





# Top 25 GCC innovators

CW lists the most innovative companies in the construction industry in the GCC.

**A**N INNOVATION-DRIVEN economy is the most advanced stage of development a country can achieve within the Global Competitiveness Index framework. To be included in this group, a country needs to have a very high level of income per capita, along with sufficient economic diversification.

The World Economic Forum, based on the theories of economist Michael Porter, assesses countries' competitiveness in terms of three main stages of economic development, including:

*Factor-driven economies:* In the first stage, the economy is factor-driven, and countries compete based on their factor endowments, which are mainly unskilled labour and natural resources. Companies compete on the basis of price, and sell basic products or commodities, with their low productivity reflected in low wages.

Maintaining competitiveness requires well-functioning public and private institutions, well-developed infrastructure, a stable macroeconomic framework and a healthy and abundant workforce.

*Efficiency-driven economies:* With advancing development and an increase in wages, countries move into the efficiency-driven stage of development, which occurs when they develop more efficient production processes and increase product quality. At this point, competitiveness and wealth creation are increasingly driven by higher education and training, efficient goods markets, well-functioning labour markets, sophisticated financial markets, a large domestic and/or foreign market, and the ability to harness the benefits of existing technologies.

*Innovation-driven economies:* Finally, as countries move into the innovation-driven stage, they can sustain higher wages and standards of living if their businesses are able to compete with new and unique products. At this stage, companies must compete through innovation, producing new and different goods and services, using the most sophisticated design, production, management, financing and commercialization processes.

The evolution of advanced countries towards innovation-based activities has resulted from cost pressures created by emerging markets. As manufacturing is increasingly sourced from cheaper-labour countries, advanced economies need to focus on the more complex, higher value-added and knowledge-intensive activities and segments.

This results in a strong knowledge workforce, which is essential for creating, sharing, disseminating and using knowledge effectively in order to create value. Knowledge professionals include researchers, scientists, managers, engineers, technicians, designers, architects and urban planners, for example.

All the companies listed in *Construction Week's* Top 25 Most Innovative Companies have played a key role in not only driving product and technology development in their respective sectors of the construction industry supply chain, but in helping the GCC attain status as a major innovation-driven economy.

These companies range from small firms distributing innovative technology regionally, to major multinationals with dedicated capacity locally. Suppliers, distributors, and manufacturers are all considered. We also take a brief look at some examples of the latest innovations and developments for the construction industry in particular. 

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## 3M ADHESIVES

At the beginning of this year, 3M unveiled its highly-anticipated groundbreaking Innovation Centre in Dubai. The opening of the Dubai centre, set to bring 3M technology even closer to its regional customers, will provide 3M with an expanded facility in the Middle East to better support customer needs across the region, resulting in more cost-effective customer-centric solutions created specifically for the region, in the region.

"The Dubai centre will draw upon 3M's global R&D strength and 45 technology platforms to provide solutions for local customers to experience all around the region," explained 3M MENA VP Irfan Malik. "In 3M we have an expression that says '3M is always within reach.' This new centre, in addition to our Saif Zone Manufacturing Facility, demonstrates that we are continuously investing in the



3M's product range includes sealants and adhesives.

**50,000**  
Products worldwide

local market, while consistently producing innovative customer centric products."

Customer technical and innovation centres are unique to 3M around the world, and serve as a mechanism for customer-inspired innovation. The first of

its kind in the Middle East region, the Dubai centre will now offer potential customers, business partners, and R&D experts the exciting opportunity to test a host of 3M's often groundbreaking innovations.

Located in Internet City, the centre, which is LEED-certified and environment-friendly, will be divided into 14 zones, showcasing all of 3M's technology platforms, capabilities and products for the Middle East market. The Dubai centre is the 23rd 3M Innovation Centre in the world.

"Today 3M counts more than 50,000 innovative products that improve our world. With every new Innovation Centre, we can be certain that number will continue to grow and that 3M's development, products and technologies will only get better," 3M executive VP of international operations Inge Tulin.

**TERRAIN  
PIPING SYSTEMS**

An example of the innovative and proactive approach to business adopted by Polypipe Gulf FZE is that it recently hosted a highly successful technical seminar in Doha to promote both traditional and innovative approaches to the installation of drainage systems to protect the built environment. Held at the Al Sharq Village Hotel, the seminar attracted over 200 attendees, ranging from clients to consultants, main contractors and installers.

“Terrain has a huge amount of experience from across the whole Middle East region, as well as from the UK. With 50 years’ experience in the Gulf, Terrain pioneered the use of PVC drainage systems,” says Polypipe Gulf FZE GM Robin Appleby.

The recent launch of the Terrain Pleura drainage ventilation system, in conjunction with Studor, brings global experience of preventing, and dealing with, drainage issues in some of the world’s tallest buildings, where new challenges are now



Terrain is the name of the drainage brand.

**Fact**

Terrain is focusing on above- and below-ground lead-free PVC drainage systems for the Doha market

being experienced with both high-rise and super high-rises.

“The Terrain Pleura system can be utilised to balance the pressures within the drainage system, and to provide protection for the water-trap seals while significantly reducing the pipework required in traditional installations,” says Appleby. For example, this means a reduction from traditional three-stack plumbing (soil, waste and vent) to twin stack (soil and waste), or even single stack, combining the piping to achieve major cost-savings from a material, installation, labour or even space perspective.

Tower blocks and sports stadia are two building types where drainage systems need to perform under extreme circumstances, let alone the challenges that new architectural designs bring to the building services team. “Architects are designing more and more challenging structures, all of which prove the need for engineered solutions,” says Appleby.

