mounting frame. However, customers can choose the optional Power Bob-Tach system to change non-hydraulic attachments simply by flipping a switch inside the cab.

Mr. Grant added, “The Bobcat S130 has proven itself as the leader of the bunch, with its versatile, readily available attachments. The large number of attachments has increased the utilisation, whilst at the same time reducing manpower requirements and giving high cost savings.”

Other standard features of the S130 loader include an adjustable cushion seat, the Bobcat Interlock Control System (BICS) for safety, a deluxe cab, the dual path cooling system, as well as front and rear lights. Like all models in the Bobcat range, the enhanced control panel on the S130 skid-steer loader offers a modern and fresh new look. There is also a deluxe instrument panel with keyless start security system as an option. Both systems are easy to use and offer additional operator functionalities.

The company’s Selectable Joystick Control (SJC) option is one of four control systems available from Bobcat. The SJC is the only system on the market to give a choice between ‘ISO’ and conventional ‘H’ hand-control patterns on the same joystick by simply pressing a rocker switch in the cab. Located on either side of the operator’s seat, the low tilt required to operate the joysticks ensures easy operation and very low operator fatigue.

Summarizing, Mr. Diab of Obaikan Equipment & Services said, “We are proud to be Bobcat’s partner of choice in Qatar. We aim to build on our previous success with Bobcat for many more years to come by providing the best possible service to our customers.”
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2009: Contraction of Steel Demand in Thailand

Thailand is the largest producer and consumer of steel products in South East Asia, with its industry divided into three main levels: upstream, midstream, and downstream. Total production volume of selected iron and steel products dropped 5.49% year-on-year in 2007. The highest capacity utilization rate was for steel sheets at 68.2% in April 2008, whilst the lowest rate was for readymade iron and steel products at 41.3%.

In 2007, domestic steel consumption was up to pace with the nation’s economic growth, with main consuming industries being construction, automobiles, and industrial machinery. The Thai government had planned megaprojects for 2009, which were to boost the construction sector and drive demand for construction materials; however, due to the financial crisis, Thailand’s steel demand is expected to slow down in 2009. According to Thailand’s Iron & Steel Institute, Thailand’s steel consumption in 2008 reached about 13.4 million tons, while it was 12.7 million tons in 2007. Nevertheless, in 2009, Thailand’s steel demand is expected to contract to 12.4 to 12.5 million tons.

Steel to lead price drop of building materials
The prices of most construction raw materials have begun to stabilize this year. The exception is steel, which is forecast to fall by 7.4 percent this quarter from the end-2008 level, said Pramote Theerakul, managing director of homebuilder Four Pattana.

He said the first indications of falling prices had come in the final quarter of last year, following average increases of 10.16 percent in the first nine months of the year.

According to a survey by Four Pattana, construction materials fell by 3.4 percent last month from the end-September level. The price of construction steel, however, is predicted to drop by nearly 7.4 percent in the first quarter of this year due to shrinking global demand.

Given this market trend, Pramote said the cost of building houses this year is likely to be about same as last year’s level. However, demand for newly built residences has continued to drop this year, with estimates of total market value at only US$1.53 billion - 3.8 percent lower than last year’s estimated US$1.59 billion.

The market share accounted for by members of the Homebuilder Association is expected to increase from 18 percent (US$0.27 billion) to 20 percent (US$0.29 billion). This is because the association promotes its members’ quality and ability to deliver homes on time, compared with small and medium-sized contractors, he said.

Thailand mulls incentives for steel makers
For some time now, Thailand’s Board of Investment has been striving to lure huge investment to the Kingdom for upstream steel smelters. Four steelmakers have written expressing interest in such investment. Each project is expected to attract at least US$2.8 billion in investment.

It is reported that Japan-based Nippon Steel and JFE Steel remain interested in investing in upstream steel facilities in Thailand even though the global slowdown is making the steel industry sluggish.

A company executive said that despite production capacity cuts announced late last year in line with the deepening fall in world demand, both firms are still eager to expand blast furnace production in Thailand. The executive said that «This investment is a long-term commitment which would take time to develop and set up. By the time the project is complete, the global economy will have picked up.”

Both world leaders in steelmaking, Nippon Steel and JFE Steel are two of four foreign firms that have expressed keen interest in developing high-quality steel blast furnaces in Thailand. The other two are AccelorMittal from Luxembourg and Baosteel from China. The source said that “Thailand remains a prime location for such investment based on domestic market demand to support the automotive and electronics industries. Its strategic location for iron ore imports also helps. However, their decision would also depend on support provided by the local government.”

REFER TO RIN 39 ON PAGE 82
Al Madina A’Zarqa Announces Tie Up With Anantara Hotels & Resorts

Blue City Company 1 (BCC1) has announced an agreement with the internationally recognized luxury hotel group, Anantara Hotels & Resorts, part of the Minor Hotel Group, one of Asia’s leading hotel owners and operators, for a new beachfront hotel development in Al Madina A’Zarqa - the most significant real estate infrastructure project in the Sultanate of Oman currently under Phase One of its construction.

Internationally recognized as leaders in luxury hospitality, the agreement with Anantara signals the launch of the first-ever hotel alliance for Al Madina A’Zarqa, as well as the debut of Anantara in Oman.

The luxury destination will offer residents and visitors alike outstanding facilities, exceptional service, and a broad range of rooms delivered in an environment of unmatched elegance and refined luxury. It will also feature a 5-star spa that will offer its guests an unmatched range of services and treatments. Supported by world-class dining options, the beachfront resort will provide a unique blend of ambience and exclusivity.

Born in Thailand in 2001, the Anantara Resorts and Spas is a collection of five-star luxury and boutique resorts and spas, providing an immersion in culture, history, and unique natural settings. The Anantara chain of hotels has been named one of the 'Top 10 Overseas Spa Hotels' and currently includes four award winning resorts and spas located in the Maldives.

Roger Kacou, Vice President of Hotels and Leisure, BCC1 commented saying, “Oman is well on the way to become a leading business and tourist destination, with vast potential in terms of tourism growth which will complement Oman’s 2020 vision. With the added attraction of Oman’s rich cultural heritage and breathtaking scenery, we anticipate a great deal of interest in this luxurious Anantara hotel in Al Madina A’Zarqa”.

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UK Construction Industry
Facing Bleak 2009

The construction industry in the UK is facing its sharpest decline for nearly 30 years and with little or no prospect of any turnaround in the short term, employment levels across the industry are expected to fall sharply throughout 2009. This is the stark picture according to the latest Trade Survey published jointly by the Construction Products Association and the Construction Confederation February.

The Survey, which covers the fourth quarter of 2008, provides no respite from the current recession, with contractors and product manufacturing predicting that the decline experienced in 2008 will continue during 2009, as shrinking output and over-capacity of construction activity will fall further over the course of a very difficult 2009.

Speaking about the survey, Noble Francis, Economics Director at the Construction Products Association said, “The Association’s anticipates that the construction sector as a whole will fall 9 percent during 2009, the sharpest fall in almost 30 years, with the private sector enduring the worst falls. Although product manufacturers experienced a very difficult 2008, declining demand combined both with rising energy costs and materials prices will continue to present an enormous challenge to the industry. Our survey suggests that the environment for product manufacturers is continuing to deteriorate, and this is being felt by both light side and heavy side manufacturers.

Product manufacturers have reported that employment fell, in the past three months; but expect a further fall in the year ahead. 86 percent of heavy side manufacturers are reporting that employment levels had fallen, the fifth consecutive quarter during which employment fell. For the year ahead, 73 percent of heavy side manufacturers, expect employment will fall further. Just 18 months ago, the main concern was whether the industry would have the capacity to produce the anticipated projects. However, this has dissipated, and the main concern now is under utilization of capacity both for contractors and manufacturers. In the last three months, only 32 percent of contractors reported that they were operating at 90 percent capacity or greater, 18 months ago, this figure was 80 percent.”

Speaking for contractors, Manus Adamson, Executive Chairman of the Construction Confederation added, ‘On the contractors’ side, construction appears to be suffering across most sectors with housing and industrial suffering the sharpest falls. More than 45 percent of contractors reported that private housing and industrial output had fallen in the last quarter compared to a year earlier.

“Looking forward, industrial and housing are set to fall further but are anticipated to be joined by sharp falls in the commercial sector. 77 percent of contractors in the latest quarter reported that their order books for industrial, private housing and commercial sectors had shrunk.’ The fall in demand has had a negative impact upon tender prices and, which combined with further increases in costs, has led to a sharp fall in profit margins.”

The fall in demand across construction has led to falls in tender prices and with costs still increasing, profit margins have fallen further. The reduction in demand has also led to a fall in employment and capacity utilization for both contractors and manufacturers. Contractors are now finding it relatively easy to attract trades to work on site, a sharp contrast from the picture just 18 months earlier, prior to the economic slowdown.

It is not only contractors suffering from under-utilization. Product manufacturers also face similar concerns, with 50 percent of light side firms and 41 percent of heavy side firms, operating at below 60 percent capacity. This has risen over the course of the past 18 and contrasts sharply with the trade survey in the second quarter of 2007 when no light side or heavy side firms reported that they operated below 60 percent capacity.

With demand falling, over capacity within the industry increases the probability of further job losses. The more capacity that is removed in the short term, the more difficult it will be to recover in the longer term when the market recovers and the long term demands of housing, prisons, schools and hospitals must be met. Worryingly these are the worst figures this survey has recorded in nearly 20 years.

Key survey findings are: 78 percent of construction product manufacturers report sales to fall in Q1 compared to Q4 2008; 91 percent of construction product manufacturers report sales lower than in same quarter last year; and 82 percent expect sales to fall in 2009 compared with 2008 and 75 percent of these expect sales to fall by more than 5 percent.
SGW Security Consulting
Launching Their Industry Acknowledged Skills into the MENA Region Security Marketplace

SGW Security Consulting has vast experience within construction, hospitality, financial, public space, and transportation security specifying. The company delivers professional, fully independent advice on threat assessment, strategic solutions, and the specification of Electronic and Physical Security. At home working with single clients or multiple agencies such as architects, contractors, and construction companies from the start of a project, and without allegiance to manufacturers or installers, SGW can provide customers with unbiased support across a broad spectrum of security system solutions. This includes undertaking threat assessment reviews, preparing holistic security strategies through to specifying access control, alarm, fire, ANPR and CCTV and physical controls together with project management services. SGW can also assist in the development of security policies, procedures, and infrastructure, and provide additional support through comprehensive staff training programs.

