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SHANTUI BUILT FOR SUCCESS



LIFTING: Liebherr's largest crane goes hybrid CONSTRUCTION: Bell introduces cost effective B25E ADT TRANSPORT: Scania reveals construction truck solutions

Institute for Work at Height Newsletter... PAGES 19-22

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Layout and design: Anoonashe Shumba

Circulation: Karen Smith

Sold copies 1st quarter 2013	Free distribution 1st quarter 2013	Total 1st quarter 2013	
13	3699	3695	



Publisher: Karen Grant Director: Jenny Warwick PO Box 140 Bedfordview 2008 Tel: (011) 622-4770 Fax: (011) 615-6108 www.ccown.co.za

Printed by Tandym Cape

The views expressed in this publication are not necessarily those of the editor or the publisher.



THE HYBRID REVOLUTION embraces the future of vehicles

A he major trend in commercial vehicle and, until recently, construction machinery development today, is a surge towards hybrid power. Virtually every manufacturer has hybrid technology of some sort and it is clear that in recent years hybrids have been the driving force behind many of the major manufacturers' research and development programmes.

Why is this the case, one may ask? Why are vehicles historically known for their 'simplistic' nature, becoming so technical? A large majority of trucks have been developed on the premise of relative simplicity in order to keep purchase, maintenance and operating costs down. This begs the question, why is the industry that has made these strong, simple workhorses for years heading in this highly scientific and technical direction?

The answer is simple. Necessity. The same reasoning that underlies previous commercial vehicle production remains: maximum payload, minimum cost. It is commonly known that as far as operators' costs are concerned, fuel is unfailingly near the top of the list of expenses. Any saving in the fuel department will naturally lead to a better bottom line. Imagine being able to get twice the distance on the same amount of diesel – that's a big deal no matter how you look at it!

Environmental concerns also play a massive

role in the development of hybrid vehicles. Euro 6 emission standards have been implemented in Europe and the emissions of any manufacturer will need to meet these standards in order to succeed in the industry. Thus a system of continuous environmental research and development is an absolute necessity for any successful manufacturer in the commercial vehicle industry.

In order to understand where this sudden surge for hybrids in the commercial and industrial vehicle market came from, one needs to take a look at the history that lies behind these futuristic advancements.

A hybrid vehicle is generally defined as one that uses two or more sources of power to propel the vehicle. In a large number of cases this means using the typical internal combustion engine to provide the propulsion until, in so doing, an electric motor has been charged, which can now provide the vehicle's driving force. When this occurs, the internal combustion engine is not in use, and this of course provides major fuel savings, good for both the environment and the wallet.

The hybrid trend started with cars and, in recent years, found its way into commercial vehicles in the form of vans and smaller trucks (the vehicles that do the city travelling of an operator), but it is now emerging in the bigger segments of the truck, bus and earthmoving markets. Clearly, there has been a small-to-big trend in the history of hybrid vehicles and this is because hybrid technology, or at least successful and viable hybrid technology, is relatively new, even in cars. Cars are generally simpler to deal with than trucks, not necessarily in terms of technology, but rather in terms of power, size, weight, functionality and purpose. Many cars are almost 'testing grounds' for new technologies, however, commercial vehicles are not as suited to this as passenger vehicles.

This is because given the sheer mass of trucks and buses, if something goes wrong with a new technology, it tends to be more serious. More important is the fact that downtime for a commercial vehicle operator is not quite the same as it is for the driver of a car. When a truck is not working, somebody is paying for the significantly more expensive maintenance and repairs, so it can stand on rubber and lose the potential earnings of that truck every day. Trucks need to be reliable, but the delay between the first hybrid cars and the first hybrid trucks is a good sign that they will be.

At this relatively early stage of hybrid trucks, much of the technology, despite variations from manufacturer to manufacturer, is similar. The use of smaller-volume diesel engines in conjunction with electric motors seems to be the major trend. However, this hybrid surge is not only limited to trucks. Certain manufacturers have been placing huge emphasis on hybrid technology in their buses and construction equipment.

Will hybrids be as successful in South Africa as they are in Europe? It is clearly a necessary development in terms of emissions in Europe, but this does not seem to be the case in South Africa. While many of these hybrid commercial vehicles will make their way to South Africa, it is difficult to say when this will be, which in turn raises the question, is there a market for these vehicles in South Africa?

While there is no denying the fact that there can be massive fuel savings derived from hybrid trucks, buses and equipment, there is also a substantial increase in cost. Will potential buyers be motivated to purchase something that is not yet an absolute legal requirement regarding emission standards? This question is particularly relevant today given the current economic conditions, not only in South Africa, but throughout the world.

Pierre Sanson, Editor

Delo[®] Testimonial: Fraser Alexander Mining

Achieves 21,000+ hours in articulated dump truck operation using Caltex Delo[®] family of products.

Founded in 1912, Fraser Alexander has grown from humble beginnings to become a key player in the South African mining industry and in selected global locations including sub-Saharan Africa, Australia and South America.

"We run a fleet of approximately 412 pieces of equipment, which includes such things as ADTs, front-end loaders and excavators. The very high exhaust gas temperatures and the long haul, have a harsh effect on the engine. We run Delo[®] across the board in all the engines," said Theo Wilcox, Technical Manager at Fraser Alexander.

After 21,000+ severe service hours using Delo[®] XLD Multigrade SAE 10W-40, Caltex and Frasier Alexander personnel agreed to inspect one of their Mercedes-Benz OM 906 LA engines from a Bell 20-ton articulated dump truck (ADT) used in coal hauling operations.





"We see excellent deposit control provided by Caltex Delo[®] XLD Multigrade SAE 10W-40 - free movement of the rings, for good sealing. Clean underside, for good heat transfer; and the crown lands, the second land, and the third land are clean, as are the ring grooves. I've inspected all the contact surfaces of the valve train components, and wear is also well under control," said John Green – Chevron Technical Specialist.

Additionally, the team inspected the major cooling components of the Mercedes-Benz OM 906 LA engine that used Caltex Delo[®] XLC Coolant. Despite the harsh operating environment and hard water found in the operating area, the water pump impeller and pump housing showed no signs of cavitation or corrosion after 21,000+ hours of operation. The thermostat was clean and free of any visual silicate film or corrosion.

'We haven't found any signs of pitting of cylinder liners or buildup of scale or anything like that on the water pump or any of the other cooling components using the Caltex Extended Life Coolant," stated Wilcox.

"Having inspected the engine parts of the OM 906 LA diesel engine, we are confident to say it's the combination of the engine design and manufacturer, the maintenance practices of Fraser Alexander, and the performance of Delo® XLD Multigrade SAE 10W-40 and Caltex Delo® XLC coolant that have enabled the customer to achieve maximum engine durability," said Green.

"We operate in a developing country with many challenges to the successful operation of a fleet of equipment, and I'm very pleased to say Delo[®] is not one of the things I have to worry about. I'm confident that Delo[®] helps our fleet of equipment go further," said Wilcox.

To learn how Delo's family of products can help you go further, visit **CaltexDelo.com**.

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Connecting Rod Bearings

Connecting rod bearings exhibit minimal wear and are still usable after 21,000+ hours of operation using Delo® XLD Multigrade SAE 10W-40.



Water Pump & Thermostats Water Pump is in very good condition with no visible cavitation or corrosion. Thermostats have no deposit build up or film. Delo® XLC has provided excellent protection.



Top Deck Very good condition with no visible sludge or deposits. Showcases the excellent soot handling control offered by Delo® XLD Multigrade SAE 10W-40.





Shantui open day confirms COMMITMENT TO LOCAL MARKET

By Pierre Sanson

hantui displayed a range of its more established and trusted machinery at its recent open day, held in Johannesburg to emphasise the company's long term commitment to the rapidly-developing African economy. The event was a firm indication of the company's intention to remain in the market and increase its footprint in Southern Africa, where it already has more than 300 units in operation.

Shantui Corporation is one of the leading Chinese manufacturers of construction machinery and rates amongst the top three global manufacturers, which include Caterpillar and Komatsu. Also, Shantui can be considered as the largest producer of bulldozers with aN annual production of 15 000 units. In 1979, Shantui started introducing advanced manufacturing technologies, the experience gained from Komatsu and Caterpillar, which resulted in the development of a wide range of products including bulldozers, hydraulic excavators, wheel loaders, hydraulic traction scrapers and road rollers. The company is also well known for its component manufacturing, such as torque convertors, transmissions, track and link assemblies and other vital components which find their way into other construction equipment brands.

"EverStar Industries (Pty) Ltd was awarded sole distributorship for Shantui South Africa in the 4th quarter of 2014. Since then, we have built a fully fledged sales team, a parts team and a fully operational service facility to provide customers with a one-stop experience for Shantui equipment. We appreciate the establishment of Shantui Equipment Southern Africa (SESA), which can now provide the market with much needed product technical support for the complete range," said Bob Wang, CEO of EverStar Industries.

Mining and quarrying are among the most rapidly developing sectors in Africa, and the introduction of these products will assist Shantui to gain a stronger foothold in this market. Its excavators and bulldozers offer power, quality and economy at an affordable price, and are designed for quarrying applications, and for entry level mining operations.

The SE220 excavator is the best seller in the excavator range. This 21.6 ton workhorse is powered by a Cummins B5.9-C, six cylinder



engine with an output of 112 kW and boasts a heavy duty boom construction with a 1.2 cu metre bucket capacity for an increased breakout force, making it ideally suited for general construction sites where a variety of ground conditions exist.

The Shantui SE480 excavator, the largest of the local range, has been well received by the local market since its launch at Bauma 2013. The introduction of the SE480 excavator is expected to result in a measurable growth in market share in the mining sector for Shantui, judging by the overwhelmingly positive response that it has received from the industry to date.

The latest -3 version of the Shantui SL60W wheel loader is also designed for mining and quarrying applications. The Shantui SL60W-3 wheel loader is powered by a Cummins engine, which develops 175 kW of power. This unit has an operating weight of 21 tons and has a 3.5 m³ bucket capacity.

Shantui SD32W bulldozer: Powered by a Cummins NTA855-C360 engine, which develops 235 kW/ 320 hp, this unit has an operating weight of 41.5 tons and is equipped with a single-shank ripper with a ripping depth of 1 m. The unit is further equipped

with rock application tracks and blade.

Shantui SD22W bulldozer: This model is powered by a Cummins NTA855-C280 engine, which develops 162 kW/220 hp. It has an operating weight of 25.5 tons and includes a three-shank ripper with rollover protective structures (ROPS) and falling object protective structures (FOPS) cab.