**TRANE  
CHILLERS**

While the Dubai market “will stay depressed for several years to come”, the fact is “there are still more new projects here, even today, than anywhere else in the world.” This is the view of Nigel Hawley, Trane’s new GM for the Middle East, India and Africa. The company’s core HVAC business is likely to stabilise, “excluding district cooling and unitary, which are two segments badly affected by the market downturn, especially in Dubai, and I do not expect to see this changing dramatically.”

Commenting on the latest technology trends, Hawley said: “Even in markets like the Middle East, which are not being driven by legislation, we are seeing increasing interest and demand for newer

environmentally-responsible and efficient product ranges.”

This is due to an increased awareness that “the right HVAC system is critical to green building”, says Hawley. “The recent past has been particularly exciting and challenging as a result of the US decision to stop producing equipment with R22 refrigerant from 31 December 2009. This was the catalyst for a massive redesign project, which resulted in Trane introducing more new models in 2009 than we had in the previous 20 years.”

An example of Trane’s approach to innovative products was the launch of the RTAC XE (Extra Efficiency) model to its range of air-cooled helical-rotary chilled water systems. It is particularly suited for applications requiring reliability and safety, including industrial, hotel and office buildings, hospitals and cleanrooms.

The RTAC XE 430 kW to 1,520 kW chilled



Trane is a major chiller manufacturer.

water system is Eurovent Class A certified with an average Energy Efficiency Ratio (EER) of 3.15. Energy savings are achieved with the patented falling film evaporator technology, minimising the expense of operating a chilled water system, which can amount to over 90% of the total lifetime cost of an HVAC system.

**3.15**

Energy-efficiency rating of new RTAC XE chiller

## RENTAL SOLUTIONS & SERVICES (RSS) TEMPORARY POWER

Rental Solutions & Services (RSS) has supplied additional power to the Hail power plant in Saudi Arabia, staving off potential power cuts. "There are power outages in the Gulf region every summer, particularly in the UAE, Saudi Arabia, Oman, Qatar and Kuwait. Moreover, MENA in general is experiencing power outages all year round. This is particularly true in Iraq, Yemen, Afghanistan, Syria, Jordan, Egypt and Algeria due to the lack of power infrastructure," says RSS GM: power projects Peter den Boogert.

Of course, utilities are not the only sectors making use of temporary power. "There are three major sectors that propel the rental power business in the region: utilities, construction and oil and gas," says den Boogert. The construction sector has taken a beating during the economic downturn, even if strong declines in some places were offset by government investment programmes in countries such as Saudi Arabia.

"I hope that the evolution of gensets and engines over the last decade continues on the same scale during the next 12 years leading up to the World Cup, so we are able to offer achievable solutions to Qatar," says den Boogert." Apart from the genset side, a couple like RSS is also able to offer its cooling expertise. "We have the ideas, we have the assets and we have the experience to assist with the air-con for these large types of outdoor events."

RSS is one of the newest rental companies in the sector, having set up shop in the Dubai in 2007. "Rental is a 24/7 business; it is fulfilling customer needs in a very short period."

# 250MW

Typical temporary IPP



An example of a generator from RSS.



NAFFCO is a global provider of total fire-protection and fire-fighting solutions.

## NAFFCO FIRE PROTECTION

National Fire Fighting Manufacturing FZCO (NAFFCO) is among the world's top five manufacturers of fire fighting equipment, fire protection systems and safety engineering. The group was established in 1975, while NAFFCO itself was established in 1991, with 11 employees. Today the company has 4,500 staff. "Our vision was to become a global leader in providing comprehensive and reliable fire protection solutions and safety engineering," says CEO Eng. Khalid Al Khatib.

For the past two decades, NAFFCO has been providing total fire-protection solutions under a single roof. "NAFFCO is a major player in the Middle East. It also has a global presence in more than 82 countries. We are planning on reaching 100 countries by the end of this year," says Al Khatib. Its product range includes certified fire extinguishers, heavy-duty fire-hose reels, fire pumps, fire cabinets, fire doors, valves, fire hydrants, highly advanced fire trucks and rescue vehicles."

Al Khatib says the company recently introduced its Falcon 6 airport rescue and fire-fighting vehicle, manufactured wholly at its JAFZA facilities in Dubai. "We are the only company outside the European and American continent to build such a highly advanced vehicle," he says.

## Fact

NAFFCO has a qualified team of more than 150 engineers

**JOHNSON CONTROLS**  
**BUILDING MANAGEMENT SYSTEMS**

An example of Johnson Controls' approach to innovation is the recent contract it clinched to supply a building management system (BMS) for the expansion of Makkah's Holy Mosque in Saudi Arabia. The project included a full HVAC system comprising 27 York multi-stage centrifugal chillers to produce one of the most efficient and sustainable facilities of its kind.

Stephen Roell, chairman and CEO of Johnson Controls, a US company that specialises in HVAC systems and with a presence in Jeddah, where the contract was signed, called the order "one of the largest single HVAC equipment orders in the history of Johnson Controls". The York chillers were installed at the Shamiyah central utility complex and Ajyad chiller plant, with a 135,000TR capacity. Using environment-friendly R134a refrigerant, the chillers are equipped with solid-state starters and variable-speed drives (VSDs) that are seamlessly integrated with a Johnson Controls Metasys BMS.

The company has had a relationship with Al Salem, which created the joint venture Al Salem Johnson Controls, since 1993. "This particular project at the Holy Mosque is one we can all be proud of, not only because of the facility's significance, but also because of the unique challenges it presents," said Saleh Binladin, executive board member of Al Salem Johnson Controls. The company has won a flurry of mega projects in the Kingdom, according to Basil Abdulaziz, MD for Al Salem Johnson Controls, with the King Abdullah of Science and Technology University, King Faisal University, King Abdulaziz International Airport, Hajj Terminal, King Saud University, King Khaled University, Hadeed-Sabic and Princess Noura.