The company’s BSIA consultancy affiliation ensures stringent membership criteria have been met through regular, rigorous independent inspections, to guarantee that each member represents the very best of British Security Industry customer practices and performance. Simon Whitehouse, Managing Director of SGW says, “Whether we are assisting an architect in the planning of a major construction to ensure crime prevention through economical design, conducting strategic reviews of organizational security functions, or developing a long-term security policy for a client, customers can always be assured of the best services and technology for their needs. Our effective security recommendations help our clients around the world achieve the most economical and high-performance systems and strategies, and we look forward to bringing the SGW advantage to new clients across the expanding Middle East and North Africa marketplace.”

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In 2007/8 a pioneering HDD project was started using Trenchless Technology on the Berri Causeway and Abu Ali Island on the Arabian Gulf coast of Saudi Arabia. Two parallel 3,050-meter-long steel pipelines were to be installed under the bay. The smaller one to be used as an oil trunk line (60.9cm) and the larger one with a total steel pipe weight of more than 1,500 tons will serve as a water injection line (76.2cm). Previously published press releases claimed these as the world’s longest undersea HDD crossings ever undertaken.

In November 2008, TT-UK were contacted by the Middle East specialist HDD Contractor Digital Connection Co Ltd of Al-Khobar, Kingdom of Saudi Arabia (KSA). They sought technical advice and assistance in the recovery of a 106.6-cm hole-opener that had become stuck along with the 3-km drill string beneath the seabed during a pre-ream pass on the second of two undersea pipeline crossings. The Berri Causeway pipeline project in the Middle East (with high profile exposure to the Trenchless technology industry) was always seen as a big challenge, for example the length of the crossings but also the dimensions of the pipeline which would weigh more than 1,525 tons. Whilst the first 60.9-cm oil pipeline had previously been successfully installed, unforeseen delays between the drilling process over a 12 week (non working) period had caused the drill string and the 106.6-cm hole-opener to become stuck on the second (76.2cm) pipeline crossing/installation.

TT-UK renowned for their expertise in the supply and service of their high quality manufactured Trenchless Technology Equipment had little time to provide a solution to releasing the 3km stuck drill string and 106.6-cm hole-opener. However, emergency discussions between TT-UK, the main contractor and the local drilling contractor quickly led TT-UK to respond to the challenge and recommend utilizing their ‘powerful’ Grundoram Taurus impacting hammer combined with steel pipe adaptations that were designed and formulated to transfer dynamic impact performance energies through special steel fabrications adapted to the drill string via the Grundoram impacting hammer in a usable and controllable hammer.

Sharing the project information with other TT Group offices in the USA and Germany, TT-UK quickly drew up a strategic plan together with a technical proposal on how they believed the drill string could be freed up using ‘Dynamic Impact Vibration Energy’.

Whilst similar successful undertakings have previously been carried out worldwide, few have been attempted for releasing stuck drill rods over this exceptionally long distance with each drill rod weighing 480kgs. Dynamic impact vibration energies have normally been placed on the end of product pipes for assistance in completing HDD (Ram Assist), or for product pipe retrieval where the product pipe has become stuck using HDD techniques, few had previously tried with stuck drill rods due to the enormous ‘impact power’ which has to be contained onto a relatively small size drill rod (6/58") from a large impacting hammer in a usable and controllable process.

The Project owner is Saudi Aramco. The main pipeline contractor is Al Robaya and the HDD subcontractors are DCL and TATCO.

The combined efforts from all companies and the personal attendance on site of Roger Atherton of TT-UK proved invaluable to the success and final retrieval of this problematic drill bore taking TTV’s Grundoram and ‘Pipe Ramming’ technologies to a ‘new’ level of HDD ram assist, pipe/drill stem rescue method. Following bore-hole salvage this 30" x 3km water injection pipe-line was, finally and successfully, installed on January 13th 2009!

This rescue saved significant financial implications such as the total cost of a lost drilled bore; any contractual penalties; any ongoing cost delays in commissioning the final pipelines; all associated costs involved in planning a new bore; and the actual costs of duplicating all the undertakings of a new bore/installation, etc.

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Danube Aims to Leverage Growing Demand by Homeowners and Interior Design Specialists for Top Quality Building Materials

Over 111,000 residential units are expected to be delivered within Dubai and Abu Dhabi, with approximately 80,000 units to be completed in the most populous city in the UAE, and another 31,000 units to rise in the capital within the next two years, according to recent industry reports. With expectations of the same trend hitting the other emirates, including Sharjah, Ajman and Ras Al Khaimah, Danube Building Materials, the leader in construction, building materials and shop-fitting industries, is anticipating an increased demand from homeowners as well as interior design specialists for top-quality building materials. In line with this, the company is gearing up for the launch of a first-of-its-kind, customer-friendly retail complex in RAK, which will feature its products installed in an actual home set-up to allow for more convenient shopping. The new RAK-based retail complex will be staffed with highly trained personnel, who can be of great assistance to end-users and even interior designers operating within the local markets. The retail complex has been designed to offer customers the widest range of products in addition to providing them with access to professional design advice. Danube offers a wide range of building materials that facilitate various design options and cater to every budget. All of its products have passed environmental standards and are safe to use, in line with the implementation of green building codes within the majority of the emirates.

Danube has recently inaugurated two new state-of-the-art facilities in Ajman and Al Quoz, wherein the company invested a total of US$14.85 million as part of its regional expansion plans to address the demand for top-quality materials in the region. The US$8.1 million facility in Ajman has a total area of 5,388 square meters and carries Danube’s most popular products, including wood, steel, aluminium, glass, and flooring. Furthermore, the manufacturer has made a decision to invest in a new factory in Al Quoz, which spans a total of 2,787 square meters.

Landmark Agreement Signed By Dubai World and Federal Republic of Nigeria

Dubai World, one of the largest holding companies in the world, has recently announced that it has signed a far-reaching cooperation agreement with the Government of the Federal Republic of Nigeria for investment in a number of key sectors in the Nigerian economy. Under the cooperation agreement, Dubai Natural Resources World (DNRW) would manage the potential development and production of crude oil and gas reserves through a variety of means including the acceleration of upstream oil and gas assets and the development of gas utilization projects. Launched by Dubai World in September 2008, DNRW and its affiliates are responsible for investing, developing, and managing investments in natural resources within the developing world.

Speaking at the ceremony, the Honorable Chief Michael Kaase Aondoakaa (SAN), Attorney General of the Federation and Minister of Justice, hailed the agreement as the latest positive development in the thriving relationship between the Federal Republic of Nigeria and the Emirate of Dubai. His Excellency Sultan Ahmed bin Sulayem, Dubai World Chairman, commented, “This historic agreement consolidates Dubai World’s strategy of tapping new business sectors leveraging the expertise of the group’s various companies to make sound, strategic, long-term investments in the field of energy and natural resources. Nigeria is a land of considerable opportunity, and it is entirely appropriate that Dubai World will partner with the Government of Nigeria to help harness this enormous potential over time.”

Commenting on the role of Dubai Natural Resources World, Abdul Wahid Al Ulama, DNRW Vice Chairman added, “We are tasked with building a diversified portfolio of investments in companies and assets related to natural resources located in developing markets. It is extremely exciting that we will be involved directly in the oil and gas aspects of this landmark cooperation agreement. DNRW looks forward with excitement to contributing to the Nigeria growth story.”

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InterfaceFLOR Opens New Regional Office in Dubai as Part of Ongoing Expansion

InterfaceFLOR, a worldwide leader in the manufacture of environmentally responsible modular floor coverings, is expanding its presence in the region and aiming for LEED (Leadership in Energy and Environmental Design) gold certification for its new regional office in Dubai.

The company, which produces innovative, fashionable, and sustainable carpet tiles, will be using its enhanced presence in the region and its green building rating systems knowledge to support customers with their own green buildings and LEED projects, helping them to become more sustainable and save money in the process. The LEED recognition, which InterfaceFLOR has also earned for other projects throughout the world including America, Thailand, China, and India, will add to InterfaceFLOR’s impressive commitment to Sustainability and Mission Zero - InterfaceFLOR’s ambitious bid to achieve a zero environmental footprint by 2020.

As a founding member of Emirates Green Building Council and leader in the sustainability field, InterfaceFLOR is able to assist clients in choosing the most sustainable carpet tile from their wide product portfolio and meet the criteria in different Green Building Rating Systems, such as LEED or Estidama – both consensus-based standards for developing high-performance, sustainable buildings.

Globally, six out of eight platinum commercial interior LEED projects already use InterfaceFLOR carpets and the company intends to extend that figure, as the number of LEED projects in the region increases exponentially. InterfaceFLOR staff has undertaken extensive training in sustainability, including gaining LEED Accredited Professional qualifications and all are part of the Sustainability Fast Forward 2020 program aimed at encouraging increased knowledge in the field. All employees are also encouraged to pass on their knowledge and expertise to other Middle East firms needing help and support in pursuit of LEED qualifications.

Summertown Interiors Applies for LEED Gold Certification

Summertown Interiors has led the way in eco-conscious building with its new corporate headquarters and showroom. Built on par with gold standard LEED certification, the new facilities, located in the Jebel Ali Free Zone Authority (JAFZA), are the first in the UAE interior design and fit-out world to be eligible for international LEED gold certification. Summertown is the first interior design and turnkey fit-out contractor in the UAE to occupy LEED-certified interiors within its industry.

The international corporate turnkey design and fit-out solution specialist aimed to create a corporate space that encourages a certain level of energy and water conservation and efficiency, while also incorporating specific material selection that lends itself to a healthier outdoor/in-door environmental quality.

LEED Certification is awarded once a corporation complies with a particular set of requirements set forth by the LEED Green Building Rating System, an internationally accepted benchmark established by the United States Green Building Council. The Certification is based on one of four levels, which directly correlate to the specific design, construction and innovation of a building and its use: certified, silver, gold, and platinum.

Depending on which environmental standard a corporate building facility meets, a corresponding certification is awarded. A few examples among the many steps Summertown has taken in its new headquarters to be eligible for gold certification are: central building management system control; usage of LEED-certified furniture and products and materials with high recycle content, reduced energy consumption through sensor-controlled lights and star-rated energy electrical equipment, indoor CO2 monitors, water usage reduction through sensor based systems, and waste segregation for recycling purposes.

Summertown Interiors has emerged as a leader in the design and execution of corporate interiors within the UAE, due to the increasing number of corporations opting for tailor-created fit-outs and redesigns.
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Hyundai Construction Equipment India (HCEI) Holds its First Indian Road Show

Hyundai Construction Equipment India Pvt. (HCEI) has been holding its first road show for its construction equipment starting at Nalgonda, Andhra Pradesh of India since January 28th.