Shantui SG21-3 motor grader: Driven by an In-line six cylinder, 4 stroke, overhead valve, direct injection Cummins 6CTAA8.3-C215 engine, it has an operating weight of 17 tons. The working performance of the blade at an inclined angle is 90 degrees, and the turning angle of the blade is 360 degrees. The unit comes complete with a 3965 mm/4270 mm blade, and includes air conditioning.

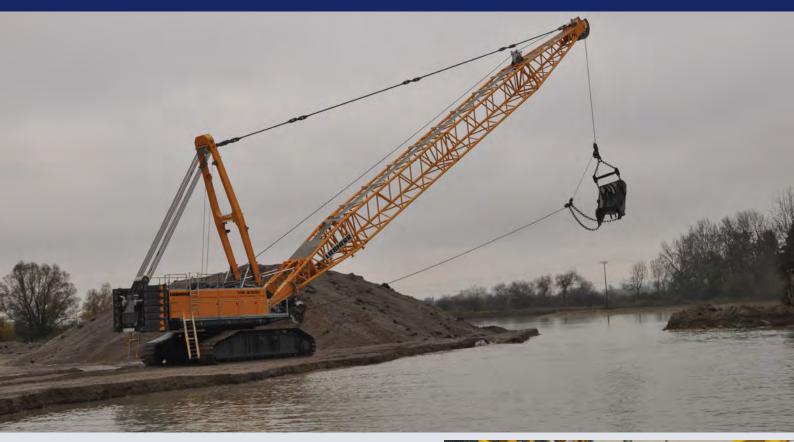
Shantui SR12 roller: The Shantui SR12-5 smooth drum roller is powered by a Deutz engine, which develops 82 kW/116 hp, has a fully enclosed cab, front drum and rear wheel drive, variable frequency and amplitude control and a climbing gradeability of 40 percent. Also included are pad-foot shells for attachment to the smooth drum.

Shantui SF50 forklift: This unit is powered

by a Weichai engine, which develops 81 kW of power. This unit has an operating weight of 8.1 tons. The lifting height of this machine is 4.2 m, with the bottom mast clearance of 195 mm, in addition to a 5 ton lifting capacity.

Flora Zhang, Senior Sales Manager of Shantui said, "This event served as the ideal platform for our customers to view our products. A number of African economies are still in the infancy stages of development and, as a result, many projects do not necessarily have highly skilled technicians or the required hardware and software for advanced diagnostics. Instead, they require a simple yet robust machine that is able to withstand the harsh African climate and operating conditions, and emerging economies now recognise and trust the Shantui brand to meet these unique demands," she concluded.

EverStar Industries is committed to massive growth and support for Shantui and in this regard has appointed Shantui dealers in Jet Park, Pietermaritzburg, North West and Limpopo. Technical and product training has and will continuously be provided to these dealers so that customers can be comfortable in the knowledge that the equipment will always be maintained according to the best global practices.



LIEBHERR'S LARGEST duty cycle crawler crane

iebherr's HS 8300 HD, the world's largest duty cycle crawler crane, recently had its premiere on a jobsite in Bavaria. It is the first Liebherr crane for the construction machinery market to be equipped with the innovative hybrid drive Pactronic®.

The HS 8300 HD combines the traditional robust design of Liebherr's range of heavy duty cycle crawler cranes with state-of-the-arttechnologies. Thus, the efficiency of the machine is significantly improved during practical application. For a further increase in performance the crane is fitted with hydraulic freefall winches offering approximately 50 tonnes of line pull.

Since the end of 2014 the company Wanner & Märker has been using the new duty cycle crawler crane for gravel excavation in one of their three quarries. The jobsite is located in the South of Germany, close to the city of Ingolstadt.

The proportions are remarkable. The machine, with an entire weight of more than 350 tonnes, operates on the site with a 44 m long main boom and a dragline bucket made by Rädlinger. The digging depth is approximately 26 m, the unloading height about 15 m. Apart from the dimensions of the HS 8300 HD, which dwarf other duty cycle crawler cranes in comparison, the machine impresses with its innovative hybrid drive allowing an increase in turnover at the jobsite by up to 25%. The HS 8300 HD is the first construction machine on the market to be equipped with the Pactronic® system developed by Liebherr. This innovative hybrid drive based on hydraulics offers both economic and ecological advantages. Surplus energy is storedand subsequently regenerated so increasing the material handling capacity while at the same time significantly reducing fuel consumption.

The hybrid drive is already a proven technology. It has been

used in Liebherr's mobile harbour cranes since 2010 and has contributed to the consolidation of the world market leader position of this product line. The proven technology of the hydraulic accumulator ensures low maintenance requirements and maximum reliability. The reduced energy consumption considerably reduces emissions therefore causing much less environmental pollution.

In the development stage special attention was paid to an extended service life of the duty cycle crawler crane. Therefore, the steel fabrication of the basic machine is extremely solid and critical points were reinforced using extra high-quality materials such as carbon fibre. Furthermore, special production methods, including the use of automated welding robots, increase the



machine's service life even under extreme operational conditions. Apart from dragline operation the HS 8300 HD is suitable for various other material handling jobs. The machine can, for instance, also be equipped with an orange-peel grab and a clamshell.

As other Liebherr machines the HS 8300 HD incorporates many components and system solutions developed by Liebherr. Apart from the homogeneous system this also guarantees high availability of spare parts within the Liebherr service network. The proven Litronic control system, which is based on CANBUS technology and includes all control and monitoring functions of the machine, belongs to the standard equipment of the HS 8300 HD. The Litronic system works reliably even under extreme weather conditions and vibrations.



ALE COMPLETES West Coast 1 project

LE has completed the West Coast 1 Project in the Western Cape region of South Africa: a major onshore wind farm being developed by Aurora Wind Power.

ALE was contracted to provide the port operations, transportation, offloading and installation preparations of 47 wind turbine generators (V90 2 MW 80m HH) as part of the project, located approximately 50 km from Saldanha Bay Port.

ALE started the work, which lasted approximately four months, in November 2014. For the port operations, the company utilised one 250 t crawler crane, one 90 t mobile crane, one 40 t mobile crane, one telehandler and three trailers to look after the vessel discharge.

To transport the generators, four axle lines of extendable trailers were used for blade transport and eight axle lines used for the towers and nacelle.

The generators were offloaded and ALE prepared and positioned the wind turbine components ready for the main installation using a 130 t - 250 t mobile crane and telehander. This included the top and tailing of the tower sections to vertical.

Christo van der Merwe, ALE's Account Man-



ager for its South Africa branch, which specialises in the wind energy sector, commented: "The wind energy market is a particularly busy industry for us and the region as a whole. We have been continually awarded project work within this sector across South Africa and have been involved in eight wind energy projects.

"The future of projects in the wind sector is promising and we will continue to support our clients and offer turnkey heavylifting solutions."

The project was completed in March 2015.

Founded in 1983 by Roger Harries, ALE delivers a highly tailored, end-to-end service covering every aspect of the handling, transportation and installation of heavy, indivisible loads, including lifting, transporting,

installing, ballasting, jacking and weighing.

ALE delivers strategic heavy-lift services to a wide range of sectors, including civil, oil and gas, energy, nuclear, offshore, renewables, petrochemical, ports, marine, minerals and metals and mining.

ALE is headquartered in the UK and has more than 30 offices across Europe, the Far East, Africa, America, South America, the Middle East and Australia. It is fully compliant with international standards of safety and excellence, including Quality Standard ISO 9001:2008, Environmental Standard ISO 14001:2004, and Health and Safety Standard OHSAS 18001:2007. ALE is also registered and qualified in the Achilles Norway and Link-up systems, and is a member of both the British Safety Council and the British Standards Institution.



JOHNSON CRANE HIRE operates the largest crane fleet in South Africa

Johnson Crane Hire has bolstered its crane fleet in terms of its heavy lift capability on both the crawler and hydraulic side. It now owns and operates the largest crane fleet in South Africa, with a total of 270 cranes, having completed a four-year fleet replacement programme in 2014 at a total investment of R600 million.

"We have added some major equipment into the top end of the fleet, with a strong focus on keeping our fleet modern and up-to-date. This is to ensure we can meet the growing demand of our core client base and to support our philosophy of providing new and reliable equipment," Peter Yaman, Executive, Johnson Crane Hire, says.

Established in 1976 as a crane hire company, Johnson Crane Hire is now firmly established as a total lifting services provider. "We can supply a full scope of project services, from crawler and hydraulic cranes to ancillary services," says Yaman. "We are not only a crane company; we are a projects company."

"We are up there with the major players in terms of equipment and engineering and services," Cornelis Grotius, General Manager: Heavy Lift Division, adds. "The fact that we are a South African company, operating alongside major multinationals in this highly competitive market, is a testament to our home-grown success story."

Another key factor is that the Heavy Lift Division operates across a range of sectors, with Johnson Crane Hire's latest highly successful diversification being into the wind-energy sector. "We spread our risk over different sectors, meaning we are not wholly reliant on construction, mining or heavy industry," Grotius explains.

Johnson Crane Hire's heavy-lift crane fleet consists of some of the largest cranes available in the South African market. These range from lattice boom crawler cranes (200 t to 750 t) to a 750 t lattice boom truck-mounted crane specifically for the wind-energy industry and hydraulic boom crawler cranes (100 t to 220 t).

In terms of a total package, Johnson Crane Hire is able to offer upfront engineering, project management, heavy transport and heavy rigging services. Part and parcel of its total lifting solutions capability is a focus on alternative lifting technologies. While Johnson Crane Hire has already used jacking and sliding techniques to great success on some projects, other complementary technologies include hydraulic gantries and strand jacking. The latest trend in this regard is Self-Propelled Modular Trailers (SPMTs).

Johnson Crane Hire has branches in all the strategic regions of South Africa, from Cape Town and Durban on the coast to the heavy industrial areas of Secunda, Vanderbijlpark, Rustenburg and Middelburg, and then specific project areas such as the Medupi and Kusile power stations. "We have a branch at Lephalale in Limpopo, east of the Waterberg Coalfield, and a newly-established branch in the Northern Cape at Deben, close to Kathu," Yaman explains.

"The Heavy Lift Division, besides having its own dedicated crane fleet, offers technical and engineering expertise to the branches, which are our regional strong points in being able to service our customers," Yaman says. It is this highly flexible approach that has resulted in Johnson Crane Hire being the preferred mobile crane hire and lifting service provider for its core client base.

Johnson Crane Hire also operates successfully in Southern Africa, with an operation in Botswana and having recently completed work in Mozambique and Zimbabwe. "We currently carry out projects on an *ad hoc*



basis in Africa as a whole, dependent on the risk-versus-reward ratio," Yaman says. Investing in the latest technology in terms of its crane fleet also means that Johnson Crane Hire adheres to the highest possible health and safety standards in the industry.