**Fact**

\$87m contract to supply 26 York chillers to Princess Noura



An example of a York chiller from Johnson Controls.



Ecoval distributes Solahart products in the region.

**ECOVAL**  
**SOLAR HOT WATER HEATING**

Dubai's new 'green' building regulations are expected to mandate that solar water heating systems must also be installed to provide 75% of domestic hot water requirements. This will herald major opportunities for innovative companies like Ecoval Trading, according to MD Jim Sebastian. The potential of the solar water heating market in the UAE is indicated by the fact that Ecoval is now the number one global distributor for Solahart of Australia. Italy is number two and South Africa number three. The company was established in Dubai in 2002. The latest trend towards building efficiency has placed the spotlight firmly on solar water heating as a cost-effective option to realise immediate savings. Solahart products are particularly suited to the region's harsh climatic conditions, when some similar European products are known to have overheating issues.

"Solahart has a presence in 90 countries, and has been manufacturing solar water heaters exclusively since 1953. Its technology is characterised by the drainback principle, whereas most other manufacturers utilise fully-flooded systems. "What happens normally is that most people place everything on the roof, which means the circulating fluid is always in the loop, the temperature goes too high, and then the pumps and pipes fail. Our system is very simple, as it switches and drains back off before it can overheat," explains Sebastian.

In addition, the collectors comprising the system are extra strong and durable. Solahart has six different collectors, depending on the specific requirement. "We install and commission the systems on a one-stop shop basis from design to installation. We even assist in calculating the total hot water requirements, the number of collectors and what back-up is needed, as consultants are normally so busy."

The average lifespan of a Solahart system is anywhere from 12 to 25 years, depending on routine mechanical equipment maintenance.

**12-25 years**

Average lifespan of a Solahart system

**JOTUN PAINTS  
COATINGS**

The growing demand for heat-reflective and eco-friendly paints has prompted Jotun Paints to launch Jotashield Extreme in the UAE. Tests have shown that structures treated with the new paint are between 2°C to 7°C cooler than those treated with normal paint.

“The phenomenon known as the urban heat island effect, in which metropolitan areas are significantly warmer than their surrounding rural areas, is becoming increasingly common in the UAE and other GCC countries due to the exponential

growth of urban areas in the region,” said Jotun Paints regional marketing director Per Olav Ramstad.

Studies have shown that the temperature of urban air domes can be as much as 4°C warmer than the surrounding countryside. This poses higher air-con costs, additional air pollution due to increased energy production, and acceleration of global warming.

“Our new eco-friendly, energy-efficient product addresses these issues by virtue of being the only paint in the Middle East that can achieve significant temperature reductions upon application,” said Ramstad.

The new paint product uses a revolutionary pigment-binder technology that allows consumers to also select darker shades of colours, and still achieve thermal indoor comfort and a longer-lasting finish with superior exterior protection at a competitive price.

Jotashield Extreme offers twice the heat-reflective capabilities of ordinary exterior paint. It provides protection against ultraviolet and near infra-red heat, thus significantly reducing indoor and surface temperatures, and consequently driving down energy consumption.

It also has anti-carbonation properties that protect it against chalking, flaking and peeling. The multicolour-tintable Jotashield Extreme has low dirt pick-up, exceeds GS-11 standards for paint, and comes with a 10-year guarantee.

“Jotun has always been known for innovative, high-quality products. Our company has also gained a reputation for raising benchmarks in environmentally-friendly production techniques.”



Jotashield reduces a building's cooling load.

**2°C - 7°C**

cooler than those treated with normal paint

**DOKA  
FORMWORK**

With a heavy investment in R&D and a consistent line of new, pioneering products, Doka is certainly one of the most innovative companies in the Middle East construction industry at the moment.

Only this year the company's framed formwork Frami Xlife (the complete system for forming walls, columns and foundations) won the Most Innovative Product (MIP) award at the World of Concrete Exhibition in Las Vegas, which was the third, consecutive MIP award for Doka's innovative product range.

Previously, the firm's Staxo 100, a high-capacity load-bearing tower, also won the award, as did its Table Lifting System (TLS), an electric-powered lifting platform for vertical repositioning of table forms without a crane.

Recently, the Staxo 100 load-bearing tower also landed Doka the European award for safety in structural engineering in Spain. But according to Doka, a company



Doka has clinched awards for its innovative formwork.

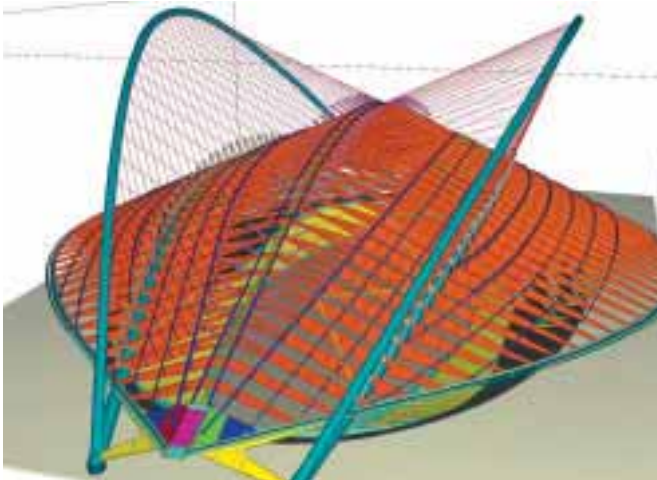
really only merits being called innovative when it can tackle a problem which users have not even been in a position to define properly. Based on this assumption, the firm continues to conduct in-depth analyses into the possible challenges the industry is likely to face in the future, and develops matching solutions.