On the first day of the show, HHI made a pitch for its newly developed excavator (R2107-) that was developed for the Indian market to the invited local enterprises and customers by demonstrating and letting them to take the equipment for a spin. Most of guests on the show including Mr. Kanayat Narashimha Rao of Granite Construction Inc. showed a keen interest on the high-fuel efficiency aspect of the new model.

Since the opening of its manufacturing factory on November 21st, 2008, HHI has started promoting its construction equipment by using its locally manufactured equipments. HHI will continue to make positive promotion activities to seize market share of the construction equipment sector in India.

Saudi Arabia's Leading Industrial Group Wins Prestigious Saudi Responsible Competitiveness Index Award

Zamil Industrial Investment Company (Zamil Industrial) has recently announced that it has scooped second place in the Saudi Responsible Competitiveness Index Award at the 2009 Global Competitiveness Forum in Riyadh. Hosted by the Saudi Arabian General Investment Authority (SAGIA) under the patronage of the Custodian of the Two Holy Mosques King Abdullah Bin Abdulaziz, the Global Competitiveness Forum is an annual meeting of top business executives, international political leaders, selected intellectuals and academics who share an interest in global competitiveness.

The award confirms Zamil’s ongoing investment into its ethical business practices across its regional and international operations, and highlights the moves being made by companies such as Zamil Industrial to champion the need for Saudi companies to invest in responsible and competitive business practices.

The Saudi Responsible Competitiveness Index (SARCI) is an initiative of the Saudi Arabian General Investment Authority, and is part of its strategy to make Saudi Arabia one of the top 10 most competitive economies by 2010. It seeks to help responsible businesses to improve their performance and build economic competitiveness, social progress, and sustainability, helping to build competitiveness within industry sectors, cities, and at the national level. Through the SARCI, a critical mass of business-level activities cumulatively helps to build a responsible and competitive climate. The Index is intended to form a core part of the process of building medium-term growth potential through social and environmental performance within the Kingdom.

Participating leading businesses in Saudi Arabia are assessed annually by SARCI consultants. The assessment looks into the strength of a company’s strategy, management, engagement processes, and performance systems. Participating businesses have a confidential briefing on its performance against sectorial, national, and global benchmarks. The process of engaging in the index offers learning opportunities for senior managers.
IronPlanet Sells US$4.11 Million in Equipment at First European Online Auction

IronPlanet® (www.ironplanet.com), the world’s leading online auction company for used construction and agricultural equipment, sold €3.22 million (US$4.11 million) of equipment in its first European online auction, held on January 28.

“We are very pleased with the results of our inaugural European auction. The number of auction attendees, active bidder participation, a global buyer base and strong prices clearly demonstrated the value of IronPlanet’s online auctions,” said Tom Cornell, managing director of IronPlanet Europe. “I think the greatest testament to the success of our first auction has been the tremendous positive feedback we have received from both sellers and buyers who participated in the auction. I am confident that our next auction, on February 24, will continue to validate why IronPlanet has become the world’s leading online auction company.”

The auction drew a global audience of more than 2,100 attendees from 126 countries, selling 118 items. The auction featured equipment from leading suppliers throughout Europe, including Finanzauto, S.A. of Spain, McCormick & McNaughton of Ireland, Pon CAT Rental of Denmark, Liebherr of the U.K., JLG EMEA and other suppliers from Belgium, France, Germany, the Netherlands and Poland.

“In spite of the challenging market environment, I was very pleased with the equipment prices we achieved at IronPlanet’s European auction,” said Graziano Cassinelli, Used Equipment Director of Barloworld Iberia. “The fact that we didn’t have to move our equipment to a traditional auction site and incur the typical make-ready charges of a traditional auction helped eliminate expenses which was very important to us as well. We are excited to participate again in the upcoming February auction, as we are making IronPlanet an integral part of our equipment disposition strategy going forward.”

“IronPlanet will play an important role for me in the future as I buy and sell used equipment. As a buyer of used equipment across the world, the fact that I can get the level of detail IronPlanet includes in its inspection reports eliminates the need for me to travel to inspect equipment or hire inspectors on my own,” said Pat O’Sullivan, director of Overseas Plant Exports, Ltd. “The confidence I have in their inspection reports, the ease of use of their online auction site, and the fact that I was in the comfort of my office when bidding on equipment makes it a great way to buy and sell equipment, and I’ll use it more in the future.”

New Estidama Online Resource to Foster Sustainability Knowledge and Dialogue

The Abu Dhabi Urban Planning Council (UPC), the agency responsible for the future of Abu Dhabi’s urban environments, has launched the new website version of Estidama – sustainability in Arabic – an initiative that groups together communities, organizations, businesses, and policy-makers to further encourage responsible decision-making to bring Abu Dhabi and the region towards global sustainability leadership.

The state-of-the-art online portal includes a number of interactive tools that allow users home page customization according to their bespoke needs and specialized interests on sustainability issues. It also functions as a forum to exchange views, comments, and ideas and empowers users to delve deep into the latest trends of sustainability directly from specialist Estidama experts.

Plan Abu Dhabi is designed to help Abu Dhabi filter and respond to current and future development needs and establishing sustainability as the driving force of our urban planning culture. To promote the related strong guiding principles, UPC is developing tailored communication tools and the new Estidama website is part of them.

Salem Al Qassimi, Associate Planner at Estidama said that visitors to www.estidama.org could learn details of the newly launched Estidama Integrative Design Process (EIDP) which focuses on the ‘how’ of sustainability rather than simply the ‘what’.

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Would you kindly describe your company’s activity, and how your presence in the Middle East and North African main markets is progressing?

Dizayn Group is a high-tech company constantly developing new technology and producing new products for the heating and plumbing sector. We are one of the most technologically developed companies based in Istanbul, Turkey.

By means of its Investor Mission today, Dizayn Group continues its production activities at three different plants stretching over 35-thousand-m2 closed area; and for the future, through new investments and new international partnerships to be established, Dizayn Group plans to become a very solid company conducting its activities on both market levels: domestic and international.

We have been serving the Middle East and North Africa region for many years now.

Dizayn Group is eminent in the Middle East, and we have some distributors marketing our brand in various places in the region including Syria, UAE, Saudi Arabia, Bahrain, Iraq, Kuwait, and Lebanon.

What differentiates Dizayn Group from other companies in your line of work?

Dizayn Group, distinguishes itself in the sector through its strong Research & Development department and professional quality service.

Our aim is always to transfer liquids in an excellent way without turning to imitations. We produce pipes ranging from 12 to 1,600mm in diameter with maximum pressure, 50 to 3600 mm with low pressure. We produce more than 4 thousand pipes and fittings using 23 different techniques.

On account of the importance given to R & D work, the quality of the products produced with unmatched technologies are documented by international quality certification organizations.

Dizayn Group, produces ergonomic and environmental products and is increasing sales volume day-by-day. Dizayn Group has been acknowledged by international markets and is now exporting to 86 countries.

Our philosophy is always to do what others cannot, by developing innovations; this is our most important feature that separates us from our competitors. I would like to highlight that our goal is to serve humanity by developing innovative technologies and delivering highly qualified products.

What is your analysis of the current market for the heating and plumbing industry, especially in the Middle East and North Africa?

There’s a general expectation that the economic crisis the world is today facing will affect the construction industry, and there will be a slowdown that will eventually affect the heating and plumbing sector. In areas like the Middle East & North Africa and the Far East, activities shall persist and grow in this sector. You only need to assess the opportunities.

What challenges to business do you come across in the region?

Actually, we as Dizayn Group like to race with our competitors in the region since we strongly believe in our brand and quality. There are a lot of local and European producers acting in the same region, and it is with them that we compete successfully.

Dizayn Group tries to prevent the usage of low-quality pipes that do not conform to international standards while making tests in its fully equipped mobile laboratory that travels all around the neighboring countries.

What were your main achievements during the year 2008, and on what basis did you undertake them?

Our sales are increasing day-by-day around the world, and we are working on expanding our network of sales in the region. Additionally, Dizayn Group has been chosen for some of the most prestigious projects in the Middle East: the Emerald Palace within the Palm Island development in Dubai and a number of towers within the Pearl Qatar.

We have also been chosen to work on other significant projects: Jumeirah Beach Residence, Old Town Burj Dubai, and Nile Underpass River-Crossing Project, etc.

What is the latest news of the Group?

On account of continuous R&D work, we recently developed two patented technologies that were used in the production of 3 new products.

One of these new products is Oxy-Plus Combi Pipe which is a revolutionary new design in the sector. “Oxy Plus Combi Pipe” has advantages over PP-R pipes. Nowadays, we are presenting another new product which is also aluminum-foiled “Dizayn PP-R Elite Pipe”. The third new product is a spiral pipe known as “Dizayn Self-Acting Pipe”.

Dizayn Oxy-Plus Combi Pipe and PP-R-Elite Pipes are produced from Polypropylene Random Copolymer raw ma-

In an exclusive interview with Mr. Hakan Ozdemir VP International Sales and Marketing of Dizayn Group, Arab Construction World highlights the company’s present and future activities in the MENA region.
Tepe Prefabricated Construction Industry Inc.

Founded in 1977, Tepe Prefabrik is the oldest and best-known company in its sector. Tepe Prefabrik is one of the affiliates of Bilkent Holding/Tepe Group (Bilkent University, Tepe Construction Industry, Tepe Cement Board, Tepe Home, Bilenergy, Cyber Park, Meteksan Defence).

Since its establishment, the company has successfully supplied “prefabricated buildings” to many international projects implemented both in Turkey and abroad, and carried out many important works in the last two decades putting into practice its knowledge and experience on alternative prefabricated building systems. With its 32 years of specialized experience, knowledge, quality, and equipment, Tepe Prefabrik rightfully bears the responsibility put on it as a well-known brand all over the world.

Tepe have had many experience in Military/Defense Business in Iraq, Afghanistan, Turkey, NATO, and UN –Humanitarian Aid basis Refugees Camps in Bosnia, Kosovo. Its subsidiary company TAV is active in Qatar and Tunisia Airport Projects. In fact, Tepe has successfully completed many projects in Middle East and North Africa:

*Customer: Prime Contractor Sky Oryx J.V. Project location: New Doha International Airport Project, Doha, Qatar. Total of completed pre-fabricates & pre-engineered buildings: approx. 10,000 m². Finishing Time: 2006 (Bechtel Inc., USA, Site Offices- TAV Offices- Dining Halls-Other Buildings- Workshops and Ware house)

Advantages of Oxy-Plus Combi Pipe

- No peeling required
- Time-efficient
- Blocks the oxygen flow

Features of PP-R Elite Pipe

- PP-R Elite pipe is used for the transfer of in-building clean cold water or any cold liquid
- Inner diameter is 30-percent: wider compared with usual PP-R pipe. The difference allows additional flow rate
- Provides oxygen insulation, as aluminum foil, in-between PP-R layers, prevents oxygen intrusion into system.