"We focus on safe lifting techniques as part of our SMART (Safety, Maintenance, Availability, Reliability and Total cost effectiveness) business philosophy," Grotius says. This means that all lifting equipment is kept in optimum condition through regular, proactive maintenance schedules and ongoing inspections and load testing. In addition, the company invests in highly skilled and trained operators to ensure they are completely familiar with the application of Johnson Crane Hire's comprehensively documented and implemented safety systems.

"Our philosophy is to bring operators up through the ranks. As the Heavy Lift Division has grown in terms of increased capacity and more project work, so have we developed the skills and expertise of our operators to a commensurately high level. We have invested significantly in this aspect of the business, and have developed our in-house expertise both progressively and organically," Yaman says. Johnson Crane Hire's total solutions approach is discernible in its involvement in the wind-energy sector, where the logistics of moving cranes on-site and to different project areas pose a considerable challenge. "That is a totally different ball game. At the end of the day, a lift is just a lift, but the attendant logistics and safety issues, and the ongoing pressure of meeting targets and deadlines, makes it a lot more challenging. Johnson Crane Hire has the inherent flexibility and in-house resources to be able to meet all such challenges," says Yaman.

The company also has the capability to take a project from its early stages through to successful completion. "We sit down with the client right from the start of the project, planning and developing the process to take it all the way through to execution. It is this upfront engineering and technical planning capability that differentiates us as a heavy lift service provider rather than a one-off crane hire company.

"The trend is to build bigger and bigger components off-site, since such modules minimise the erection and construction work on-site. However, you need to work around those sorts of issues early enough, plan for the equipment that is needed, and then carry out the necessary engineering, which results in major advantages for the client in terms of cost-saving and overall efficiencies," Yaman explains.

An example of Johnson Crane Hire's successful application of a total lifting service was at the Natref Clean Fuels project for client Fluor, where it consulted with the client in terms of the crane sizes needed and was then able to plan the transportation and installation accordingly. The company conducted a rigging study analysis that enabled the client to formulate the costing and feasibility estimates for the project. It also afforded the client the opportunity to develop a proper methodology.

At present, some of the most technically challenging lifts being undertaken by Johnson Crane Hire are for the wind-energy industry, where up to 100 t have to be lifted as high as 80 m. Current projects include a 184 t to lift for a new headgear installation at a major diamond mine in South Africa, as well as a 143 t lift at a 43 m radius for a planned refinery shutdown in Durban in May, which will see the impressive deployment of a range of cranes from Johnson Crane Hire.



A FASSI F425RA.2.24 E-DYNAMIC CRANE on Mont Blanc

The new Mont Blanc Cable-Car System goes into operation in June. This €105 m project has taken four years to construct and connects a departure station at Pontal d'Entrèves, close to the motorway, with the arrival station at Punta Helbronner at an altitude of 3 466 m up in the mountains.

This pioneering work was carried out by the Cordée Mont Blanc consortium on behalf of Funivie Monte Bianco S.p.A.. The consortium is led by Cogeis S.p.A., an historic Canavese company that specialises in major projects both in Italy and abroad. It was Cogeis S.p.A. that selected Fassi Gru as a technological partner, thanks in part to the decisive support of the Turin branch of the Bergamo industrial group and of its manager, Marco Linguanotto, at the specification stage.

"The aim was to identify a crane configuration that would meet the specific needs of the construction site, taking full advantage of the versatility of the machine," explains Rossano Ceresoli, head of research & development of Fassi Gru. "As well as using it on the Mont Blanc construction site, the customer had requested that the crane could be subsequently installed on a commercial vehicle. This is how we identified the best solution to be the F425RA.2.24 e-dynamic crane model coupled with the L324 jib and equipped with winch and platform."

The high-altitude construction site needed a crane to handle materials at the upper station and to install the metal structures, complementing the heavy lifting duties carried out by a pair of tower cranes that had to be assembled by helicopter. As the works progressed, the Fassi F425RA crane became appreciated for a number of other operational benefits. For example, when wind speeds reached 70 km/h – not a rare occurrence, as they can sometimes top 150 km/h at this height – the tower cranes had to stop working for safety reasons. The Fassi crane, however, was able to continue.

Work started in April 2011 and by the following year the F425RA e-dynamic crane was already operational. It was first installed at the lift shaft that connects the Punta Helbronner arrival station with the tunnel down to the Nuovo Rifugio Torino, a refuge building located 100 metres below.

In fact, one of the advantages of the articulating crane was the speed with which it could be moved around the site to where it was needed next. The Fassi crane was then installed at the top of the structure where, using its winch, it was a great help placing reinforcing steel during cement casting. The next step was the construction of the two-storey station structure, always moving on to the floor above as gradually each concrete pour neared completion. Its contribution was also crucial in laying of the steel girders and crossbeams.

During the winter breaks the crane remained outdoors, covered only by a tarpaulin in temperatures that reached minus 30°C, but this never caused any problem. When work resumed, the crane was always ready, as was the case every morning, even after the worst storms.

For the final stages, the Fassi F425RA crane was fitted with the work platform basket for tightening the bolts and installation of doors and windows and the solar panels. These were all operations in which it continually proved to be the ideal solution, simplifying the work and halving the time.

It was another wonderful Italian story, technical ingenuity and perfect delivery set against a backdrop of stunning scenery, with our companies and the Fassi F425RA 2.24 e-dynamic crane in starring roles.

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cranes (LR series).

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SA FRENCH SUPPLIES TOWER CRANES for major South African dam project

Potain tower cranes will dominate the horizon on a major project by the Department of Water and Sanitation (DWS) to raise the Clanwilliam Dam wall. This will be the largest dam construction project undertaken by DWS after the De Hoop Dam project, where Potain tower cranes were also deployed. The latest project is a showcase for using tower cranes for complex civil engineering projects.

SA French, a division of Torre Industrial Holdings, will supply a MD 485 tower crane, which is adaptable to a variety of job sites owing to its modular design and efficient load handling capabilities. In addition, its Optima controls provide for smooth speed changes and high productivity. It will also supply a Potain MC310 crane, expected on-site in early May. The 25 t Potain MD 485 tower crane will pour the bulk of the concrete work at the Clanwilliam Dam, supplemented by the Potain MC 310 for smaller lifts.

The MD 485 tower crane was used with great success at the De Hoop Dam project on the Steelpoort River near Burgersfort in Limpopo Province. It has been dismantled and transported to the Clanwilliam Dam on the Olifants River in the Western Cape. The extensive experience that SA French gained at De Hoop will facilitate the construction process at Clanwilliam and help drive down the overall cost for the client.

"The methodology of using tower cranes for dam construction is largely cast in stone, and a lot of the knowledge and experience we gained at De Hoop and other DWS dams will be easily transferrable to Clanwilliam," says Quentin van Breda, managing director, SA French. A major accomplishment at De Hoop was relocating the Potain MD 485 tower on two separate occasions.

An example of SA French's proactive approach to meeting the specific requirements of its client was its recommendation that simultaneous erection of the two tower cranes would result in a considerable cost and time saving. The company will have a team onsite for the commissioning process, while DWS will use its own operators. "Part of our in-house offering is to train any certified operators that the client may require," van Breda says.

Upfront planning is critical in terms of adherence to all health and safety requirements, as well as ensuring that all lifts are carried out as accurately and as quickly as possible. This is a key feature of the total lifting solution offered by SA French, which includes its considerable expertise backed by an extensive reference base in complex engineering projects, all of which is complemented by Potain's market-leading tower crane technology.

SA French's longstanding relationship with

DWS, starting with the former Department of Water Affairs on the Braam Raubenheimer Dam near Lydenburg in 1982, was cemented by its successful involvement at the De Hoop Dam. This relationship played a vital role in it securing its latest contract. "Our long-term relationships add additional value in terms of our comprehensive service and support," van Breda says.

Tower cranes are particularly suited to dam construction, as such projects require very specific lifts at certain radii. The number of lifts required on a dam site in terms of piping, valves and pumps does not justify the use of a crawler crane from a cost-effectiveness perspective, van Breda notes.

"More often, these lifts relate to the massive pipe structures that need to be handled and put in place. The only cranes that can handle these structures efficiently in terms of the combination of height and required radius are tower cranes," van Breda says. Some of the pipe sections at De Hoop, for example, ranged from eight to ten tons.

The Clanwilliam Dam project is expected to use Roller Compacted Concrete (RCC), which DWS pioneered at De Hoop. This comprises large, dry aggregate in the form of rock, sand and cement that is compacted to form the bulk of the dam wall. RCC is a far more cost-effective option than traditional concrete dam walls. It also



allows for more compact and sophisticated spillway sections, which necessitates the use of tower cranes in these constrained construction sites.

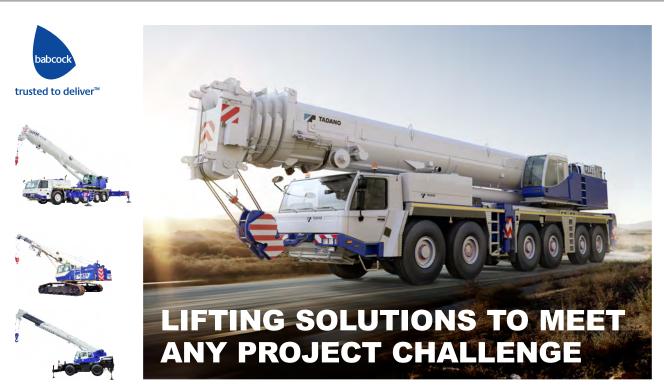
The main driver for the Clanwilliam Dam project is believed to be the burgeoning viticulture industry in the Western Cape. The concrete gravity dam was built originally in 1935 and raised in the 1960s by the addition of 13 crest gates with pre-stressed cables. The dam wall is currently 43 m high, with a net storage capacity of 122 million cubic metres.

The latest project aims to increase the Full

Supply Level (FSL) of the dam by raising the dam wall by 13 m, providing an additional 70 million m^3 of water a year to downstream farmers. This will involve realigning a portion of the N7 road. In addition, the gravel access road on the eastern side of the dam will have to be realigned to allow for maintenance access to the top of the dam wall.

Van Breda comments that SA French is keen to look at dam construction projects in the rest of Africa. "Wherever possible we aim to build on the existing Torres Industries Group infrastructure in conjunction with Elephant Lifting Equipment, focused on areas where Torre has a presence, such as West Africa." The Torre Industries Group recently added Elephant Lifting Equipment to its Plant and Equipment Division, which includes SA French, Manhand and Kanu Equipment.