It claims, however, that its innovation strategy is broad-based and not restricted to the development of new products and services. It encompasses process-oriented and technology-oriented exploration, with a focus kept on expanding the company's portfolio to make Doka a premium supplier of formwork services.

Using Doka's 'forward-looking radar', a tool developed jointly with external experts, its R&D teams are able to simulate scenarios with a planning horizon of 10 to 15 years, and then use the gained insights to lay out the appropriate development projects.

**Fact**

Doka is about to open a new 50,000m<sup>2</sup> facility in Dubai



A BIM model is essentially a project encyclopaedia.

## TEKLA SOFTWARE

Fragmented and inaccurate project information leads to delivery problems in the building and construction industry. Securing information flow and accuracy results in less costs, less waste, and projects delivered on time. These are the very essentials Tekla building and construction customers work to achieve every single day.

Tekla BIM (Building Information Modelling) software solutions work like model-based encyclopedias of a project, allowing professionals to include every important detail while managing the construction process as a whole. Tekla's ambition is to develop the best tool to enable the best efficiency for organizations, allowing them to free up more resources and time to build our future. Winning bids and planning, managing and delivering first-class projects enable a better quality of everyday life for customers, employees and ultimately the whole society. In order to kickstart this collaborative process, Tekla BIMsight is a free-of-charge software application for model-based project cooperation.

Tekla BIM solutions provide an accurate, detailed and data-rich 3D environment that can be shared by

Contractors, structural engineers, steel detailers and fabricators, precast and cast-in-place concrete contractors, detailers and manufacturers, educational institutions and application developers.

The highly-detailed as-built structural models created, combined and distributed with Tekla Structures enable the highest level of constructability and production control. Centralising building information into the model allows for more collaborative and integrated project management and delivery.

# 120%

Of net sales invested in R&D

## RAK CERAMICS CERAMICS

RAK Ceramics is well-known for its innovation in the construction industry. It is this, along with other factors, which have contributed to making it the world's largest ceramic tiles and sanitaryware manufacturer, with exports to more than 150 countries across five continents, and over 8,000 production models, with new designs added constantly.

One sure sign of the company's innovation in recent years has been its efforts to implement new technologies such as Roto Printing, Salt and Pepper, Soluble Salt Printing, MDR, Double Charge, Granitech, Technoslate and Twin Press. The company was also an industry pioneer in integrating the PH 7200 Press into its production line in order to create slabs and large-format tiles for multiple applications such as vanity tops, steps and façades, which were earlier purely based on natural stone. In addition, the company has adopted the latest digital printing technologies, resulting in new tile collections.

Further proof of innovation comes from the fact that RAK Ceramics was the first company in the world to launch luminous, golden or silver glazed tiles, and the first to launch a series of super specialty tiles called RAK Antimicrobial, created specifically for the hospitality and healthcare industry. The company then took innovation in ceramic tile design to a whole new level when it launched its RAK Slim range, a new brand of 4.5mm thick tile that sets an industry benchmark in terms of thickness, strength, cost and ease of use. This product line offers features unprecedented for thin-sized tiles, reducing the weight of tiling by half, significantly slashing dead load on buildings and related structure costs.

## Fact

Named Company of the Year by  
Arabian Business in 2004



RAK Ceramics is the world's largest ceramics, sanitaryware manufacturer.

**VSL  
POST-TENSIONING**

VSL has been able to capitalise on the widening use of post-tensioned concrete systems with an increasing variety of clients, projects and end uses for its engineering. In bridge projects, the company has particularly been able to shine, both for the overall structures, and for its SSI 2000 system for stay cables, giving more options to main contractors and developers from the Gulf to Hong Kong.

Bridges have been plentiful in the last two years, particularly as Abu Dhabi continues to transform itself and provide links to its many islands. The company has shown itself adept at working jointly on a project with other companies, as shown by the link at the end of 2009 with AST to build the Hodariyat Bridge in Abu Dhabi. This leaves the company arguably well-placed for the next clutch of bridge projects, particularly as it can bring expertise and experience from across Asia.

VSL has been one of the leaders in bringing together the design element, traditionally decided before a main contract is awarded, and the construction methods used on the eventual building. The result is a more consultative approach that has allowed bridge engineering to achieve new feats.

At the same time the company has been offering significant alternatives in other vital structural areas for both towers and infrastructure, including ground anchors and earth-retaining systems. It has also made great strides in the construction of diaphragm walls through its foundation subsidiary Intrafor.

For example, the bulk excavation at Cairo's Metro's Attaba Station is one of the deepest of its kind ever built, with a non-circular diaphragm wall and strutting. The subsidiary completed two 1,500mm-thick diaphragm walls that are 85m-90m deep. The total amount of diaphragm walls was 61,000m<sup>2</sup>.

**2009**

VSL became the first post-tensioning company to have its integrated systems certified by global body SGS



Bridge projects have been plentiful, such as the Sheikh Zayed Bridge in Abu Dhabi.



A sampling of Ejot's extensive fastener-product range.

**EJOT  
FASTENERS**

Ejot is a medium-sized group of companies operating in the area of fastening technology. The origin of the business group is the former Adolf Böhl GmbH & Co. KG, a manufacturer of screws and nails in South Westphalia. With time, expansion, acquisitions and diversification, the former screws company developed into the present business group with about 2,100 employees, of which 1,400 are working in Germany and the remainder globally. It has a subsidiary in the UAE as well.

With its 20 distribution and production companies, Ejot is the European market leader in fastening technology. In addition, it established the Global Fastener Alliance (GFA), an international union of specialists in the field of fastening technology. The alliance enables the world-wide availability of products and technologies for globally operating customers.