Features of Dizayn Self-Acting Pipe

- Kg/m weight is lower
- It is easier to merge
- On-site production facilities - can be made according to project size

*Customer: Teknotes, Turkey - Iberdrola, Spain J.V. Project Location: Doha Industrial Region, Qatar. Project/Job Owner: Qatar Petroleum. Total of completed pre-fabricates & pre-engineered buildings: approx. 4500 m². Finishing Time: 2007 (Site Offices - TAV Offices - Dining Halls - Workshops and Warehouses)


*Customer: Yasar Ozkan Turkey-Libyan administration. Project Location: Density Faculty Clinic of el fateh University Project Location: Libya. Total of completed permanent buildings & steel construction buildings: 4,568 m²; finishing Time: 2007.
UAE Manufacturer Says Local Furniture Production Can Dramatically Reduce Costs and Delivery Times

A leading UAE manufacturer of ergonomic office workstations says local production can cut costs by up to 60 percent and reduce customer waiting times from three months to less than four weeks.

BAFCO, exhibiting at The Office Exhibition from 3 to 5 March in Dubai, is set to announce a doubling of its local production and a commensurate cut in its reliance on imported products in order to meet strong demand for cost-effective, ergonomic office furniture.

The company, which currently manufactures office furniture from facilities in Al Quoz and Rashidiya, has announced a significant increase in local production processes that will see production rise from 20 percent to 50 percent, drastically cutting costs and delivery time for customers in the UAE.

Gilbert Grino, Senior Marketing Executive at BAFCO said, “Given that customers in the UAE can wait for up to three months for their office furniture to be delivered, there is clearly a strong incentive to manufacture locally. This also means we are able to customize our products to suit local tastes and provide a local servicing centre. In the end, the consumer could also see savings of ten to 60 percent.”

BAFCO is well-established in the UAE as the exclusive agent of Humanscale products and recently completed an AED11 million fit out of customized workstations at Dubai International Airport’s Terminal 3. They have also been awarded a contract to fit-out the Hamdan Bin Mohammed e-University (formerly eTQM College) in Dubai.

First Bahrain Appoints International Consultancy Firm to Ensure Quality of Warehousing Development at BIW

First Bahrain, an innovative regional real estate developer, announced the appointment for Tebodin Middle East Consultants and Engineers as project and construction managers for its warehousing development at the Bahrain Investment Wharf (BIW). The development, which is in close proximity to the new Shaikh Khalifa Port, is a prime example of First Bahrain’s demand-driven investment approach, as well as its leadership in exploring untapped opportunities in Bahrain’s real estate market with a differentiated value proposition.

First Bahrain’s project at BIW is aimed at raising the bar for warehousing development in the Kingdom of Bahrain by developing modern spatial solutions to cater to the needs of small to medium enterprises (SMEs). The warehousing space will be divided into individual units, starting with 93 square meters, and with an option to combine them to accommodate larger tenants’ needs.

Tebodin Middle East was selected for First Bahrain’s project due to the firm’s success in other similar projects in Bahrain such as facilities for Kraft Food, Lauscha Fiber International, and St. Christopher’s School.

Tebodin Middle East will be charged with the project and construction management of civil, structural, piping, mechanical, and electrical and instrumentation installation for the development, as well as the handling of associated field engineering, material control, accounting, safety, security, and environmental control.

The project will offer a range of value-added services, in addition to the physical warehousing space, including a 24/7 security service, state-of-the-art ICT provision, assistance on fit-out and leaseable forklifts. The small to medium, modern and safe warehousing spaces can be used solely for storage, or as a combined storage facility / office, ideal for encouraging startups and smaller companies, and in allowing existing companies to expand.

Tebodin, an Innovative Regional Real Estate Developer, Announced the Appointment for Tebodin Middle East Consultants and Engineers as Project and Construction Managers for its Warehousing Development at BIW.
Sungwon OBO to Provide Exclusive Facilities Management Services to Michigan State University Dubai

Sungwon OBO, a member of Makateb Holding, the first Office Building Operator Company in the world, has announced that it has recently signed a one-year renewable contract to provide exclusive facilities management (FM) services to Michigan State University (MSU) Dubai. The new agreement serves as a testament of Sungwon OBO’s growing presence across key sectors in the UAE, as it delivers customized FM services to one of the country’s premier educational institutions.

Sungwon OBO has revealed that it is now finalizing a specially developed strategy to optimize the lifecycle of Michigan State University Dubai’s facilities. Sungwon OBO will officially commence delivery of FM services that includes Cleaning and Security Services beginning March 1, 2009, to Michigan State University Dubai’s new headquarters in Dubai International Academic City.

“Appointing Sungwon OBO to provide exclusive facilities management services for its brand new facilities in Dubai International Academic City manifests a high level of confidence in our expertise and capability to satisfy the university’s strict quality standards. This partnership will definitely further strengthen our reputation as the preferred FM services provider of prestigious organizations in the UAE,” said Eric Raes, CEO of Sungwon OBO.

Sungwon OBO, the pioneering facility management company in South Korea and the Facilities Management Division of Makateb Holding, delivers a full range of integrated facilities management services, including mechanical and electrical maintenance, cleaning, security, FM consultancy, and energy management. Sungwon OBO has revealed that it is now finalizing a specially developed strategy to optimize the lifecycle of Michigan State University Dubai’s facilities. Sungwon OBO will officially commence delivery of FM services that includes Cleaning and Security Services beginning March 1, 2009, to Michigan State University Dubai’s new headquarters in Dubai International Academic City.

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Eric Raes

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Imdaad, the integrated Facility Management solutions provider, has lately announced that it has signed a 10-year contract with Dubai World Corporate Services under which it will undertake maintenance including MEP services, civil engineering, and infrastructure maintenance at all Dubai World Corporate Services premises.

Speaking about the agreement, Jamal Abdulla Lootah, CEO of Imdaad said, “Imdaad has gained vast experience in the field of total facilities management. Our agreement with Dubai World Corporate Services constitutes an added value to our business portfolio which includes various top real estate, financial, services, and industrial companies in Dubai. We are sure that our team will do its best to maintain such high-quality services, and continue to protect our clients’ assets and exceed their expectations”

Jotun Paints launches Jotashield SuperDurable and Jotashield Heritage High Build in Egypt

Jotun Paints has announced the launch of its newest products: Jotashield SuperDurable and Jotashield Heritage High Build, at a launch ceremony held recently at the Intercontinental City Stars in Cairo, Egypt. The manufacturer further revealed that the newest addition to its exterior paint range is a pure silicone acrylic-based product (SuperDurable) and is specially formulated to protect concrete from extreme climate conditions in the region. The ceremony was attended by senior officials from Jotun and 400 professionals representing the top 42 consultants and contracting offices in Egypt.

With aims to address the increasing demand for environmentally safe paint products in the region, Jotun has introduced Jotashield SuperDurable: a low volatile organic compound (VOC) coating based on a special hybrid silicone binder with twice the life span of traditional coatings. Formulated to provide superior durability, the product has anti-concrete carbonation properties, and low chemical reactivity, thus enabling it to offer superior concrete protection and help reduce maintenance costs. Jotun has also identified the potential in offering specialty decorative paints amidst the growing trend for traditional designs in new structures, which is the focus of the Jotashield Heritage High Build. A follow-through to the success of its Jotashield Heritage range, the new paint product is a single pack modified acrylic, water-based high build-textured coating that is ideal for buildings, which require either a worn look or trendy look.

Imdaad to Provide Facilities Management Services to Dubai World Corporate Services

Imdaad, one of the leading facility management companies in the UAE, aims to provide the market with a portfolio of integrated FM solutions. The company offers consultations for facility management from the conception to the completion of projects, transition and operations and delivers long-term services.

Some of the major projects Imdaad has undertaken include Palm Jumeirah, The Gardens, Atlantis, International City, Jebel Ali Port and Free Zone, Ibn Batuta Mall, Dubai Maritime City, and Wasl-DREC.

Speaking on behalf of Dubai World Corporate Services, Saeed Al-Qaizi, Director of Group Procurement, Contracts, Statistics, and General Admin, said, “Imdaad has successfully established itself as a key player in the growing facilities management industry by keeping pace with advanced technology and services. Imdaad provides distinguished services and enjoys high credibility in the industry. “Furthermore, the company has consistently met our requirements in the past, and continues to do so,” he added. Imdaad, one of the leading facility management companies in the UAE, aims to provide the market with a portfolio of integrated FM solutions. The company offers consultations for facility management from the conception to the completion of projects, transition and operations and delivers long-term services.
New UAE Manufacturer to Commence Production of European Furniture

A new UAE-based manufacturer says locally produced office and commercial furniture can match expensive European imports for quality. Ras Al Khaimah Engineering and Design (RED) will begin production of high-end furniture and partitioning systems from a new 7,000-square-meter manufacturing facility in Ras Al Khaimah in the coming months. The company, which will be officially launched at The Office Exhibition taking place in Dubai from 3 to 5 March, says it will meet a demand from UAE companies, hotels, and retailers for cost-effective, functional and stylish furniture solutions, and faster delivery.

Hani Al Qasem, Managing Director of RED said, “There is a huge opportunity for locally produced quality goods, due to the UAE’s reliance on imported products. For local clients seeking high-quality European styling, most have no option but to wait for expensive orders from Europe. By working closely with our European manufacturer and distributors, we will be able to deliver European standard furniture to the Middle East and Indian markets in half the time and far more cost-effectively.”

The company will produce furniture under its own brand, as well as partnering with several leading European designers to produce their furniture in the UAE.

RED has signed a know-how agreement with Italian partitioning system designer, Lafano, providing RED with access to technical designs and engineering expertise, as well as guaranteeing exclusivity of production in the region. In addition to the enterprise with Lafano, RED is finalizing negotiations with other leading European office and furniture designers.

High Impact Seminar Raises Awareness on Autodesk Revit and Civil 3D 2009 Solutions in Qatar

The design solutions market in the Middle East is expected to rise by 5 percent in 2009, according to Promedia, a leading systems integrator and part of UAE-based OMNIX International, with more developers identifying the advantages of adopting technology-driven solutions to fast track their projects’ construction process and, thereby, reduce loses amidst the current economic downturn. In line with this, ProMedia, hosted a high impact seminar focusing on the revolutionary Revit and Civil 3D 2009 range of design solutions by Autodesk, the world leader in 2D and 3D design software for the manufacturing, building, and media and entertainment markets. The seminar, which was held at the Marriot Hotel in Doha on January 26, 2009, highlighted the Building Information Modeling (BIM) concept upon which these revolutionary Autodesk solutions are based.