SA French and Elephant Lifting Equipment will ultimately fall under the umbrella brand 'Torre Lifting Solutions' which, combined with the extensive distribution network of the Torre Industries Group, will allow it to offer a total lifting solution – from consumables to tower cranes and electric overhead cranes – to its customers in South Africa and across the continent.



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GENIE MAGIC from Goscor Hi-Reach

Goscor Hi-Reach, the official distributor of Genie's extensive and well-known range of equipment in Southern Africa, once again sets the benchmark at new heights with the launch of four new Genie lifting options.

George Landsberg, Managing Director of Goscor Hi-Reach, expresses great excitement about these new machines from Genie. "Customers are spoilt for choice with this line-up of two articulated boom lifts and two scissor lifts. With distinctive features that meet a variety of indoor and outdoor lifting applications, these machines are a game changer, particularly for the construction industry."

"The GS-4069 Series is undoubtedly one of the most exciting of the new machines," continues Landsberg. "Whilst not entirely new, with battery operated and rough terrain units introduced to the market approximately two years ago, this latest development from Genie delivers all the benefits of hybrid technology in a unique bi-energy version." Equally at home indoors and outdoors, the Genie GS-4069 BE is the textbook first-on-site-last-off-site solution for the construction industry. Under diesel power the Genie GS-4069 will go about its duties during ground-breaking and structural work. Once the building is enclosed, a simple flick of the switch to battery power and the machine is ready to perform its indoor duties ensuring a safe, comfortable, no-noise, emission-free working environment. Landsberg points out that the extreme flexibility of this two-in-one unit makes it a highly convenient and affordable rental option as both outdoor and indoor duties can be performed by one machine.

The working height of just under 14 m of the battery operated GS-4047, the next offering in Goscor Hi-Reach's new products, makes it unique amongst scissor lifts. "Few manufacturers are able to offer battery operated scissor lifts that can reach this height," says Landsberg. Another outstanding feature of the machine is that it can be driven at full height. The machine covers a variety of indoor lifting applications especially where more height is required, such as atriums and large volume areas typically found in warehouses, shopping centres, casinos, conference centres, etc. Produced in the UK, the unit weighs just over 3 tons with a lifting capacity of 350 kg in the basket. According to Landsberg, the GS-4047 has been available to the local market for some 18 months but the latest offering is designed to USA ANSI specifications.

Goscor Hi-Reach's two new articulated boom lift offerings from Genie include the rough terrain diesel driven Z-62/40 and the lightweight battery operated Z-33/18. The improved design of the diesel machine which replaces the previous generation Z-60/34, provides better accessibility. The working height has been extended by an additional 70 cm to 20.87 m while the outreach has been substantially improved by an additional 2 m to a maximum of 12.47 m. With the added benefits of zero tail swing for easy manoeuvrability in confined spaces and 4-wheel drive for easy negotiation of rough uneven terrain, the Z-62/40 will improve productivity by getting the job done quickly, safely and effectively, making it the perfect lifting solution on construction sites.

"The Z-33/18 meets industry's call for a lightweight battery operated articulated boom lift with a reach of between 10 m and 12 m for indoor applications," continues Landsberg. "Weighing in at just over 3 tons (3 665 kg), a working height of 12 m and a maximum outreach of 5.57 m, this battery operated machine is one of few on the market in this size." With zero tail swing, the lightweight unit is ideal for indoor operation in constricted areas and where there are weight restrictions on slabs or floors where the work has to be carried out. With the first six units already on their way to South Africa, Landsberg is particularly optimistic about the prospects for this machine in the market and says it will fill a definite gap in the industry.

The four new Genies are also available as rental options from specialist rental company Goscor Access Rental. Managing Director, Dean Jones, is extremely happy with the machines. "Genie is a well-known, well-accepted, tried and tested brand in South Africa and this new product line-up further broadens our rental scope to the market."



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BELL INTRODUCES COST EFFECTIVE 6X4 configuration for B25E

"Generally tipper trucks go up to an 11 m³ bin with an associated payload of about 18 tonnes. There are larger tippers available but they are sold in fairly small numbers so our B25E 6x4 will give many owners a significant payload advantage over these machines." hile Bell Equipment's B60 Articulated Dump Truck (ADT) is designed to give customers an alternative to large rigid trucks in the mining industry, in its small truck range the company has introduced the B25E 6x4 supertruck to deliver a cost effective and versatile alternative to road-going tipper trucks in the construction and quarrying industries.

Comments Bell Product Marketing Manager: ADTs, Tristan du Pisanie: "There is quite a substantial difference between conventional trucks and our standard offering of six wheel drive ADTs in terms of off-road ability. An ADT excels at carrying a payload in extremely challenging conditions such as soft sand, deep mud, undulating ground, rough roads as well as steep inclines and declines. These types of conditions would typically result in more conventional trucks either getting stuck or experiencing premature failures.

"However, this level of off-road ability does come at a price so we filled the gap with our B18E 6x4 and B20E 6x4 supertrucks, the latter being homologated for road use. Now we have introduced the B25E 6x4 recognising that this configuration, with a larger payload, will be a highly productive and attractive proposition for some of our existing customers. In addition, new customers whose operations are struggling with their road-going tipper trucks in difficult applications will find a lot of value in the machine."

He adds: "Our B25E 6x4 has the same 24 000 kg payload and engine performance as our standard B25E. It also shares the typical ADT layout but with a 6x4 drivetrain and 20.5R25 tyres to deliver a substantial cost saving compared to the standard B25E."

While the B25E 6x4 does not have the same off-road ability as the 6x6 model, it is much better than a conventional tipper truck. In addition, it inherits the same long-life, rugged components found in the standard B25E.

"Generally tipper trucks go up to an 11 m³ bin with an associated payload of about 18 tonnes. There are larger tippers available but they are sold in fairly small numbers so our B25E 6x4 will give many owners a significant payload advantage over these machines," said du Pisanie.

Other benefits for the B25E 6x4 supertruck over a tipper truck are the driven front axle, which assists steering in soft sand in combination with the typical ADT characteristic of a very tight turning circle. Another important consideration is that the Bell trucks have fully certified ROPS/FOPS operator cabs as well as a host of other purpose-designed safety features that are becoming more necessary to meet safety requirements on construction and mining sites.



BELL RUSTENBURG relocates to better premises

n line with Bell Equipment's strategy to invest in its Customer Service Centres (CSCs) to drive customer support, the company has moved into new premises in Rustenburg.

With a total developed area of 2 600 m², the Bell Rustenburg is now located at 5-11 Tiger Fish Avenue, River East Industrial Park, Waterfall East Ext. 55 and represents an investment by the company of R37 million.

According to Rustenburg CSC Branch Manager Gerald Lottering, the facility is located in the newest industrial area in Rustenburg and provides easier access from the national N4 highway.

The workshop has been fitted with a 10 ton crane and has six bays with place for 12 machines. The parts stores is about four times larger than the one in the previous CSC and is fitted with a state-of-the-art vertical storage unit, which is 4,5m high with 60 trays and 2 270 compartments to store smaller parts.

With future growth in mind, the stores are double volume to accommodate the construction of a second floor when needed and a 100 kW generator has been installed to ensure that customer service is not compromised during power outages.

Other features of the CSC include a boardroom, a private discussion room, a main reception area and a separate parts reception with toilet facilities designated for customers as well as rest rooms and a kitchen for staff and a spacious home zone with change rooms for technicians and apprentices.

Managing Director of Bell Equipment Sales South Africa (BESSA), Bokkie Coertze says: "Although the mining industry is facing difficult times, our investment shows that we are committed to our customers in this sector and we are in business for the long haul. We are proud of what has been achieved at our Rustenburg CSC and we are confident that our customers will reap the benefits of our improved facilities through improved customer support and better parts availability." With future growth in mind the stores are double volume to accommodate the construction of a second floor when needed and a 100 kW generator has been installed to ensure that customer service is not compromised during power outages.



CASE LAUNCHES new generation D Series Crawler Excavators at Intermat 2015

G ase Construction Equipment has launched its new generation D Series crawler excavators at the Intermat 2015 exhibition. The four new models, ranging from 25 to 40 tonnes operating weight, run a Tier 4 Final (Stage IV) engine and introduce new features and upgrades that raise the bar on the performance of CX excavators while strengthening the outstanding controllability, low fuel consumption, high comfort and reliability these machines are known for. The new generation D Series offers high productivity, comfort and safety, combined with low running costs that construction businesses look for.

The D Series crawler excavators feature the proven Case Intelligent Hydraulic System that places Case CX excavators among the best in the market for their impressive controllability and performance. The electronically controlled hydraulic pumps and larger main valve further boost the new generation's productivity: they improve the machine's responsiveness, resulting in cycle times up to 12% faster than the previous generation's; they result in a breakout force up to 6% higher than the C Series; and they increase the models' lifting power. In addition, the CX370D features two bigger pumps compared to the model it replaces, with a maximum flow of 2x300 litres/minute.

The new generation crawler excavators strengthen the Case leadership in fuel efficiency, which is up to 8 % higher than the previous generation's as a result of the engine technology and the improved hydraulics.

The new models comply with Tier 4 Final (Stage IV) emissions standards with Case's maintenance-free SCR solution, which requires no Diesel Particulate Filter or regeneration, resulting in maximum uptime and lower operating costs.

The large AdBlue tank and low additive consumption result in outstanding autonomy, as the AdBlue tank only needs to be refilled every five refueling stops, so that Case customers will be able to work longer hours without pause.

The pressurised cab, with cushioning system, ensures remarkably low noise and vibration levels, providing an operating environment among the quietest in the D Series' class. The spacious cab with ample legroom for the operator features and the fully adjustable workstation with optional heated air-ride seat create an ideal working environment.

The large widescreen monitor accommodates a continuous camera view and all the performance data the operator needs, such as fuel consumption rates, maintenance information and machine diagnostics.

The cab meets ROPS and FOPS LEVEL II safety standards, providing maximum protection to the operator. Daily service points are easily accessible and reached safely with the standard handrails. The excellent visibility is further enhanced after dark with the optional LED lighting package that provides a deeper and wider coverage of the area around the machine at work. The optional factory fitted travel alarm contributes to greater safety on the jobsite around the machine.

The new generation D Series crawler excavators also offer features to protect the customers' asset; the SiteWatch telematics system enables the fleet manager to keep track of the machine and helps prevent misuse of the equipment, while the lock code protects the units from theft. \bigcirc













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WORK @ HEIGHT: FROM THE BOARD

THE INSTITUTE'S CODE OF ETHICAL PRACTICE

To become a member of the Institute's trade association, all organisations are required to comply with the professional standards set by the association.

One of these standards is the Institute's Code of Ethical Practice, which sets out how organisations offering services in the work at height environment should behave.