In the industrial fastener sector Ejot uses the basic technology of cold-forming metal to manufacture fastening elements. Combining this fastener know-how with injection moulding results in innovative synergies between screw, plastic and metal subassemblies, which in turn reduces customers' processing costs. The actual cost of the fasteners only represents 10% to 20% of a joint's total system costs, meaning there is a significantly greater savings potential to be unlocked through component development, logistics and assembly.

In terms of fastener solutions for the building and construction industry, Ejot has over 30 years' experience and development know-how perfected in Germany, meaning it understands the requirements of a fastener and its application on building envelopes very precisely.

**Fact**

Ejofast JF3 is the new screw generation for side lap fixing for outer shell applications

**IRON PLANET  
ONLINE AUCTION HOUSE**

Iron Planet, the online auction house, announced its official arrival into the Middle East market at the start of 2011. While it may now have a physical presence in the region via its newly-opened Dubai offices, the truth is the company has been a force to reckon with since beginning trading at the end of the last decade.

Heavy machinery in the Gulf is a fast-moving industry, with equipment changing hands at speed as construction activity shifts around the region. Few companies have facilitated that fluid market as much as Iron Planet, nor helped transform the bidding bonanza into the digital age. The pioneering company (a survivor of the dotcom era) describes itself as the 'eBay of construction equipment', freeing sellers from the costs of getting items and buyers from attending physical auction.

The company's detailed and extensive website charts a wide range of machinery and equipment – from the Middle East to Europe and Canada – boosting, it says,



John O'Sullivan from Iron Planet.

**Fact**

The company turnover is \$800 million a year.

profits through low transaction costs and the better price realisations from a global scrum of bidders.

With its auctions drawing in machinery from across the globe, Iron Planet has assembled an army of inspectors, who are tasked with capturing all the relevant data on sale items, evaluating machinery and ensuring pricing fairness.

It is this attention to detail that, it claims, forges its 'IronClad Assurance', which it says guarantees assurance from users. It has strong industry approval, too, with Accel Partners, Kleiner Perkins Caufield and Byers, Caterpillar, Komatsu and Volvo all committed backers.

Perhaps the most compelling innovation of Iron Planet is its ability to work on users post-auction, often redirecting them to other sales and machinery they may find relevant, and creating continuity between events. Where other auctions say everything must go, Iron Planet says everyone can buy.

**GEZE  
ARCHITECTURAL HARDWARE**

With a history of providing innovative products in the construction industry, GEZE was a top candidate for CW's 25 most innovative list. Since its inception in 1863, it has grown from a small, family-owned company into one of the biggest international suppliers of manual and automatic door, window and safety systems. But the firm is not just known for its technological innovations. It is also recognised for its approach to sustainability and the effects of demographic changes – the firm taking ecological and economic sustainability criteria, as well as quality of living aspects, into account when it develops its

products and system solutions in the GEZE technology centre.

"Innovation and sustainability go together, and we are seeing new demand for innovative technologies that meet high safety and efficiency standards. We have recently retooled our operations in the region and focusing on transferring technologies that deliver just that," said Geze Middle East MD Charles Constantin.

A good example are Geze's barrier-free automatic door and window systems with remote controls, which meet the requirements of tomorrow's older generations, as well as the market today by accounting for environmental concerns and future safety standards. So while 'intelligent' windows with coordinated drive and control technologies can save energy in line with ongoing pressures to be more environment-friendly, control and monitoring systems to handle the



Geze Middle East MD Charles Constantin.

opening status of windows in the event of fire and for daily ventilation purposes are likely to become standard. Geze is already developing technology along these lines, with barrier-free functionality, flexible usage, safety, sustainability and an integrated design theme as top priorities.

Geze automatic drives feature new LED sensor buttons that incorporate a new circular sliding door system that offers protection against vandalism.

**900mm**

Automatic window opening in just 60 seconds in the case of smoke or heat

## HENKEL SURFACE TREATMENTS

Founded in 1876, Henkel holds globally-leading market positions both in the consumer and industrial businesses with such well-known brands as Loctite. Headquartered in Düsseldorf in Germany, it has about 48,000 employees worldwide and counts among the most internationally aligned German-based companies in the global marketplace.

Henkel is the world market leader in adhesives, sealants and surface treatments for consumers, craftsmen and industrial applications. It has a well-balanced portfolio of international, regional and local brands. Henkel offers a multitude of applications to satisfy the needs of different target groups, including consumers as well as craftsmen and industrial businesses.

The very first delivery of adhesives left the Henkel facility on 22 June 1923. This milestone marked the birth of a business segment in which Henkel is now a global market leader. Henkel became involved in making adhesives quite by accident when an interruption in the supply of glue threatened the labelling of some of its own consumer products. Since then, Henkel's commitment to adhesives has grown to become a business sector in its own right. Today Henkel Adhesive Technologies is the world market leader in adhesives, sealants and surface treatments.

Henkel utilises global R&D resources available to it in order to secure the success of the company going forward. It marshals both internal and external expertise for the purpose of strengthening and extending its product portfolio and developing new markets.

### Fact

The company has 7,500 patents, 5,000 patents pending and 2,000 registered designs.



Loctite is a well-known Henkel brand.



Zamil Steel has four divisions.

## ZAMIL STEEL INDUSTRIES STEEL

Zamil Steel is perhaps still the stand-out company in the regionally-competitive Zamil Industrial Investment Company (ZIIC), the listed vehicle that is part of Zamil Group. In the last year it has barely been out of the industry headlines, prompting a flurry of notifications.