With Qatar’s economic standing expected to remain stable amidst the global credit crunch, ProMedia aims to leverage the growing demand for robust design applications within the country to support a wide range of projects within the oil and gas, construction, and media sectors. In line with this, the company teamed up leading architects, interior designers, structural and MEP consultants to highlight the immediate impact of Revit and Civil 3D 2009 solutions, as well as the BIM concept on Qatar’s architecture and construction industry. Customers will now be able to bring their most innovative ideas to market faster by staying competitive, while improving Rol.

Revit solutions keeps information coordinated, up-to-date, and accessible in an integrated digital environment, giving project teams a clear overall vision of their designs, the capacity to test and visualize in a digital environment, improve efficiencies, and reduce errors by streamlining the decision-making process. The Civil 3D software provides project teams with a comprehensive surveying, design, analysis, and documentation solution to deliver land development, transportation, and environmental projects faster and with improved accuracy.
Cirrus Developments Completes the Enabling, Piling, and Shoring Package for Celestial Heights

Cirrus Developments LLC, one of the fastest growing developers in the region and the first third-party developer to begin construction at Downtown Jebel Ali, has completed the enabling, piling, and shoring package for its Celestial Heights project. The US$270-million Celestial Heights development is now moving into the second phase of construction.

Celestial Heights itself is located in the Trellis District of Zone One, Downtown Jebel Ali, which comprises mid-rise towers, shaded walkways, and beautiful parks. The development offers residential, commercial, and retail units, and will be made up of three towers: Capella, Orion, and Polaris. Celestial Heights was the first project to be launched by Cirrus Developments and the first by a sub-developer in Downtown Jebel Ali. The company has since launched other residential and commercial projects to the value of US$81 million, including the Aquarius Gate project at Nakheel’s Waterfront. Cirrus Developments has recently announced it was the first third-party developer to start construction at the Waterfront project with enabling works getting underway at Aquarius Gate earlier this month.

REFER TO RIN 66 ON PAGE 82

Emaar E.C. Reveals Final Designs of King Abdullah Economic City Sea Port

Emaar, theEconomicCity(Emaar.E.C), the Tadawul-listed company developing King Abdullah Economic City (KAEC), has revealed the final blueprints of the KAEC Sea Port, designed in coordination with Halcrow, the international consultancy specializing in the provision of planning, design, and management services for maritime projects.

One of the six key components of the 168-million-square-meter KAEC, the Sea Port will be the largest in the Red Sea and one of the top 10 ports in the world with a capacity to handle 20 million TEU (twenty foot equivalent contain-
er units). Planned as logistics hub, the world-class port is uniquely bonded with city’s industrial zone, facilitating the flow of primary material and products to the industries within the zone, furthermore assisting regional and global export. Set to become operational by Q1 2011 the KAEC Sea Port will consist of a multipurpose cargo terminal and a 1.7 million TEU container terminal, after which the capacity of the port will be increased on several phases.

As per design the port will have a depth of 18 meters permitting mega vessels to anchor. At a strategic location on the Red Sea and stationed on one of the largest and busiest shipping line routes, the mega-city’s Sea Port will create a regional logistics hub that will further stimulate the Saudi economy through new job and investment opportunities. Furthermore, the port’s integrated transportation system promises to deliver cargo seamlessly to various destinations – within the region and internationally.

REFER TO RIN 67 ON PAGE 82

Nakheel’s Marina Residences Set For Handover Starting April

Nakheel, Dubai’s master-developer, has announced that the exclusive Marina Residences development on Palm Jumeirah is now 90 percent complete. The handover of more than 900 homes on the development is set to commence in just a few weeks, from April 2009.

Work at the development has progressed rapidly. Groundwork only commenced on Marina Residences’ six towers, located at the tip of Palm Jumeirah’s trunk, in September 2006.

Marina Residences is a stunning residential complex located at the tip of the trunk on Palm Jumeirah. The high-end, high-rise development consists of six residential towers that rest on landscaped podiums faced with marinas. The six towers hold 940 apartments and penthouses; a further 40 units rest on a marina fronted promenade in the form of townhouses. Over the next 24 months, Nakheel will deliver thousands of homes at its communities. Handover of homes has already begun at Jumeirah Village, with 2,200 villas and townhouses expected to be handed over by the end of the year. 24 ultra-luxury villas at Jumeirah Island Mansions are set for handover this spring, adding to this already vibrant community that has become one of the most sought-after residential locations in Dubai. Jumeirah Park is also on track, with homeowners set to take up occupancy later this year. 90 percent of infrastructure works are complete across the development, with villa construction 30 percent finalized. At family-focused Al Furjan, 14 show villas are open for viewing, with handover of the first properties on schedule for late 2010.

REFER TO RIN 68 ON PAGE 82
Modon Signs Contract for Energy Service City in Dammam Attracting Industrial Investment of US$1.3 Billion

Saudi Industrial Property Authority (MODON) entered into an agreement to establish Energy Service City in Dammam 2nd Industrial City.

The project involves building an integrated industrial city specializing in energy services of international standards on an area of 1.5 million square meters in Dammam 2nd Industrial City to support the industry sector specialized in energy services in the Kingdom of Saudi Arabia, particularly the oil and gas sector.

The Oil Fields Processing Company will plan, develop, construct, and manage the industrial city and use the concept of establishing an integrated base of equipment and logistical support to clients engaged in similar business and will follow the best international standards of safety, environment, and quality. The city will include an industrial as well as residential, educational, commercial, and public services areas.

The project is to be built in two phases: Phase I includes approximately 120 factories with an investment value estimated of US$106.7 million as cost for the establishment of the first phase. The investments in these factories are estimated to reach more than US$1.3 billion. The types of industries targeted in the Energy City are: Covers for drilling, links for pipes, mechanical products, chemical products, etc.

Realty Capital’s i-Rise Project on Schedule as 2010’s Completion Date Draws Near

Realty Capital has announced that construction on its centerpiece i-Rise business tower project remains on schedule and will finish on time for the tower’s announced mid-2010 completion date. The casting of the tower’s 4th podium floor slab is underway and will be completed within a week, while works for the 5th podium level are already in progress. Mechanical, electrical, and plumbing installations as well as block-works are also ongoing at the basement and podium levels.

The 167,220-square-meter development will become one of the largest office towers in the region upon its completion.

“We take pride in handling one of the most awaited projects in Dubai, which has been able to proceed despite today’s challenging business conditions. We assure our clients and partners that work on i-Rise is going smoothly and that we shall continue to anticipate and effectively manage all potential challenges,” said Marwan Mansour, CEO, Realty Capital.

Strategically located at TECOM Site-C, Dubai’s Technology and Media Free Zone, the AED 1 billion, 37-storey i-Rise is poised to become a popular landmark due to its unique curvilinear design. The business tower will feature a specially treated podium façade; modern executive and corporate offices; 19 high-speed elevators, dining establishments; commercial space; a fitness center; a helipad; and a multi-storey car park.

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“Realty Capital has announced that construction on its centerpiece i-Rise business tower project remains on schedule and will finish on time for the tower’s announced mid-2010 completion date. The casting of the tower’s 4th podium floor slab is underway and will be completed within a week, while works for the 5th podium level are already in progress. Mechanical, electrical, and plumbing installations as well as block-works are also ongoing at the basement and podium levels.

The 167,220-square-meter development will become one of the largest office towers in the region upon its completion.

“We take pride in handling one of the most awaited projects in Dubai, which has been able to proceed despite today’s challenging business conditions. We assure our clients and partners that work on i-Rise is going smoothly and that we shall continue to anticipate and effectively manage all potential challenges,” said Marwan Mansour, CEO, Realty Capital.

Strategically located at TECOM Site-C, Dubai’s Technology and Media Free Zone, the AED 1 billion, 37-storey i-Rise is poised to become a popular landmark due to its unique curvilinear design. The business tower will feature a specially treated podium façade; modern executive and corporate offices; 19 high-speed elevators, dining establishments; commercial space; a fitness center; a helipad; and a multi-storey car park.
Nakheel Begins Handover of Villas at Jumeirah Village

Dubai’s master developer, Nakheel, has recently revealed that it has started handing over 300 villas at Jumeirah Village.

Nakheel has sold 96 percent of available villas and townhouses in Jumeirah Village and this is the second release of residences in the new Nakheel Village and this is the second release of new Nakheel villas and townhouses in Jumeirah Village. Nakheel has sold 96 percent of available housing after full handover of 300 villas at Jumeirah Village and this is the second release of new Nakheel villas and townhouses in Jumeirah Village.

Sweet Homes Sells out Al Khor Units

Sweet Homes, a leading UAE-based developer and multi-service provider to the real estate sector, has sold out two towers (‘A3’ and ‘B4’) within the Al Khor Towers development in Ajman.

As the exclusive marketing agent for the two towers, the company further revealed that delivery and handover of the two towers, which are ready for occupation, is slated for within two to three weeks from now.

Launched in 2006 and offering 100 percent freehold status to residents, Al Khor Towers is a project of Real Estate Investment Establishment (REIE), Department of Private Properties (Government of Ajman), which undertakes private real estate investments, and will comprise nine 16-storey apartment buildings located in the Al Khor area in Ajman.

‘A3’ and ‘B4’ are set to offer 133 two- and three-bedroom apartments, with only four apartments, ranging in size from 141 to 219.8 square meters, on each floor. The modern residential units will incorporate two balconies and a maid’s room with a bathroom, and chilled water central A/C and fresh air system. In addition, the project’s facilities also include three high-speed elevators, 24/7-security system and open-air parking.

Further, the ground floor of the A3 tower has a selection of retail shops as well. Located in close proximity to the Etsalat building and Ajman City Centre, Al Khor Towers offers excellent views of the Ajman Creek and is overlooking the Ajman beach. The project also offers the same design and layout as Al Nuaimiah Towers, which was another project launched by REIE in 2006 and marketed by Sweet Homes.

Having successfully managed the sales of towers within these two high-profile developments, Sweet Homes has attributed its success to its extensive experience in promotion, marketing and overall management of real estate projects in the region.

Sherwoods Independent Property Consultants has announced that it has recently deployed new strategic initiatives to capitalize on an expected upswing in real estate business activities within the last two quarters of 2009, as the global financial downturn gives way to more positive changes in Dubai’s property rental market. Furthermore, Sherwoods revealed that it expects the rental index introduced recently by the Real Estate Regulatory Authority (RERA) to further consolidate and stabilize the rental market in the long term, as it creates a highly transparent system that promotes investor confidence and helps control rates from once again escalating to unreasonably high levels.