Compliance with a Code of Ethical Practice ensures a member will identify and manage risks, and also protect consumers with the provision of quality services and goods. Violation of such Code can of course have legal consequences.

The Institute's Code of Ethical Practice is as follows:

A quality work at height service is entirely dependent upon the professional integrity of member companies, their directors and staff.

- In the spirit of "EXCELLENCE", the Institute For Work At Height subscribes to and adopts the following Code of Ethical Practice and mandates total compliance thereto by all members as a condition of membership.
- All members will use proper care and exercise professional judgement regarding the appropriateness of their actions, and discharging their duties and responsibilities in accordance with the statutes of the Republic of South Africa.
- · All members shall comply with all relevant indus-

Scaffolding Industry to be regulated by IWH

The IWH scaffolding chamber is the voice of the scaffolding industry and its main objective is to improve the quality of scaffolding training and obtain recognition as a profession in South Africa.

The IWH can assist the construction industry by providing regulated scaffold companies as well as competent trained people.

Scaffolding is currently not recognised as a professional trade in South Africa and scaffolders are hired from Labour Brokers with inadequate "training certificates". Many of these certificates are forged and correct training / assessments have not been done. No nationwide record scheme bares proof of training and assessment.

Many training providers have little knowledge of the correct training procedures in the scaffolding industry and certified training authorities have given accreditation to incompetent scaffolding training providers. These training authorities also have little knowledge in the erection and inspection of access scaffolding.

Owing to a lack of competent training, safety standards related to safe erection of scaffolding are not being adhered to.

Many companies throughout South Africa are



Brian Tanner

try statutes, the Institute's constitution, rules and decisions of the Institute as may be determined from time to time, and be open to audit in order to ensure compliance.

- All members will maintain the highest standards of honesty and integrity towards their clients, employees, fellow members, and avoid any action contrary to the public interest that would bring the Institute into disrepute.
- All members are expected to provide "fit for the purpose" services to meet client needs.
- All members shall employ competent staff and make them effective through training and the provision of suitable equipment and materials.



Perry Todd

erecting unsafe scaffolding due to the ignorance of both the company's directors and the end user. Scaffolding providers are continuously erecting sub-standard scaffolding, creating opportunities for any employer to become a scaffolding provider.

The IWH now has a code of conduct which all members must apply to. All members' yards, training facilities and sites are audited to ensure that they comply with IWH requirements prior to acceptance.

With 29 members to date, I am delighted with the progress made as we are moving ever closer to ensuring that the scaffolding industry achieves the highest practicable stan-

Continued on page 22

WORLD NEWS

IDIOTS ON LADDERS

After receiving more entries than ever before, the Ladder Association's Idiots on Ladders contest has ended and this year's 'biggest idiot on a ladder' has been crowned.

The success of Idiots on Ladders mirrored a record breaking year for the Ladder Exchange which traded over 15% more ladders than in the previous year, continuing its three straight years of growth since being taken over by the Ladder Association in 2012.

The winning idiots on Ladders picture received 60% more votes than its two joint runners-up. It showed two men inside the bucket of an excavator which was already around 20 feet off the ground with one of them footing the ladder in the bucket so the other could climb on top.

Ladder Association communications & social media officer, Michael Fern, said, "This year the public sent in more pictures of people working dangerously at height than ever before and some of the pictures were among the most unbelievable we have ever seen".

"Along with the winner, one of the runners-up also showed a ladder being used from inside an excavator, hinting at how worryingly common even ideas as ridiculous as these can be, Idiots on Ladders is a great reminder of the importance of training. Its message is clear – if you are using a ladder you must make sure that you are competent, otherwise you really are taking your life in your hands", concluded Fern.

WORK @ HEIGHT: REGIONAL NEWS - GAUTENG

LAYHER A LEADER IN SCAFFOLDING TECHNOLOGY

For more than 60 years the name Layher has been synonymous worldwide with high-quality and practically tested scaffolding systems and supplying an extensive range of services to the industry. Layher with headquarters in Gueglin-gen-Eibensbach in Germany, can be regarded as one of the largest system manufacturers in the world, known for their product innovations and their customer service. The South African subsidiary is one of 30 in the world network and ensures that the local clients receive the same dedicated service synonymous with the company's standards.

They have influenced new developments with their ideas which have significantly led to their leadership in scaffolding technology.

The Layher Speedy Scaf is an unbeatable quick-to –assemble insertion frame scaffolding which consists of five basic elements, assembly frame, scaffold deck, guardrail, diagonal brace and base plate which guarantees a speedy assembly time.

The Layher Allround Scaffolding, the original concept with all-round flexibility which has taken the place of conventional scaffolding technology. It has become established in the market as a synonym for modular scaffolding.

The Layher Event System is based on Allround scaffolding and caters for grandstands, stage, camera towers and a variety of entertainment orientated events.

The optimum solution for working at height are the Layher ladders and rolling towers, manufactured with the latest materials and conforming to the most stringent safety regulations.

THREE WORKERS FALL FROM HEIGHT What happened?

A team of three workers was dismantling a scaffold (10m high) next to a storage tank when the scaffold collapsed (fell over) as the result of unstable ground below the scaffold. One employee unhooked his fall protection and jumped off the scaffold before it fell. The other two fell with it. Injuries included a fracture on the bridge of the nose and laceration to an arm. One employee had no injuries.

Causes of event:

- · Incorrect ground condition and lack of scaffold inspection.
- Lack of communication between supervisors of the workers for the two different operations, excavations/scaffold dismantling.
- Risk assessments for the two operations apparently did not identify the need for co-ordination and communication between the two operations.
- Lack of awareness of the employees involved in the operations to recognise the potential for the collapsing of the scaffold when destabilised by excavations.
- Lack of control over dismantling of scaffolding.

Corrective actions:

- Persons appointed to supervise excavations to ensure excavations are backfilled or shored appropriately
- Review risk assessments, both operations, to identify hazards created by excavations around scaffolding.
- Supervisors from both operations to be debriefed to identify their competencies in hazard identification.
- Review System in place for checking ground conditions prior to scaffold erection
 and dismantling
- · Dismantling sequence of scaffolds to be assessed prior to removal

Relevant legislation:

- Construction regulations-7 Risk Assessment, 8 Fall protection, 11(d) Excavation Work, 12 Demolition work, 14 Scaffolding
- Construction Regulation 5 Principal Contractor and Contractor
- Construction Regulation 6 Supervision of construction work

These are references to the old Construction regulations and need to be updated.



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How high do you need to go?

Specialist access systems company SkyJacks has joined the global rental equipment and industrial services group, Waco International. Skyjacks is a leading supplier of scaffolding, hydraulic access equipment and suspended platforms. Skyjacks is now geared to push even higher as they complement their impressive local experience with the backing of an international group.

SkyJacks is renowned as a leading access system provider to the construction, mining, building and industrial maintenance industries. They hire and sell the most advanced industrial products and are the sole distributor of the Skyclimber range in South Africa.

For more information on SkyJacks' solutions call them on 011 397 2730 (Suspended Platforms and Alu-Scaff) or 011 397 6594 (Hydraulic Access) or visit: www.skyjacks.co.za



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WORK @ HEIGHT: GOOD PRACTICE

PASMA Sponsors Working At Height Theatre at A-OSH EXPO 2015



Once again, the Prefabricated Access Suppliers' and Manufacturers' Association (PASMA) is sponsoring the Working at Height Theatre at the A-OSH Expo, running from 12th to 14th May 2015 at the Gallagher Convention Centre. By sponsoring the theatre they are achieving elements that are core to the PAS-MA's objectives by promoting safe practices, when working at height.

PASMA was founded in 1974 and is the worldwide recognised focus and authority for mobile access towers, sometimes also known as scaffold towers. As such, it advances safety, standards and best practice across a wide range of sectors. The association works in South Africa in collaboration with the Institute for Work at Height (IWH), trade and professional bodies, as well as with industry regulators and key decision makers.

PASMA provides the industry standard training scheme, for mobile access towers, for the proficiency and competence required for safe assembly, use, dismantling, moving and inspection. In addition, the association is a single, central source of information on all aspects of mobile access towers.

The Association is an important contributor to the development and enhancement of standards governing the construction, use, inspection and maintenance of mobile access towers internationally. It works closely with the HSE as well as SABS and SANS in South Africa. PASMA plays a major part in promoting mobile access towers for temporary work at height, not just in construction and building maintenance, but also in facilities management, the local government sector and retail. Taking part in conferences, seminars and workshops is an essential part of the Association's educational remit.

"The Association is committed to delivering world-class support to all corners of the industry. Providing practical skills and knowledge are central to meeting this objective," says Peter Bennett, PASMA's MD.

David Bass, PASMA's South Africa representative, says: "Our participation in A-OSH Expo 2015 means that PASMA is putting real emphasis on promoting prefabricated access towers as well as working safely at height in South Africa. We will take this opportunity to showcase local manufacturers, suppliers and training establishments along with our industry partners whilst promoting safe working at height". He added, "This year we have combined presentations and demonstrations that for IoSM and SAIOSH members can add up to CPD Points".

IoSM and SAIOSH members must record their details for each session they attend. One (1) CPD point will be awarded for each three sessions up to a maximum of 2 points over the three days of the Expo.

Continued from page 20

dards of workmanship through detailed regulation and development.

A chamber meeting was held on 25 March 2015 where all issues and objectives were outlined and discussed.

We are in the process of establishing Non NQF and NQF training courses.

- Non NQF Basic Scaffolder Skills Training (up to 8m high)
- NQF Scaffolder Training (Unit Standard 262345)
- Advanced Scaffolder Training (Unit Standard 116691)
- Scaffold Supervisor Training (Unit Standard 263224)

We have three new professional designations which have been submitted to SAQA:

- Scaffolder
- · Advanced Scaffolder
- · Scaffold Supervisor

Details of the outcomes/range etc are available on the website www.ifwh.co.za





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SCANIA 'CONSTRUCTION TRUCK SOLUTIONS' contribute to maximum uptime By Pierre Sanson

G ustomers today chase profitability by reducing operating costs, regardless of whether their business is transporting passengers or goods. Fluctuations in the price of fuel, one of the largest cost factors in transport, have necessitated a shift towards looking at transport in a more sustainable light. Sustainable transport is profitable transport and, based on this conviction, Scania continuously introduces new technology and services to ensure that it remains at the forefront of providing customer benefits.