Firstly, Zamil Steel's four divisions have snapped up big mandates to supply across a wide range of industrial projects, including a SAR46million deal for its Structural Steel arm to supply steel works for the Saudi Aramco Mobil Refinery Company Clean Fuels Project in January, and a SAR103million contract for its Steel Towers & Galvanising subsidiary to supply towers for the Munifa-Qaisumah power line project.

Secondly, it has ploughed time and money into boosting its capacity, leaving it able to provide to more projects simultaneously and claim further market share. Specifically, SAR40million has been invested for its new plant for the Steel Towers & Galvanising division, which will feature the latest machinery and technology, including a 15.5m galvanising basin that measures 15.5m in length, 1.5m wide and 3.2m deep. The new capacity will potentially increase production capacity from 50,000t/y to 75,000t/y.

Thirdly, the company has formed alliances with international producers, including the UK's Severfield Rowen, a structural steelwork provider. The move intends to boost the companies' ability to supply design, manufacturing and installation expertise to the big projects out there, including stadia, airports and high-rise buildings.

Finally, ZIIC last year restructured Zamil Steel to make it a limited liability company (along with Zamil Air Conditioners), a move analysts in Saudi Arabia attributed to the strong growth in its steel division that would be better clarified as an LLC, still fully owned by ZIIC.

# 50,000

The number of buildings Zamil Steel has supplied to more than 90 countries worldwide.

**MAPEI**  
**CONSTRUCTION CHEMICALS**

Modern construction methods increasingly rely on construction chemicals to deliver results including performance and durability, said Mapei business development director Laith Haboubi. "However, it does take a certain proactive approach on behalf of the various project stakeholders to integrate the use of construction chemicals at an early stage to really extract maximum value rather than use as problem 'solvers'."

Mapei remains focused heavily on the UAE market, with only about 10% to 15% of its turnover being diverted to GCC exports. Obviously, there is now a great buzz about the Qatar market, which will hopefully positively effect other Gulf Markets from a suppliers perspective, noted Haboubi.

"The current business environment remains challenging. The market shrank considerably over the past couple of years, yet the number of players remained more or less the same. There is certainly a greater emphasis on value addition as profit margins remain tight for all those involved in the construction supply chain."

Among the biggest issues facing quality construction chemicals suppliers has been a lack of unified specifications or building codes. Industry organisations such as MEDMA (Middle East Dry Mix Mortar Association) and CTI (Concrete Technology Institute) are working with members such as Mapei and others to educate the market and elevate awareness of standards such as ISO 13007.

The latter has recently been adopted by the Gulf Standards Organisation (GSO), as well as green classification such as GEV, which helps a lot when working on LEED or Estidama rated projects. Most of the recent standards such as ISO 13007, EN 1504 or EN13813 all help in selection of the right product for the application, as well as defining performance criteria.

**Fact**

Mapei exports 10% to 15% of its products to the GCC



Mapei sees innovation as a key business driver.



Self-cleaning glass is a prime example of product innovation.

**EMIRATES GLASS**  
**GLAZING**

An eco-friendly glass with a chemically-treated surface that keeps away dirt and grime has been launched in the UAE by Emirates Glass LLC, one of the region's leading processors of premium architectural flat glass products and a subsidiary of Glass LLC, wholly-owned by Dubai Investments. VitroGlaze is a permanent treatment that prevents the adhesion and build-up of contaminants on the glass surface. It also provides oil- and water-repellant properties, eliminating the need for harsh chemical solutions and reducing cleaning time by almost 90%.

"VitroGlaze guarantees clean glass. Its self-cleaning property saves time and water consumption. Harsh chemicals that are used to clean normal glass are usually washed off into the soil and contaminate it, but the use of VitroGlaze eliminates this environmental hazard," said Glass LLC senior VP: sales and marketing Ziad Yazbeck. "VitroGlaze products are perfect for villas, buildings and other establishments that use a lot of glass for outdoor façades," said Yazbeck.

VitroGlaze is coated with titanium dioxide on the outer surface of the glass, which gives it the self-cleaning property. It cleans itself in two stages. The first stage is the action of light on the surface of the glass that basically eats away the dirt on the surface. The next process ensures that any water that falls on the surface forms sheets and washes away dirt uniformly. The glass spreads the water evenly over its surface, without forming droplets.

VitroGlaze bonds into glass surfaces both mechanically and chemically. In doing so, it modifies the physical and chemical properties of the surface material. The coating mechanism works best when spread on surfaces with pores, holes, crevices and voids into which it solidifies. In this manner, it acts as a mechanical anchor.

**Titanium Dioxide**

Self-cleaning coating on the outer surface of the glass

**KIMMCO  
INSULATION**

Kuwait Insulating Material Manufacturing Company (KIMMCO) was established in 1977, and is a market-leading insulation solution provider in the Middle East, Africa, the Far East and other Asian countries. As a licensee of Saint Gobain, Isover, the world-leader in fibreglass insulation, it manufactures and supplies customised reflective, acoustic and fire-resistant insulation solutions.

With a strong commitment to the environment, health and safety of its employees and surrounding communities, KIMMCO actively collaborates with international organisations such as ISO and OHSAS, and is compliant with best-in-class international environmental standards. KIMMCO insulation provides the four-in-one benefits of improved comfort,

energy savings, acoustic buffering and sustainability. KIMMCO Building Roll (KBR) is utilised for thermal and/or acoustic insulations of all buildings walls and roofs. The building rolls are manufactured from stable glass fibres bonded with thermosetting resins. They are light in weight, strong, resilient and easy to handle. The building rolls are available unfaced or with a variety of facings to suit white vinyl, FSK, metallised polyester, kraft paper and glass tissue. The material is dimensionally stable under varying conditions of temperature and humidity, as well as being rot-proof, odourless and non-hygroscopic, while it will not sustain vermin or fungus. A longer life is ensured due to no sag and settling.