With rents becoming more affordable partly as a result of the global financial downturn, Sherwoods pointed out that the situation will ultimately deliver long-term benefits to Dubai’s property sector as businesses will feel less pressure in subsidizing housing allowances for their workers, while more people will be encouraged to relocate in the emirate. Sherwoods further noted that a more stabilized rental market combined with the adoption of a credible rental index system would likewise drive investor confidence as rental yields will be much more predictable and easier to calculate.

Sherwoods also noted that some of the issues raised against the rental index are likely short-term problems, which can be settled once the values reflected on the rental index are updated for 2009, providing a more accurate depiction of the current market situation. Furthermore, as it considers the rental index a more viable long-term solution to resolve issues in Dubai’s rental market, Sherwoods expects RERA to update the index figures on a regular basis and subsequently have a more clear-cut policy on the index’s role in the rental market.

Sherwoods expects transparency, affordability to help restore Dubai rent market stability in second half of 2009.
Sbie, At the Center of the Saudi Multibillion Building & Interiors Market

Benefiting from a strong economy and surging oil revenues, the Government, in partnership with the private sector, is engaged in a huge program of mega infrastructure projects involving total investments in excess of US$320 billion over the next four years. The creation of Six Economic Cities, the first and largest of which is the King Abdullah Economic City, a US$60-billion project near Jeddah, are already providing huge opportunities and fuelling demand in all areas of the buildings and interiors sectors.

These important booming sectors require a marketing platform and showcase, and the annual saudi building & interiors exhibition (sbie) fulfils this role. The 18th edition of this important annual international showcase, organized by Al Harithy Company for Exhibitions, will take place from 12 to 16 April, 2009, in Jeddah, the commercial and leisure hub of the Kingdom, when it will once again provide the ultimate platform for exhibitors to access the vibrant and lucrative Saudi market.

Sbie attracts a wide and varied range of participants, with international companies and national pavilions exhibiting alongside leading Saudi businesses. Providing an unrivalled international showcase for products, technologies, innovations, and design trends for the building and interiors sectors, sbie is proud of its reputation of offering visitors from across Saudi Arabia and the surrounding Gulf States the widest concentrated presentation of building and interiors products and services available anywhere within the Kingdom. On an international level, the show will have the presence from USA, Iran, China, Germany, Indonesia, Thailand, Turkey, Malaysia, India, France, Egypt, Lebanon, Kuwait, Bahrain, and UAE. Running parallel to the exhibition will be a high-profile symposium featuring expert speakers from the industry conducted by the Saudi Council of Engineers. A host of advisors and specialists will conduct technical demonstrations and provide free consultancy to prospective builders or property owners.

Sbie’s strength lies in its comprehensive presentation and its role as the communication platform for the dual combination of the building and interiors sectors providing Saudi and international companies with a world class forum from which to promote products and services. The wide spectrum of high profile professional visitors, attracted from across the Kingdom and neighboring Gulf States, ensures sbie’s place as an integral part of any marketing strategy for Saudi Arabia.

REFER TO RIN 74 ON PAGE 82
32nd INTERNATIONAL TURKEYBUILD 2009 ISTANBUL
06-10 MAY
100,000 visitors
850 exhibitors
60,000 sqm fair area
3,200 brands
11,000 products from 17 countries

Fair all day, Istanbul all night

INTERNATIONAL BUILDING, CONSTRUCTION MATERIALS AND TECHNOLOGIES TRADE SHOW

www.turkeybuildistanbul.com
info@turkeybuildistanbul.com

The fair “is organized under the authorization of TOBB according to the law 5174.”
Turkeybuild 2009
All About Construction...

The International Turkeybuild 2009 Istanbul Fair, which will take place between May 6th and 10th 2009, in Tuyap Fair and Congress Center, is a major gathering platform for the most distinguished companies of the local and international building sector. Ever since the first time it was organized, International Turkeybuild Istanbul Fair, the biggest and most important building materials fair in Turkey, developed into an important platform with the support and contribution of the professionals in the sector. This year, once more, the participants will seize the opportunity to demonstrate innovations that would pave the way to the industry at a larger scale and quench the thirst for new ideas.

Held in an area of 60,000 m² with 10 different halls grouped according to production areas, Istanbul Fair, the first of International Turkeybuild Fair series, is the most effective access to the Turkish building market. With the participation of 800 companies from 50 different countries, the International Turkeybuild Istanbul Fair is qualified as the greatest building fair of Turkey and contributes a great deal to the international effectiveness of the Turkish building sector.

Having the largest exhibition area, participant and visitor profile, Turkeybuild Istanbul Fair also proves its competency by providing maximum exposure to the market and giving the visitors freedom of choice in a variety of highest quality and cost effective products. In an area of 60,000 m², this year Turkeybuild Istanbul has attracted 96,000 visitors and not only gathered together all components of the building sector, but it also contributed a lot to the foreign promotion of the Turkish Construction Sector.

The Building Information Center has already started the foreign promotion of the Turkeybuild 2009 Istanbul Fair. It is anticipated that the volume of participants as well as visitors will go through a considerable growth.

Purchasing committees responsible for construction investments in 20 foreign countries have participated in the fair with the support of Prime Minister’s Office Undersecretariat of Foreign Trade Purchasing Committee Program and TOBB Foreign Economic Relations. Under the coordination of Prime Minister’s Office Undersecretariat of Foreign Trade, participation of the committees was organized by Istanbul Mine and Metals Exporters Union General Secretary (İMİMİB) and Central Anatolia Exportation Unions General Secretary (OAİB). Purchasing committees from Jordan, Lebanon, North Korea, Bulgaria, Azerbaijan, Albania, Oman Sultanate, Belarus, Bahrain, Georgia, Iraq, Israel, Kuwait, Moldova, Uzbekistan, Russian Federation, Palestine, Syria, Ukraine, and Qatar contributed to the activities of Turkish building sector in the international area.

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The Building Information Center has already started the foreign promotion of the Turkeybuild 2009 Istanbul Fair. It is anticipated that the volume of participants as well as visitors will go through a considerable growth.
Section One: International and regional manufacturers and suppliers of Lifting Equipment.

Section Two: Contact details of agents and distributors as well as companies active in the Lifting Equipment sector in the Middle East and North Africa region, listed by country.

Section I

Cargotec Finland Oy, Hiab
Sörnäisten rantatie 23, P.O. Box 61, 00051 Helsinki, Finland
Tel: +358 204 554401
Fax: +358 204 554511
E-mail: communications@cargotec.com / sales@hiab.com

Contact Person: Mr. Pekka Varthainen - Hiab’s President
Ms. Aija Kalandier - Vice President External Communications

Tel: +358 40 5551637
Hiab is the World’s leading supplier of on-road load handling equipment. The product range includes HIAB loader cranes, MULTILIFT demountable, MOFFET truck-mounted forklifts, ZEPRO, AMA, WALTCO, DEL, ULTRON and FOCOLIFT tail lifts as well as LOGIFT and JONSERED forestry and recycling cranes, Hiab is part of Cargotec Corporation, the world’s leading provider of cargo handling solutions.

Agents & Distributors
International Agencies - Bahrain
Yusuf Bin Ahmed Kanoo WLL, Commercial - Machinery Division - Bahrain
Panaos Ltd. - Cyprus
Panaos Truck Bodies Industry Ltd - Cyprus
Uniprint Ltd - Cyprus
ISMATCO General Trading & Agencies Co. - Egypt
Al Badiyah Engineering Equipment Co (P.L.C.) - Jordan
Alam Steel Ind. Co W.L.L - Kuwait
Hassan A. Karim Algahtani Sons & Co. - Saudi Arabia
Yusuf Bin Ahmed Kanoo, Dammam - Saudi Arabia
Yusuf Bin Ahmed Kanoo, Jeddah - Saudi Arabia

Yusuf Bin Ahmed Kanoo, Riyadh - Saudi Arabia
Nahas Intertrade - Syria
Intermobil A.S. - Turkey
Istanbul Genel Makina - Turkey
Arser Ls Makineleri Servis ve Tic. AS - Turkey
BM Teknik Elektronik Hidrolık - Turkey
Hiab, Sales Middle East - c/o MacGregor (ARE) L.L.C - UAE
Bin Brook Motors & Equipment – UAE

Gunnebo Industrier AB
Bruksvägen 3, 590 93 Gunnebo, Sweden
Tel: +46 490 89000
Fax: +46 490 89198
E-mail: info@gunneboindustries.com
http:www.gunnebolifting.com

Contact Person: Mr. Christer Lenner - CEO
Tel: +46 490 89 111
E-mail: christer.lenner@gunneboindustries.com

Gunnebo Industries develops, manufactures, and markets chain and lifting components, fastening systems for the construction industry, blocks and systems for heavy lifting equipment, traction devices, and telescopic ladders. The group operates in 15 countries, as well as partnering with some 50 major distributors and agents worldwide.

Agents & Distributors
Emirate Safety Services Ltd - Abu Dhabi, UAE
Emirate Safety Services Ltd - Dubai, UAE
Emirate Safety Services Ltd - Sharjah, UAE

Haulotte Group
BP 9, La Péronnière 42152 L’Horème, France
Tel: +33 4 77292424
Fax: +33 4 772943 95
E-mail: haulotte@haulotte.com
http:www.haulotte.com

Contact Person: Mrs. Marjolaine Degrange - Public Relation Manager
E-mail: mdegrange@haulotte.com

Haulotte Group, worldwide manufacturer of people and material lifting equipment:
- Aerial work platforms
- Telescopic handlers
- Backhoe-loader

Agents & Distributors
Haulotte Middle East FZE - UAE

Jungheinrich AG
Am Stadtrand 35, 22047 Hamburg, Germany
Tel: +49 40 6948-0
Fax: +49 40 6948-1777
E-mail: info@jungheinrich.de
http:www.jungheinrich.de

Jungheinrich offers customized “all-round solutions” for stacking, transporting, warehousing and order picking. With a comprehensive range of forklift trucks, racking systems, services and consulting covering the entire field of intralogistics.
- Low-lift platform trucks, stackers and order pickers with a loading capacity of up to 9t.
- Racking systems - from rack stack frames to cantilever racks right up to high racking systems.
- Planning and implementation of complete logistic systems

Agents & Distributors
The National Company for MEchanical & Electrical Works (KNDU) - Kuwait

Locatelli SpA
Via Lombardia, 32, 24030 Mapello (BG), Italy
Tel: +39 035 494 5066
Fax: +39 035 494 5549
E-mail: info@locatellicrane.com / sales@locatellicrane.com
http:www.locatellicrane.com
Locatelli SpA is the first Italian Company manufacturer of telescopic hydraulic cranes and specialized in the production of rough terrain cranes, ranging from 12,5- through 60-metric-ton capacity as well as city cranes 20-ton and 40-ton capacity, with a great choice of options for different applications.