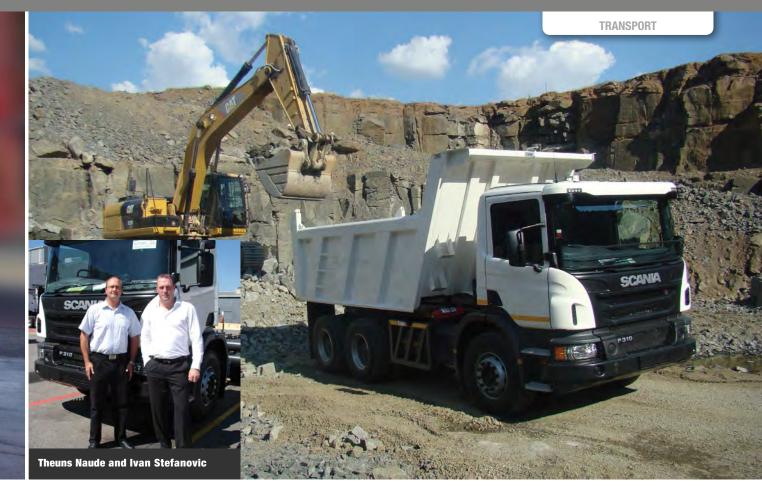
Over a period of time Scania has developed products, services and systems that contribute to its customer's total financial position. Construction vehicles are no exception to this concept as the industry has come to rely on Scania trucks as robust, durable and ingenious solutions guaranteed to provide uptime, productivity and fuel efficiency.

In an exclusive interview with Capital Equipment News, the Directors and Management of Scania South Africa revealed their new range of construction trucks, which is being introduced into the market and which will allow the company to further increase its footprint with additional transport solutions. "Scania works closely with its customers to ensure that the right combination of chassis, wheel configuration, powertrain and cab are matched to the job requirement. Not only does this allow Scania to provide customers with the right specifications in a cost effective way but a vehicle with the right specification is more efficient and has less of an impact on the environment," says Ivan Stefanovic, Sales Director of Scania South Africa.

In the Scania construction truck range, there are several wheelbase options available for each axle configuration, which equates to a larger choice of bodies than can be accommodated. "As part of the solutions offered by Scania, chassis can be supplied with standard type bodies that are immediately available from our appointed bodybuilders. This allows customers the opportunity to reduce delivery times by not having to wait for bodies that sometimes have a long lead time," explains Stefanovic. "Scania has appointed selected bodybuilders, all approved to meet the requirements of the Scania factory and, as a result, service on the bodies forms part of the service package of the vehicle. When a vehicle goes in for service it is a one-stop shop for the complete vehicle," adds Stefanovic

Theuns Naude, Key Accounts Manager-Construction, explains some of the technical aspects of the vehicles, "The new Scania construction trucks have special features to ensure their optimum performance in the field and to provide the necessary driver comfort and safety. The frontal styling incorporates a heavy duty grill with protective mesh, a solid steel bumper which includes a 35 tonne tow pin tucked in behind the number plate, and a 25 degree approach angle which is a result of the high chassis design. The choice of rear bogie ranging from 19-32 tonne, depending on the application, which incorporates high placed brake chambers and the combination of hub reduction and disc/drum brakes, ensures the new construction truck is well equipped for off-road conditions." Naude expounds on the features of the new cab adding, "Cabs too are a feature of the Scania construction range with three variants for the P, G and R series models, all available in different heights and lengths. The G series cabs are particularly well suited to construction operations as they offer easy entry and exit, good close range visibility, low engine tunnel and plenty of storage space."

The choice of engines in Euro III configuration ranges from the 5 cylinder 9 litre,



250 hp (184 kW) to the V8, 16 litre. 580 hp (426 kW) combined with flexible gearbox options to suit the application requirements. Naude explains that Scania offers the ultimate in transmissions, "The Opticruise feature is an optimum requirement for the construction vehicle application, especially for off-road conditions, with two pedal controls, 8+1-speed heavy duty gearbox with crawler gear and powerful Scania Retarder producing 3500 Nm or 4500 Nm of retardation depending on the application. The Scania Retarder is tailored for off-road conditions whilst the Scania Opticruise has performance modes for off-road driving. Also available on selected models is the classic manual transmission suitable for municipal, urban tipper and mixer applications."

With construction totally in mind, Scania's new range of trucks covers the full spectrum of the industry from tippers for urban transport of construction materials to heavy duty units where conditions are extra tough and heavier loads are required to be moved on-road and off-road. Hook-lift and skip loader applications require the capabilities of abnormal forces in loading so the flexibility of the chassis construction ensures a more efficient performance from the vehicle. Concrete mixers, concrete pumps, crane applications and timber transport fall well into the scope of the durable and robust Scania heritage. Scania South Africa has embarked on a full scale programme to further its objectives in the construction industry and with the introduction of its range of vehicles has ensured that the coverage and technical competence of its sales and service network is fully geared to bring the concept of its construction trucks to the fore. "This has been as the result of a thorough analysis of the market with numerous customer interviews to establish customer demand," says Stefanovic.

Uptime is the main focus of the Scania construction truck package and the full spectrum has been offered in its management solution to the industry in order to effect the highest possible efficiency from each customer's vehicle fleet. Starting with financing options, solutions include vehicle leasing with maintenance, insurance and personalised packages based on account financial and operational credentials.

Scania has one of the tightest knit and most proficient service networks in South Africa and neighbouring territories. The network is continuously being upgraded to include the new regions in which Scania customers operate. Workshop standards have been revised and improved with commitment to staff training. Workshop services are closely linked to roadside assistance and parts availability to provide the service flow that contributes to maximum uptime.

Another feature is the Scania Fleet Manage-

ment System, fitted as standard and free of charge to all vehicles. Customers have the choice of activating the system to make use of the data in order to achieve the highest possible efficiency from their vehicles. With this system, operators get a weekly report sent to their e-mail addresses. The report includes a PDF document that compiles the basic operational data of the fleet, such as idling, speeding, heavy braking and fuel consumption. An additional package, the Control Package, can be added to the standard package to give operators the facilities to set parameters for each driver and vehicle and monitor the progress, live, at any given time.

Driver training and education are a long standing tradition at Scania and the training of construction truck drivers forms part of the solutions offered by the company to its clients. Driver trainers are deployed to the work site to provide 'on-the-job' training without disrupting the normal production day. The effectiveness of this training ensures that all the functions of the vehicle are being utilised thus providing immediate tuition to the driver.

When it comes to transport solutions, Scania has taken a critical step forward with the introduction of its Construction Trucks Solutions, aimed at securing its position in the market and contributing to its customers' total financial position.



TRAILER MANUFACTURERS innovate to keep ahead

By Pierre Sanson

D emand for trailers is driven mainly by availability of capital and demographics. The profitability of individual manufacturing companies depends on the uniqueness of the product, design and effective marketing. Large companies have the advantage of brand recognition but smaller companies can compete as effectively with an original product design and by providing service levels that can be individually tailored.

Although larger companies may have more than one production facility, most manufacturers have a single facility that includes metal fabrication, welding, CMC machines, bending brakes and paint facilities under one roof. This can make for better control of the manufacturing process.

Some manufacturers hold patents for components and designs that produce better results and give them the edge. Product innovation technology development has been the driving force in the trailer business especially in the electronic safety systems built into trailers today. To differentiate their products, manufacturers have added electronic features, especially in the braking, to offer operators better control of their rigs.

Another innovation which has crept into trailer design is the aero-kit which, when fitted to a trailer, helps improve not only the stability but in combination with the truck, allows an improvement in the fuel consumption of the rig. Aerodynamic technologies include gar fairings that reduce turbulence between tractor and trailer, side skirts that minimise wind under the trailer and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.

Using fairings in combination with one another offers the potential to provide an estimated 5% fuel saving when used in conjunction with an aerodynamic truck tractor.

The stringent laws that are coming into effect regarding safety and environmental conformity have also impacted on the trailer business and, combined with the current economic climate, have forced manufacturers to introduce some innovations to ensure their products remain high in the value chain.

Local trailer manufacturers have had to cope with many challenges to keep their respective businesses on a profitable path and the influx of trailer components from the Far East has impacted on the sales volumes. This impact has also been felt by the steel merchants whose supply chains have been eroded as a result. One of the innovations though, is the initiative of a steel supply company to provide components to refurbish existing trailers The stringent laws that are coming into effect regarding safety and environmental conformity have also impacted on the trailer business and, combined with the current economic climate, have forced manufacturers to introduce some innovations to ensure their products remain high in the value chain.

as a means of overcoming the onslaught of cheaper products from the East and maintaining a market for their steel.

The trailer industry is a vital cog in the transport wheel and has been a stalwart in the ever-changing dynamics of the tough market in which it operates. Changes to meet the challenges have meant providing the right solutions at the right time in order to ensure the survival of many a manufacturer.

GOLDHOFER TRANSPORT OPERATION

from Turkey to Iraq

A n impressive transportation milestone was set by the Turkish heavy haulage specialist Botros-Yigit-Nata (BYN) using innovative equipment supplied by Goldhofer Aktiengesellschaft. To move a 247 t refinery boiler with a length of almost 62 m (and a diameter of 3.5 m) from the port in Iskenderun to a refinery in the oil-rich city of Erbil (Iraq), BYN employed a combination of two Goldhofer ten-axle THP/SL heavy-duty modules.

The refinery boiler was first shipped from Jebel Ali (United Emirates) to the Turkish port of Iskenderun. From there, BYN's specialists took the huge load by road over a distance of 1 150 km to its final destination in Erbil. That was the first time a load of this size had ever been transported to Iraq via Turkey in a single operation. The journey from Iskenderun to Erbil lasted a total of twenty days.

"Everything went smoothly. We spent six months planning the project and performing



a detailed inspection of the roads down to the very last bend. Once we had the permits for the journey, it was simply a question of the reliability of our Goldhofer modules. And they did not let us down once," says BYN general manager Aydin Fatah.

At a gross combination length of almost 70 m, the Goldhofer axle lines showed what they are capable of. With a suspension stroke of \pm 300 mm and a high bending moment, they are the ideal solution for transporting

long loads in off-road conditions. With a load height of 5.25 m, the boiler transportation operation was a real eye-catcher on the journey across Turkey.

"It's gratifying to see customers place their trust in our technology for the really challenging missions and break new ground in the process. We provide the ideal basis for handling landmark projects," says Stefan Fuchs, CEO of Goldhofer Aktiengesellschaft. ۞



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SKYJACK UNVEILS new telescopic boom at Intermat 2015

Linamar Corporation's (TSX-LNR) Skyjack Division unveiled the SJ86 T telescopic boom, as well as a charitable campaign to mark the company's 30th business anniversary, at Intermat, the triennial exhibition for the construction and material industries, held in Paris, France.

"When our customers expressed the need for a boom with higher reach and greater capacity, we listened," said Skyjack President Brad Boehler. "It's an exciting time – we're very pleased to be launching a new telescopic product, the SJ86 T, which will give Skyjack customers many new levels of opportunity."