KIMMCO Duct Liner (KDL) is for internal insulation of ducts and air-handling equipment where sound absorption is required. It is also used for sound-absorption treatment of walls, ceilings and acoustic enclosures. The material is



KIMMCO is a licensee of Saint Gobain.

produced from strong resilient glass fibres, free form shot and coarse fibres. Easy to handle cut and fit, KIMMCO duct liner is available in flexible roll form and semi rigid slabs. The duct liner has a strong damage-resisting facing, which is carefully bonded to the glass fibre mat during manufacture.

The duct liner is faced with a non-woven, strong, dimensionally stable black glass tissue to provide a highly-efficient sound-absorption performance free from fibre emission at internal air velocities up to 25 metres per second. The material will not shrink due to aging or temperature variations.

**1977**

Company established

**SAS INTERNATIONAL  
CEILINGS & PARTITIONING**

SAS International has supplied products for the new souk in Abu Dhabi's Central Market. The design and manufacturing company, which provides interior fit-out solutions, including acoustic and fire products for the public and private sector, designed and manufactured bespoke lighting and service channels, as well as metal ceilings for the lift lobby areas.

"With many unusual shapes and specifications involved in the souk's design, SAS International was actively involved in the design and manufacture of these high quality architectural metalwork solutions for both internal and external applications," a spokesman for the firm said. "Ensuring the highest standard throughout was essential as, still partially under construction, Abu Dhabi's Central Market has already become a landmark."

The building, which is a mix of modern and traditional architecture, is located



SAS International has been in the region for 30 years.

**Fact**

SAS International can make high-volume and bespoke units

at the heart of the city's commercial district and on the site of the emirate's oldest bazaar, which was destroyed by a fire in 2003. The redevelopment of the site by developer Aldar has seen new life breathed into the market area, and a range of commercial and residential opportunities for investors. International architectural firm Foster + Partners was appointed in 2006 to do the design.

Having operated in the Middle East for over 30 years, SAS International has supplied many projects in the region, including the Aldar HQ, the main building at the Science & Technology Park in Doha and the H3SIXTY Business Centre in Bahrain. The company has offices in both Abu Dhabi and Dubai. As project demands have changed, SAS International has diversified into associated disciplines such as partitioning systems and doors, and energy-efficient cooling and heating.

## DUBAL ALUMINIUM

Earlier this month it was reported that Mubadala Development Company is considering buying a stake in state-owned Dubai Aluminium Company, a firm in which it already has a 50-50 JV running Emirates Aluminium (Emal), an Abu Dhabi-based smelter. The stake will potentially create one of the world's biggest smelting firms, and is a reminder as to the growth and strength of Dubai even as its home emirate continues to feel the effects of a construction slowdown.

Dubal's production capacity has grown more than sevenfold since the company's creation in 1979, and financial results for last year – also released this month – give significant indicators of its upward growth.

Net profits more than doubled to AED2.13billion, partly due to the sharp rise in the price of aluminium, but also due to strong sales. Revenue hit a record AED8.67billion, with both cast product and sales volumes topping one million tons for the second consecutive year. Last year it sold 1.5% more than 2009, producing 4.9% more aluminium.

HH Sheikh Hamdan bin Rashid Al Maktoum, deputy ruler of Dubai, UAE minister of finance and chairman of Dubai, pointed out at the announcement of the results that compound annual revenue has increased by 11%. But the company has also aggressively controlled its capital spend, particularly as the cost of raw materials have risen in line with the end products. This has been instrumental in the company's stellar results.

The company commissioned 756 reduction cells for Emal Phase 1 in record time in Q1 2010, allowing the plant to operate at full capacity of 740,000 from this year onwards.

# 756

Reduction cells for Emal Phase 1 were supplied in record time in the first quarter of last year



An example of an aluminium potline.



S&B of the UK was established in Dubai in 2002.

## S&B FENCING FENCING

S&B, the largest manufacturer of fencing and barriers in the UK, swiftly made the Middle East a home from home since its entrance into Dubai with a separate company in 2002. In what is in fact a critical and underrated part of any large-scale construction project, all of S&B's fencing and barrier products are produced locally in the GCC, and protected with registered designs and patents. These include Steelhoard temporary fencing, Barricade rapid-deployment hoarding, temporary mesh security, fencing for demarcation and secure perimeters, plastic hoarding, permanent fencing, edge protection and security accessories.

The size of the projects around the Gulf that needed complete perimeter fencing during construction – from Jumeirah Beach Residence in Dubai to Kingdom City – means some of S&B's jobs run into the millions. Last year the company introduced its Eco Plastic Hoarding recycled plastics system and has further developments planned. Recycled materials and general attention to the environment have been key attributes of the company.

Paul Grundy, head of S&B, told *Construction Week* that the success of the company is such that it can "cherry-pick" clients that it knows has a good track record with paying on time. This has allowed the company to ride out the downturn better than a lot of sub-contractors even when it needs to chase payments. But word of the company's offering has quickly spread around the region, with the company receiving enquiries from Qatar, Oman, and Kuwait as well as Morocco and Malta, according to Grundy, on the back of its work in Dubai.

## Fact

S&B also has a range of noise-reduction panels

**BASF**  
**CONSTRUCTION CHEMICALS**

With the longer design life specified on many projects, the use of construction chemicals has become a necessity, says BASF GM John Sarkis. "The additional cost of specialist admixtures that produce self-consolidating concrete is tiny when looked at as part of the total placement and life cycle cost of a concrete structure.

"Much of our efforts are aimed at informing key decision makers of the benefits of our products. Without a strong technical site support team training applicators and contractors on the correct use of them, specifiers would rapidly lose faith in us. However tough times are, training and site support will never be compromised," says Sarkis.