Agents & Distributors
Yoke Industrial Corp.
39, 33rd Road, Taichung Ind. Park, Taichung 407, Taiwan
Tel: +886 4 23508088
Fax: +886 4 23501001
E-mail: yoke999@ms47.hinet.net
http:www.yoke.net
Contact Person: Mr. Steven Hong - President & CEO
Yoke Industrial Corp. Create innovative solutions to solve the difficulties faced in the lifting, construction, material handling and personal safety harness solutions.

INMA Co. Oman L.L.C. - Oman
SPAN Warehouse Solutions - Qatar
Zahid Tractor & Heavy Machinery Co. Ltd. - Saudi Arabia
SAAD & Company Machinery Trading - Syria
SACMI - Tunisia
Junghenrich Istif Makinalari San. ve Tic. Ltd. Sti. - Turkey
SPAN Group - UAE

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SPAN Warehouse Solutions - Qatar
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SAAD & Company Machinery Trading - Syria
SACMI - Tunisia
Junghenrich Istif Makinalari San. ve Tic. Ltd. Sti. - Turkey
SPAN Group - UAE

If you would like to run your contacts in this space, kindly contact us at businesslinks@menaservices.net

visit us at: www.acwmag.com
fields. It offers all popular lifting items as well as many other items for use in the lifting and material handling industry.

SECTION II

BAHRAIN

International Agencies
Ali Al Wazzan Building, 131 Al Khalifa Avenue, P.O. Box 584, Manama, Bahrain
Tel: +973 17 228655 / 72691
Fax: +973 17 210016
E-mail: dm-service@intercol.com
http: www.intercol.com
Representing: Cargotec Finland Oy, Hiab – Finland

M. H. Al Mahross BSC (C)
P.O. Box 65, Manama, Bahrain
Tel: +973 17 408090
Fax: +973 17 404323
E-mail: almahroos@almahroos.com
http: www.almahroos.com
Representing: Jungheinrich AG – Germany

Yusuf Bin Ahmed Kanoo
WLL, Commercial - Machinery Division
P.O. Box 45, Manama, Bahrain
Tel: +973 17 738200 / 17 738201
Fax: +973 17 732828 / 17 738206
E-mail: ajit.s.nair@ybakanoo.net
http: www.kano.com
Representing: Cargotec Finland Oy, Hiab - Finland

CYPRUS

Cyprus Import Corp. Ltd.
108, Ayliou Ilarinos Str. Kaimakli, 1027 Nicosia, Cyprus
Tel: +357 2 2459873
Fax: +357 2 2347835
E-mail: askarlatos@cic.com.cy
Contact Person: Mr. Andreas Skarlatos
Representing: Jungheinrich AG – Germany

Panaos Ltd.
28, Giannis Koromias Str., Kaimakli, Nicosia, Cyprus
Tel: +357 2431655
Fax: +357 2430322
E-mail: panaos-ltd@lycos.com
Representing: Cargotec Finland Oy, Hiab - Finland

Panaos Truck Bodies Industry Ltd
28 Yianni Koromia, 1028 Kaimakli, Nicosia, Cyprus
Tel: +357 22 431655
Fax: +357 22 343022
E-mail: cargotec@panaos Ltd
Representing: Cargotec Finland Oy, Hiab - Finland

Uniplant Ltd
182 Limassol Avenue, CY 2235, Latsia, Cyprus
Tel: +357 22 488777
Fax: +357 22 488885
E-mail: demetris.karpis@uniplant.com
Contact Person: Mr. Demetris Karpis
Representing: Cargotec Finland Oy, Hiab - Finland

EGYPT

ISMATCO General Trading & Agencies Co.
20 Hosni Alashmawi Street, Helioopolis, 11351, Cairo, Egypt
Tel: +202 6365756 / 6399240 / 6356814
Fax: +20 2 6354384
E-mail: cargotec@matco Ltd
Representing: Cargotec Finland Oy, Hiab - Finland

The Logistic Company
El-Obour City Street 31, Assata Complex, 11828 Cairo, Egypt
Tel: +20 2 46102431
Fax: +20 2 46102433
E-mail: eg.jungheinrich.com
Representing: Jungheinrich AG – Germany

IRELAND

Lowzan Amlash Co.
P.O. Box 14665-753, Shahrake Qods, Farahzadi Ave, after Darya boulevard, Morvarid building, No.1, APT 8 Tehran 1468993883, Iran
Tel: +98 21 22097277
Fax: +98 21 22075321
E-mail: lowzan@sepanita.net
Representing: Jungheinrich AG – Germany

LEBANON

Span I.T. and Automation Solutions
Hachem Centre, 5th Floor, Electricity Street, Bauchrie, P.O. Box 90-1218, Beirut, Lebanon
Tel: +961 1 888288
Fax: +961 1 902690
E-mail: inquiry@span-group.com
http: www.span-group.com
Representing: Jungheinrich AG – Germany

JORDAN

Al Badayerh Engineering Equipment Co (P.L.C.)
Jabal Amman, Zahran, Samir Al-Rifa‘ee Street No 19, P.O. Box 974, Amman 11118, Jordan
Tel: +962 6 4643800 / 4643900
Fax: +962 6 4643901
Representing: Cargotec Finland Oy, Hiab - Finland

KUWAIT

Alam Steel Ind. Co W.L.L
P.O. Box 1011, Safat, Kuwait
Tel: +965 4831522
Fax: +965 4831740
E-mail: alam@qualitynet.net
Representing: Cargotec Finland Oy, Hiab - Finland

Equipment Co. W.L.L.
P.O. Box 192, 13002 Safat, Kuwait
Tel: +965 24812400
Fax: +965 24819562
E-mail: mc@equipcokuwait.com
http: www.equipcokuwait.com
Representing: Jungheinrich AG – Germany

The National Comapny for Mechanical & Electrical Works (KNDU)
P.O. Box 24081 Safat 13101, Kuwait
Tel: +965 3981996 / 3980312
Fax: +965 3981995 / 3987225
E-mail: kn.du@kharafinational.com
http: www.kharafinational.com
Representing: Jungheinrich AG – Germany

OMAN

INMA Co. Oman L.L.C.
P.O. Box 760, 112 Ruwi, Muscat, Oman
Tel: +968 24 562100
Fax: +968 24 562039
E-mail: inmaco@omantel.net.om
Representing: Jungheinrich AG – Germany

QATAR

SPAN Warehouse Solutions
P.O. Box 51, Doha, Qatar
Tel: +974 44431166
Fax: +974 44328642
E-mail: qatar@span-group.com
http: www.span-group.com
Representing: Jungheinrich AG – Germany

SAUDI ARABIA

Hassan A. Karim Algahtani Sons & Co.
Khoobar/Dammam Highway, 3195, Al-Khobar, Saudi Arabia
Tel: +966 3 8570096 / 85700966
Yusuf Bin Ahmed Kanoo, Damman
Machinery Division, P.O. Box 37, Damman 31411, Saudi Arabia
Tel: +963 3 8571265 Ext. 303
Fax: +963 3 8577139
E-mail: mdssales@kanoosa.com
http://www.kanoocom.com
Representing: Cargotec Finland Oy, Hiab – Finland

Yusuf Bin Ahmed Kanoo, Jeddah
Machinery Division, P.O. Box 812, Kilo 7, Madinah Road, Jeddah 21421, Saudi Arabia
Tel: +966 2 2632959 Ext. 631, 632
Fax: +966 2 2632979
E-mail: mdssales@jed.kanoosa.com
http://www.kanoocom.com
Representing: Cargotec Finland Oy, Hiab - Finland

Yusuf Bin Ahmed Kanoo, Riyadh
Machinery Division, P.O. Box 753, Riyadh 11421, Saudi Arabia
Tel: +961 1 4914624 Ext. 223 / 212
Fax: +961 1 4914404
E-mail: mdssales@ruh.kanoosa.com
http://www.kanoocom.com
Representing: Cargotec Finland Oy, Hiab - Finland

Zahid Tractor & Heavy Machinery Co. Ltd.
P.O. Box 8928, Jeddah, Saudi Arabia
Tel: +966 2 6671156
Fax: +966 2 6603147
E-mail: helweh@zahid.com
http://www.jungheinrich.com
Representing: Jungheinrich AG – Germany

SYRIA
Nahas Intertrade
P.O. Box 3050, Damascus, Syria
Tel: +963 11 2129736 / 9742
Fax: +963 11 2129851
E-mail: nahas-co@snc-net.org
http://www.nahasgroup.com
Representing: Cargotec Finland Oy, Hiab – Finland

SAAD & Company Machinery and Trading
Fardoss Street 16, P.O. Box 30890, Damascus, Syria
Tel: +963 11 2229386
Fax: +963 11 2216493
E-mail: saadmt@sacmi.com.tn
Representing: Jungheinrich AG - Germany

Tiger1 Establishment
P. O. Box 9314, Damascus, Syria
Tel: +963 11 6110488 / 6110209
Fax: +963 11 6130414
E-mail: info@tiger1me.com
http://www.tiger1me.com
Representing: Locatelli SpA - Italy

TUNISIA
SACMI
Z.I., 2035 Ariana Aéroport, B.P. 393, 1080 Tunis, Tunisia
Tel: +216 70 837800
Fax: +216 70 837800
E-mail: info@sacmi.com.tn
Representing: Jungheinrich AG - Germany

TURKEY
Arser Ls Makineleri Servis ve Tic. AS
Sinan Ercan Sk. 18, Papa Korusu Konağılyr, Kazakster, Istanbul 34736, Turkey
Tel: +90 216 5719000
Fax: +90 216 4635367
E-mail: pbingo1@ist.ars.com.tr
Representing: Cargotec Finland Oy, Hiab - Finland

BM Teknik Elektronik Hidrolik
Mak. Bilgisayar Sistem San Tic Ltd, Orhanlı Girisi, Turgutreis san.sit. C-3 Blok No. 1 PB 34957, Istanbul, Turkey
Tel: +90 216 3941839
Fax: +90 216 3941833
E-mail: sedatcakiroglu@bm-teknik.com.tr
http://www.bm-teknik.com.tr/
hakkimizda.htm
Contact Person: Mr. Sedat Cakiroglu - Sales Manager
Representing: Cargotec Finland Oy, Hiab - Finland

Intermobil A.S.
Akin Plaza, Halide Edip Adivar Mahallesi, Cihtecevizler Deresi Sokak No:2 Kat 2, 34382, Sisli, Istanbul, Turkey
Tel: +90 212 3142000
Fax: +90 212 3142001
E-mail: intermobil@superonline.com
http://www.intermobil.com.tr
Representing: Cargotec Finland Oy, Hiab - Finland