The new SJ86 T telescopic boom with jib helps meet increasing customer demand in the rental industry with its higher capacity and greater reach. The latest model boasts a working height of 28.21 m and horizontal outreach of 23.42 m. The jib has a range of +65 degrees to -60 degrees and features an optimised design that improve its strength.

Skyjack is using Intermat to kick off celebrations in Europe surrounding the company's 30th business anniversary. "As one of the world's leading suppliers of access equipment, we are grateful that our customers, communities and the industry have supported us consistently throughout the years, allowing us to get where we are today," Boehler said. "As such, we want to use Skyjack's 30th anniversary to give some- thing back. And the best way we could think to do this is via the products and the customers that mean so much to us."

In addition to revealing its new telescopic boom, Skyjack also showcased two vertical mast platforms – the SJ12 and the SJ16. These popular models both boast a lightweight design that provides operators with low ground pressure and floor loading, a zero-degree inside turning radius and a traversing platform for added reach.

The world's best-selling electric scissor lift, the SJIII 3219, was also on display at the show – it has a working height of 7.79 m, 30% gradeability and an overall capacity of 227 kg. The machines in this class are all able to work in the tightest of spaces, making them the world's top-selling aerial work platforms. Exhibiting alongside the SJIII 3219 was the SJIII 3226; this electric scissor lift is extremely quiet, produces zero emissions and boasts robust and reliable design features that offer customers an easy to service, low maintenance, compact and versatile package.

From its articulating boom line, Skyjack showed the range-topping SJ63 AJ; with a unique open knuckle riser design for improved visibility and dual lifting cylinders that provide superior comfort and stability, Skyjack's SJ63 AJ features a working height of 21.38 m and a 227 kg platform capacity.

Finally, Skyjack also exhibited the SJ6832 RTE from its rough-terrain scissor lift line, the only machine in its category to offer a 45 % gradeability and four-wheel drive as standard. •



TRUCK AND TRAILER aerodynamics

By Pierre Sanson

The changes in the design of trucks has been an ongoing thing for the past 40 years and the extensive research by engineers and scientists continues to explore myriad methods to reduce drag on these kings of the road.

The larger a vehicle is and the faster it moves the more air it pushes ahead. For a large truck, this can mean a particularly large surface moving a large quantity of air at a high velocity - its blunt face acting like a fast moving bulldozer, creating a zone of high pressure. The displaced air must go somewhere, spilling around the cab into swirling vortices. The air travelling along the side moves unevenly, adhering and breaking away and sometimes dissipating into the surrounding air. At the end of the cab or trailer the opposite effect of the high pressure zone at the front, develops: the airflow is confronted with an abrupt turn that it cannot negotiate and a low pressure zone develops.

The high pressure up front, the turbid air alongside and under the vehicle, and the low pressure at the back, all combine to generate considerable aerodynamic drag. A study published in Automotive Engineering, found that a tractor trailer unit moving at 55 mph, displaced as much as 18 tons of air for every mile travelled. In such cases, roughly half of the truck's horsepower is needed just to overcome aerodynamic drag while operating at highway speed. Likewise the gap between the cab and the trailer can create a significant amount of drag as air swirls in the space between. Two conventional methods designed to address these issues have proved to be problematic. Adding side extenders (To decrease the exposed gap) is expensive and may impede the manoeuvrability; moving the fifth wheel forwards to shorten the gap places more weight on the steering axle which is legally regulated and could lead to abnormal wear on the axle.

Smoothing the airflow is therefore the aim and ultimately improving the fuel efficiency without compromising design utility. Going about reducing drag coefficients have led to manufacturers into building a certain amount of aerodynamics into their vehicles such as fairings which have become standard equipment in some instances.

Aerodynamics for trailers on the other hand have been largely ignored until recently and represent the greatest area for potential improvements left on the tractor trailer combination. The drag caused by the trailer's box shape is a severe detriment to the vehicle's overall wind resistance. NASA studies have proven that back in the 1980's that streamlining the front, rear and undercarriage of a rectangular vehicle can reduce fuel wasting drag by over 30%. The key, therefore to achieving these savings has been recent work to identify the most important and practical areas to realise these gains.

The area underneath a trailer represents the greatest opportunity for significant and practical semi-trailer aerodynamics improvement. This statement is not only based on the pioneering work that has been done in this area but is supported by no less than 18 skirting products that have been able to meet the 4 % minimum SAE J1321 type II testing requirement of the verified aerodynamic technologies list in the USA..Trailer skirting technology is very efficient in redirecting airflow and crosswinds around the drag inducing rear wheel, axle components and cross members to provide improved laminar air flow around the trailer.

Against this background of globally increasing demands of reducing energy consumption and having expounded the shortcomings of truck and tractor design in the area of aerodynamics, one possible answer has loomed large on the horizon.

The concept truck and trailer may be on the drawing boards of many manufacturers but as yet, not quite around the corner but manufacturers are certainly paying attention to the current conventional models and with the aid of the right fairings and making sure all the gaps are closed, they are well on the way to reducing the drag coefficient that contributes to the eventual fuel savings.



KNAPEN TRAILERS supplies first 4-axle moving-floor trailer

he 4-axle trailer was supplied by Knapen Trailers from The Netherlands to Transportbedrijf A. Krol. Knapen specialises in everything to do with moving-floor trailers and goes a lot further than just standard trailers. With most suppliers, Variant X or Model Y is the starting point. At Knapen Trailers it is the customer's requirements that are the starting point. Only then do they look at a vehicle and they do not shy away from special construction. The 4-axle trailer is a great example of this. The requirements were clear: a solution for the transport of waste and compost with the greatest possible loading capacity. Another major requirement was that there should be no fines for overloaded axles as a result of poor weight distribution. People often choose a 3-axle truck with a 3-axle trailer. In order to use the additional axle

under the truck properly, the trailer has to be loaded as much as possible at the front.

Krol choose a 2-axle truck with a 4-axle trailer. The additional axle under the trailer is financially more attractive because of the longer service life. Moreover, the axles are better distributed along the length of the load. The fourth axle under the Krol trailer is a steerable axle as well as a lift axle. The 4-axle trailer therefore steers forwards and backwards like a 3-axle trailer. In addition. the first axle is also designed as a lift axle. Knapen Trailers has been supplying 4-axle trailers to Scandinavia for years. As an extra option, Krol opted for a remote control for the moving floor. From now on, this will be a unique Knapen Trailers version that can be used to control not only the moving floor but also the lift axle and the lights.









BOBCAT T870B COMPACT TRACK LOADER meets bush clearing requirements

ff Bobcat has a wide range of quality machines and tailor-made attachments that are ideally suited to the forestry industry," says Elmar Minderon, Sales Representative at Bobcat Equipment SA. "We supplied the T870B compact loader with two attachments – a forestry cutter and a tree transplanter – to Ihlathi approximately eight months ago."

With its enhanced hydraulic, lifting and cooling capabilities combined with unbeatable durability, the Bobcat compact loader delivers efficient and reliable performance. Using the tree transplanter attachment, the operator can conveniently dig up, transplant and package trees without having to leave the cab, which Minderon points out saves a lot of time for the end user and keeps productivity on the up and up. "The forestry cutter takes care of shrubbery in no time," adds Minderon.

Ihlathi owner, Emile Nel, reports extreme satisfaction with his Bobcat equipment. "Nothing beats Bobcat when it comes to reliability and service," says Nel. "The machine offers a service and durability that no other company could provide. We are very happy with the machine's operation;



it is a straightforward and uncomplicated machine and here I refer in particular to engine placement, air intake and radiator."

Nel was also impressed with the standard of operator training offered by Bobcat which he describes as professional and well-presented, "putting the operator at ease in no time."

Discussing maintenance, Nel affirms that they opted for Bobcat's Full Maintenance Lease. "It is ideal for any start up business since any unwanted surprises are eliminated. Because Bobcat is responsible for maintenance, we can rest assured that any problems that may arise will be sorted by Bobcat. This means that we can be up and running in no time and our productivity is not compromised."

In closing, Nel says that Bobcat's professional and rapid back up service combined with the high quality and reliability of the machine translate to low cost of operation and a very good return on investment.





SIX NOOTEBOOM SUPER WING CARRIERS for Laso Transportes SA

ASO Transportes SA from Malveira in Portugal has strengthened their fleet for the transport of windmills with no less than 6 Super Wing Carriers for the transport of ultra-long rotor blades, as well as a significant number of extendible 4-axle semi low-loaders. All the SWC Super Wing Carriers have been delivered and are in full swing.

In the last 6 months LASO has made an investment of 9 million Euros on 70 Nooteboom trailers and new trucks, amongst them the new Mercedes SLT to 250 Tons.

LASO is by far the largest operator in the windmill transport sector on the Iberian Peninsula and with their extremely modern fleet they are one of the major players in Europe. LASO has every semi-trailer that you can think of at their disposal, including the Mega Windmill Transporter, which enables them to carry out any transport related to the wind turbine industry. With the Nooteboom semi-trailers the fleet is equipped in a way that is so multi-functional and universal that components from all windmill producers' makes can be transported. Not just within Europe but far beyond.

Paulo Franco, managing director of LASO Transportes SA: 'For us the choice for Nooteboom SWC Super Wing Carrier was clear. It is simply the best transport solution for the transport of long rotor blades. To us the outstanding manoeuvrability, flexibility and stability are invaluable, enabling us to carry out the transports in the most efficient way. In spite of the huge dimensions of the wings, with the SWC we are able to deliver the wing to any unloading site. The fact that this semi-trailer is extremely easy to operate makes it a firm favourite with our drivers too.' LASO Transportes SA, with headquarters in Malveira, Portugal, is one of the major companies for special transport in Europe with a very large specialisation in windmill transport. The transport fleet of LASO contains over 850 units. As far as the tractors are concerned. LASO has by now more than 200 Nooteboom semi-trailers, varying from simple 3-axle semi low-loaders to the most advanced Super Wing Carriers and Mega Windmill Transporters. Nooteboom, as Royal Warrant Holder, has had strong ties with LASO Transportes S.A. for many years. The Nooteboom programme and organisation compliment the mission of LASO perfectly. Their mission statement: 'To be the best service provider in the area of road transport of goods, both inside and outside Portugal, and to be recognized by our high performance, in a continuous search for excellence'.

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POWERSTAR REINFORCES ITS POSITION in the local market

The Powerstar brand has proven itself to have a definite value in the South African market. The simplicity of its design and construction has provided a platform for the brand to build its sphere of activity, not only in South Africa but the rest of Africa as well.