There is a core of international construction chemical manufacturers that



Green building is boosting product innovation at BASF.

invest in R&D. "Our strength is in adapting products and systems developed in Europe and the US to local needs. We have done this in the UAE for over 30 years with great success," says Sarkis.

He adds that the company's "business development team are discussing the technical needs of consultant engineers and architects on a daily basis. As buildings are built to become more energy-efficient and sustainable, we have moved away from using solvented products or raw materials based on coal tar.

"We have found that the demands of public financed infrastructure works are often more stringent when it comes to selecting high end waterproofing or concrete protection systems.

"You just need to look at Abu Dhabi where the government is building museums, universities and hospitals to the highest standards. We are regularly adapting our product range to the needs of the market," says Sarkis.

**30 years**

BASF's presence in the region

**CONMIX**  
**READYMIX CONCRETE**

Conmix, a joint venture between the Bukhatir Group and German-Gulf Enterprises, was established in 1975. The Bukhatir group is a highly diversified conglomerate operating in various sectors such as building materials and contracting, while German-Gulf Enterprises is a UAE-based engineering and trading company representing various global manufacturers of heavy vehicles and equipment used in the construction industry.

Conmix is a significant manufacturer of readymix concrete, premix plaster and construction chemicals in the UAE.

The company added a piling division to its portfolio in 2007. It has offices and manufacturing units in Abu Dhabi, Dubai, Sharjah, Ajman, Ras Al Khaimah, Ethiopia and India, and plans to expand further afield in the near future.

The core business of the company remains readymix concrete, which it designs and supplies to the exact requirements of specifiers. Through its team of experienced engineers and concrete technologists, the company can supply high-performance durable concrete for all applications and requirements. The company has computer-controlled batching plants with a combined capacity of about 200,000m<sup>3</sup> a month.

The plants are geographically well spread to ensure prompt and smooth delivery of concrete to sites. The logistics of readymix concrete delivery is managed through efficient utilisation of a large fleet



Conmix is a pioneer in the readymix sector in the UAE.

of transit mixers, as well as mobile and stationary concrete pumps. In addition, the company can provide hydraulic concrete distributor booms whenever required.

Conmix is a pioneer in the field of premix plaster products and applications in the UAE. With state-of-the-art dry mortar plants, the company is one of the leading manufacturers in the Middle East.

**Fact**

Conmix products are exported to 30 countries

**DUCAB**  
**CABLES & WIRING**

The International Copper Association (ICA), the apex copper body, has joined hands with Ducab, a leading cable manufacturer, to highlight aspects of electrically-safe buildings. Ravinder Bhan, local representative for the ICA, stressed the need to emphasise building safety through five levels covering planning, building, monitoring, reviewing and improving safety.

“Electrical wiring made of pure copper has low resistance and high current carrying capacity. This enables it to withstand heavy electrical loads with ease. That is why using pure copper wires while planning electric circuits is a must,” he said.

He added that the causes for fires or short-circuits include the use of poorly recycled copper in building wire, overloading of plug points, improper earthing practices and ignoring the right size of wires.

“To promote electrically-safe buildings, it is extremely important to have smart and safe wiring, with well-planned points, independent circuits, correct rating and good earthing,” he added. Bhan cited the use of copper wires, plates and rods for earthing, as galvanised iron plates and rods tend to corrode and disintegrate. He also reiterated the importance of inspections to ensure that electrical installations are set at high safety standards.

“At the ICA, we strive to raise awareness on safe wiring issues through various promotion programmes among homeowners on safe house wiring practices in association with public and private organisations,” said Bhan. “In the GCC, we are partnering with Ducab to drive electrical safety awareness and implement global best practice in electrical installations.”

**110,000**

Copper tonnes of high, medium and low voltage cables a year.



Ducab's innovation extends to promoting electrical safety in buildings.

**DELTA PLUS**  
**PERSONAL PROTECTION EQUIPMENT**

Delta Plus is a French designer, manufacturer and supplier of personal protective equipments (PPE). Started in 1977 and listed on the Paris Stock Exchange since 1999, the group has a worldwide exposure, with a presence in more than 20 countries (Europe, Asia, the Middle East and South America), operating from six production sites and six logistics platforms.

Delta Plus Middle East FZE key accounts manager David Jerromes says the company aims at a total solution offering head-to-toe protection based on value-adding PPE products under its own brands Venitex and Panoply. Delta Plus controls the complete process, from design to production, in a 2,400m<sup>2</sup> climate-controlled warehouse in Sharjah. In terms of fall-arrest technical solutions, Froment (France) is now associated with Allsafe's leadership in the Middle East. (Allsafe is part of the Delta Plus group).

Delta Plus designs and controls the manufacture of all of its PPE products. There is a hugely significant technical input to the products to help reduce the level of risk to the user from a respective hazard, says Jerromes. Therefore each item is designed specifically to incorporate features that will allow a wearer to operate in more comfort and safety within a given hazardous environment.



For example, the TW400 full grain S3 leather boot not only complies with EN ISO 20345, it also protects the wearer to under-foot temperatures of up to 300°C. Additionally, being a 'composite' construction boot, it is much lighter than steel for the wearer to use, and yet with all the strength of steel, and they can also walk through airport security without setting off the metal detectors.

“The first step for any company or worker is to reduce hazards in the workplace. Risk assessments should be carried out to take into account the work environment and any potential hazards. In theory, PPE should help protect a person from harm. However, if an employer purchases the wrong products for a specific job, then that PPE could actually be useless,” says Jerromes.

**Fact**

Using correct PPE is not the only step; it is part of a process to reduce risk