Istanbul Genel Makina
Perpa Ticaret Merkezi, K2 No. 82, 80270, Istanbul, Ockyndani, Turkey
Tel: +90 212 2220942
Fax: +90 212 2220945
Contact Person: Mr. Omer
Representing: Cargotec Finland Oy, Hiab - Finland

Jungheinrich Iistif Makinalari
San. ve Tic. Ltd. Sti.
Eksioglu Mahallesi, Yeni Sile Otoban yoluzu überi, Sehitler Cad. No: 47, 34794 Alemdağ, Istanbul, Turkey
Tel: +90 216 3124707
Fax: +90 216 3124708
E-mail: info@jungheinrich.com.tr
http://www.jungheinrich.com.tr
Representing: Jungheinrich AG – Germany

UAE
Bin Brook Motors & Equipment
Umm Al Nar, P.O. Box 879, Abu Dhabi, UAE
Tel: +971 2 5554888
Fax: +971 2 5552090
E-mail: binbrook@emirates.net.ae
http://www.binbrook.com
Representing: Cargotec Finland Oy, Hiab - Finland

Emirate Safety Services Ltd
P.O. Box 22197, Dubai, UAE
Tel: +971 4 3477702
Fax: +971 4 3477715
http://www.emiratesafe.com
Representing: Gunnebo Industrier AB - Sweden

Haulotte Middle East FZE
P.O. Box 293881, Dubai Airport Free Zone, Dubai, UAE
Tel: +971 4 2895110
Fax: +971 4 2895111
E-mail: haulottemiddle-east@haulotte.com
http://www.haulotte-international.com
Representing: Haulotte Group – France

Hiab, Sales Middle East - c/o
Mac Gregor (ARE) L.L.C
P.O. Box 30029, Between Interchanges 3 and 4, Dubai, UAE
Tel: +971 4 3413933 Ext: 158
Fax: +971 4 3413110
E-mail: Sandeep, Ramakrishnan@hiab.com
Contact Person: Mr. Sandeep Ramakrishnan - Sales Manager
Representing: Cargotec Finland Oy, Hiab - Finland

SPAN GROUP
Nad Al Hamer Road, Al Naboobah, Showroom No 4, Ramool Road, Dubai, UAE
Tel: +971 4 2895111
Fax: +971 4 2895110
E-mail: inquiry@span-group.com
http://www.span-group.com
Representing: Jungheinrich AG – Germany

Emirate Safety Services Ltd
P.O. Box 6322, Abu Dhabi, UAE
Tel: +971 2 5555725
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**Coming Events**

**March 2009**

**BAHRAIN**

**Power-Gen Middle East 2009**
08 – 10, Abu Dhabi Conference and Exhibition for the Middle East Power Generation Industry
Bahrain International Exhibition & Convention Centre
P.O.Box 11644
Manama
Bahrain

**Info**
PennWell Conferences & Exhibitions
1421 S. Sheridan Road
Tulsa, Oklahoma 74112
USA - United States of America
Tel: +1 (918) 835-3161
http: www.pennwell.com
Email: headquarters@PennWell.com

**EGYPT**

**Middle East Coatings Show 2009**
17 - 19, Show dedicated to the Coatings Industry
Cairo International Convention & Exhibition Centre
Nasr Road
Nasr City
Egypt

**Info**
Dmg World Media (UK) Ltd.
Westgate House
120/130 Station Road
Redhill, Surrey RH1 1ET
UK - United Kingdom
Tel: +44 (0)1737 855000
Fax: +44 (0)1737 855475
http: www.dmgworldmedia.com
Email: webmaster@ca.dmgworldmedia.com

**RUSSIA**

**MosBuild 2009**
Mar 31- Apr 03, Moscow International Building and Construction Fair
Expo中心' Krasnaya Presnya Fairgrounds 14, Krasnopresnenskaya nab.
Moscow 123100
Russia

**Info**
ITE LLC MOSCOW
Schepkina St., 42
building 2a
Moscow, 129110
Russia
Tel: +7 (495) 935 7350
Fax: +7 (495) 935 7351
http: www.ite-expo.ru
Email: Helga@ite-expo.ru

**OMAN**

**Buildex 2009**
16 – 18, Building & Construction, Public Works and Maintenance
Oman International Exhibition Center
P.O. Box 117
Seeb Airport
Oman

**Info**
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P.O. Box 20,
Postal Code 117,
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Oman
Tel: +968 790333
Fax: +968 706276
http: www.omanexpo.com
Email: omanexpo@omantel.net.com

**APRIL**

**BAHRAIN**

**Property Arabia**
29-03 (May), Middle East International Property and Investment Exhibition
Bahrain International Exhibition & Convention Centre
P.O.Box 11644
Manama
Bahrain

**Info**
Arabian Exhibition Management
P.O. Box 20200
Manama
Bahrain
Tel: +973 550033
Fax: +973 553288
http: www.ameinfo.com.bh
Email: ameinfo@batelco.com

**QATAR**

**Project Qatar 2009**
27 – 30, International Trade Exhibition For Construction Technology, Building Materials, and Equipment for the Middle East
Qatar International Exhibition Centre (QIEC)
Corniche St., Doha
P.O.Box 22366
Qatar

**Info**
IFP Qatar
P.O. Box: 3082
Doha
Qatar
Tel: +974 4329900
Fax: +974 4432891
http: www.ifpqatar.com
Email: info@ifpqatar.com

**TUNISIA**

**Africa CemenTrade 2009**
28-29, seizing opportunities in growing Africa's cement market

**Info**
80 Marine Parade Rd
#13-02 Parkway Parade
Singapore 449269

**JUNE**

**LEBANON**

**Project Lebanon 2009**
02-05, International Trade Exhibition for Construction Technology, Building Materials, and Equipment for the Middle East
Forum de Beyrouth
P.O. Box: 11-4680
Charles Helou Avenue, Medawar
Beirut – Lebanon

**Info**
International Fairs and Promotion (IFP)
Hazmieh, Off Jisr El Basha, Near SNA
P.O.Box. 55576 Beirut
Lebanon
Tel: +961 5 959 111
Fax: +961 5 959 888
http: www.ifpexpo.com
Email: info@ifpexpo.com

**NOVEMBER**

**KUWAIT**

**Expo EC 2009**
2-6, Alternative Energy Applications: Option or Necessity?

**Info**
Kuwait Society of Engineers (KSE)
Tel: +965 2247 2255
Fax: +965 2247 0055
E-mail: info@ec2009kuwait.org

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2/1 - بحلل النماذج المالية، نستطيع أن نقول بأن النمو الإقتصادي لا يعتمد فقط على النمو في القطاع الصناعي، بل إن النمو في القطاع النامي والتعليمي ضروري أيضاً.

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The Building Technology (BT) markets in the Middle East led by key countries such as the UAE, Saudi Arabia, Qatar and Kuwait, respectively, are expected to slowdown and post a toned down growth in 2009. However, the 2009 growth rate for the BT industry that includes Building Management Services (BMS), fire safety, and security, will vary across different countries within the Middle East, with the UAE and especially Dubai, witnessing relatively much lower growth. The impact of the slowdown is expected to diminish starting mid-2010.

The Middle East, especially the GCC countries have undergone an unprecedented economic boom in the past five years. This was driven by huge revenues and cash surpluses generated from oil exports at increasing prices as high as US$147 a barrel. The positive economic scenario, huge oil surpluses which were diverted towards diversification of the region’s predominantly oil economy and rising FDI, and local investment helped fuel an infrastructure boom that was the prime driver for the BT market. As a result, the overall BT market in the Middle East has been growing at over 20 percent since 2004. Additionally, rapid improvement in living standards, government regulations, laws and an overall increase in awareness about safety, security, and comfort have also greatly contributed to increasing demand rapidly.

The overall BT market for the Middle East comprising BMS, fire safety, and security was estimated at approximately US$2.5 Billion, with GCC alone clocking in close to US$1.3 billion in 2008. However, BT industry, especially the BMS market which is predominantly dependant on commercial constructions requiring relatively high upfront expenditure, is expected to come under strain as the global economic downturn intensifies, retarding the infrastructure growth in quite a few of the Middle East economies. As oil prices and demand continue to plummet, market confidence is undermined along with tightening of liquidity and commercial financing. The property markets across the Middle East countries will continue to slowdown in varying degrees, with property demand and prices declining. Consequently, a few major projects are expected to be stalled or delayed. The BT industry will continue to grow, albeit with lower growth rates, in the first two quarters of 2009 as on-going projects and related orders keep on being executed. Thereafter, growth is expected to be significantly muted until mid-2010 due to the economic condition; and a wait-and-watch approach is likely to set in and limit the number of new projects.

The impact of the slowdown on the BT Industry, however, is to be more pronounced in countries such as the UAE (mainly Dubai) and Bahrain. The impact of the slowdown on the BT industry in Qatar will be relatively less pronounced on account of its oil and gas wealth and sound investment in infrastructure. Similarly, major projects in Saudi Arabia and Oman are expected to continue to be executed, due to the financial backing from the Government in these countries, limiting the downside for the BT industry in these markets.

While the global economic slowdown and the resultant strain on the construction industry in the region is slowing the pace of growth, the market still holds significant potential. Segments such as security are likely to show more resilience as compared to fire safety and BMS, because many Middle East countries have large security spending and have allocated security budgets for beefing up security to create a safe global image. Even the energy management segment, which had been gaining ground on account of the environment and energy concerns, is expected to do well due to its role in reducing operative and maintenance costs. Additionally, the initiatives being taken by the various governments with respect to building intelligent and sustainable, green buildings, as well as stringent implementation of the security laws such as Act 13 of Dubai, will give BMS, fire safety, and security industry the much needed push. As a result, the adverse impact of the slowdown, which is being increasingly witnessed due to delaying of projects, will be toned down significantly from late 2009.

Overall, compared to other markets, all of which are affected by the global slowdown, the Middle Eastern region and mainly GCC is expected to offer good long-term prospects though the region may witness a moderate growth of 13 to 18 percent across various countries and BT segments in 2009 and 2010.

Vivek Gautam, Analyst, Frost & Sullivan

Word of the Expert
كلمة الخبير

Middle East BMS, Fire Safety, and Security to Witness Moderate Growth until Mid-2010

The Building Technology (BT) markets in the Middle East led by key countries such as the UAE, Saudi Arabia, Qatar and Kuwait, respectively, are expected to slowdown and post a toned down growth in 2009. However, the 2009 growth rate for the BT industry that includes Building Management Services (BMS), fire safety, and security, will vary across different countries within the Middle East, with the UAE and especially Dubai, witnessing relatively much lower growth. The impact of the slowdown is expected to diminish starting mid-2010.

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