Since its local introduction, the Powerstar brand has built up somewhat of a track record amongst certain operators for its overall performance in the field. This track record is based on the fact that it is less sophisticated, but extremely rugged and economical to operate in short and medium haul operations.

The simplicity of the brand cannot be understated as the vehicles are designed for both on and off-road applications and are specced to meet the rigorous demands of the South African market, cost effectively. Although the engines are technologically advanced, they steer clear of sophisticated electronics which could cause complications in the field, creating unnecessary expenses for the owners.

It is well accepted in the market that mainstream operators are conservative when it comes to purchasing new brands irrespective of price, until ample evidence of their reliability under local conditions is obtained. Furthermore, these vehicles must also be supported by a guaranteed level of service and sales support.

Already some Powerstar operators have more than proven their trucks' capabilities. Some of these vehicles have completed more than one million kilometres. Other operators, especially in the mining industry, are so happy with their Powerstars that they have placed repeat orders.

Having now turned the corner and undergone recent restructuring, the company is now under the umbrella of Everstar Industries (Pty) Ltd which is also the distributor of Shantui Construction Equipment. This move means that the company is well poised to grow their business in South Africa with the two brands having definite synergy.

The appointment of Rodney Selesnick as the Senior Sales Manager for Powerstar, has seen a significant change in the management structure. Selesnick has more than fifteen years experience in the automotive industry and brings with him skills in sales parts and service and has a definite brief to grow the business and take it to the next level.

"Initially, Powerstar's winning ways will be additionally supported by new developments in the appointment of dealers in the most strategic areas of the country. Some dealers in Namibia and Zimbabwe have been on stream for some time whilst newer dealers in Ermelo, East London are busy creating infrastructure to enable them to effectively manage their market segments," said Selesnick.

"The product has seen a remarkable growth in the last few years with volumes increasing year on year and it is my intention to continue with the growth pattern with the introduction of new models like the Powerland," he said further.

Selesnick was upbeat with his role at Powerstar and concluded by saying, "The South African market with its diverse business cultures has a definite place for vehicles sourced from eastern manufacturers so it is therefore our intention to remain in the forefront of this market segment by offering products that will gain the reputation of providing affordable transport solutions with low lifecycle costs."

The shareholders of Powerstar, with their extensive experience, their affiliations and investments with more than 40 countries throughout the world in the areas of commercial vehicles, have made a continued commitment to design and manufacture trucks suitable for the African continent.



UNIMOG new benchmark in off-road perfection

The toughest sections of the off-road course south of Berlin really highlights the familiar strengths of the legendary short-nosed Unimog U4023 and U5023: their outstanding handling characteristics in difficult terrain. In the new generation, these have been improved even further, thanks to the altered position of the engine.

In 2013, Mercedes-Benz introduced diesel engines for the entire commercial vehicle range which conformed to the Euro VI emissions standard well ahead of the norm coming into enforcement. At the same time, the extreme off-road version of the Unimog also underwent a complete redevelopment to feature a mid-engine design. The engine has been shifted a metre to the rear, which helps not only accommodate the assemblies that Euro VI made necessary, but also enables direct power take-off from the engine. This means that devices can work independently of the vehicle being driven. Transmission power take-off also remains possible.

The Euro VI diesel engine is the heart of the new mid-engine concept. The engine used here is the new high-torque OM 934 BlueTec 6 engine; a four-cylinder unit with an output of 170 kW (231 hp) and a displacement of 5.1 I. Exceptionally efficient, the assembly provides a higher torque of 900 Nm, which is available consistently over the entirety of the principal driving range from 1200 rpm to 1600 rpm. The technical top speed of 90 km/h is quite adequate for longer journeys and motorway driving.

Despite the added engineering complexity required to meet the Euro VI criteria, the new all-terrain Unimog combines low fuel consumption with reduced emissions, great reliability, a long life expectancy and long maintenance intervals. Alongside cooled exhaust gas recirculation within the engine, emission control features a successively switched system comprising a closed particulate filter. AdBlue injection and an SCR catalytic converter. A particularly positive aspect: for the new Unimog with Euro VI engines, fuel consumption has been reduced by up to three percent. This means that the engines, which already produce up to 90 percent less emissions and particulate matter than the previous models, are even more environmentally friendly.

The transmission of the Unimog has been optimised and uprated, resulting in shorter shift times whilst also extending its service life. The transmission is operated via a steering-column lever, which is also used to control the electronic quick reverse (EQR) function. As in the previous version, eight forward and six reverse gears are available and there is also an optional offroad group for off-road use in the speed range between 2.5 and 35 km/h.

Safety has also been improved: the new engine brake is a double-speed decompression brake which, in the case of the OM 934, develops braking power of up to 180 kW. Each cylinder in the engine has its own engine brake unit. The high braking efficiency considerably reduces wear and tear on the wheel brake systems, thus greatly improving the overall economy. Offroad ABS comes as standard.

The great advantage of the Unimog extreme off-roader - its outstanding handling in heavy terrain - remains unimpaired. Indeed, in some respects its strengths have been further extended. The fact that the frame and the tubular cross-member of the Unimog is welded guarantees its exceptional robustness and torsional flexibility of up to 600 mm when driving off-road. The axle articulation of up to 30 degrees is made possible by the use of torgue tube technology in conjunction with coil springs, whereby the torque tube and the torque ball are used to connect the axles to the transmission. Portal axles, the low centre of gravity and extremely good angles of approach and departure (44 degrees at the front, 51 degrees at the rear), as well as the ramp angle (34 degrees) and its slope-climbing ability (45 degrees) all add up to make the Unimog extreme off-roader a true off-road professional. In addition to this there is the maximum fording depth of 1.20 m and a lateral inclination angle of up to 38 degrees. Driving in extreme situations with the all-wheel drive system engaged is supported by the selectable differential locks and the tyre pressure control system.

All this explains why the Unimog extreme off-roader enjoys such an excellent reputation around the world. Off-road deployment in extreme conditions is the order of the day for these vehicles. For clearing heavy snow, fighting forest fires, disaster relief, crane operations, pipeline construction, on expeditions, on rescue and recovery missions, and last but not least, in passenger transport - the natural habitat of the U 4023 and U 5023 begins where roads give way to rough tracks and open country. An array of equipment developed by specialist equipment and body manufacturers means that the Unimog can master difficult tasks, even in tough terrain. 📀



Symbolic cutting of the ribbon at the opening of Hino Isando. Those in the photo (from left) are: Calvyn Hamman, Senior Vice President Sales and Marketing, TSAM; Patrick Arthur, Dealer Principal of Hino Isando; Ernie Trautmann, Vice President of Hino SA; Junsuke Ando, General Manager Europe and Africa Division, Hino Motors Limited and Tetsuji Hitokata, Managing Director of Hino Motors Europe.

SUPER GROUP open flagship Hino dealership

Super Group, a leading transport logistics and mobility group which was founded in 1986 and is listed on the Johannesburg Securities Exchange, has opened a flagship Hino dealership in lsando, well-situated in the industrial and commercial hub of Gauteng.

Hino Isando is the 22nd exclusive dealership in the Hino network of 64 dealers and the cost of the development – excluding the land – was in excess of R25-million.

The dealership has been operating since last November, but the official opening only took place on 21 April 2015. However, the importance of the official opening was such that it was attended by Junsuke Ando, the General Manager of Hino Motors' Africa and Europe Division. He said that although the majority of Hino sales take place in Japan and South-East Asia the continent of Africa was a region showing rapid growth with high potential.

Junsuke added: "Hino recognises that there will be no Hino global success without Hino success here in South Africa. For this reason we are delighted that a high profile public company such as the Super Group has made a substantial investment in a new Hino dealership."

"We are very proud of the manner in which

the Hino brand is flourishing in the ultra-competitive South African truck market and this latest investment in a new dealership is another sign of confidence in a brand that has been in South Africa since 1965 and remains the market leader in Japan," said Calvyn Hamman, the Senior Vice President, Sales and Marketing of Toyota SA Motors, of which Hino SA forms a part.

"We are very pleased with the commitment from Super Group through Graeme Watson, the Chief Executive Officer, and Alistair Rawstorne, the Chief Operating Officer, and really appreciate the strategy and planning put into place by Roelf Strydom, Franchise Executive for the Toyota Group within Super Group and Patrick Arthur, the Dealer Principal, in bringing this new dealership to life.

"This is a further example of confidence in the Hino brand. Last year we had the renaming of Hino Pretoria North to Hino Tshwane and relocation to spacious new premises in Pretoria West as well as the appointment of a Hino dealer in Cradock, which was an open point we were happy to fill. In addition, most of our dealers have either rebuilt or substantially refurbished their facilities over the past three years so we believe we are now well set for future growth," added Hamman. Hino Isando is currently staffed by 17 people, but this number is planned to grow to 35 as the dealership gains sales and service momentum. The facility has six double work spaces making 12 bays and there is space for another six double bays for future development. There is an extensive parts stock on site and this is replenished at least twice a day.

The workshop facility is equipped to undertake Certificate of Fitness (COF) testing but still awaiting full accreditation to conduct COF inspections. It also has an express pit lane to minimise downtime for urgent work when required.

The facility is already eco-friendly in that all the lights are movement-sensor-controlled and plans are in place to recycle rain water for the wash bay.

"Hino South Africa is fully committed to supporting Hino Isando to ensure its success, using Hino Total Support as one of our key strategies, because the establishment of a strong dealer network is a critical part of our 2020 strategy to achieve a market leadership position in South Africa," concluded Senior Vice President Calvyn Hamman.



NAMIBIA BREWERIES LIMITED (NBL) opts for Kipor

N amibia Breweries, brewers of the famous Windhoek beer, takes no chances in its impeccable, clockwork-like operations, so its decision to use specially designed Kipor forklifts is a feather in the cap of this fast-growing brand of warehouse materials handling equipment, which is distributed in Southern Africa by Smith Power Equipment.

In its latest order, Namibia Breweries took delivery of three Kipor KDF25 - 2.5 Ton Diesel - and three KD35 - 3.5 ton Diesel - forklifts, which are being used to load trucks with product from the warehouse. Sister company, Namibia Dairies (also owned by the Olthaver & List group) received three Kipor KDF25s.

The Breweries' Kipor KD35s were custom designed with double fork attachments for extra productivity and double front wheels for greater stability at height. The double front rims were designed and precisely machined using an ingenious and innovative technique by J&H Refurbishing. "The extended 'dish' had to be machined to fit exactly into the existing rim to help carry the extra weight and stress on the studs," says J&H Refurbishing's Joe Liebenberg.

"We are pleased with the machines," says Namibia Breweries operations manager Gerhard Tredoux. "They are efficient and have thus far proved to be reliable. I am also very pleased with the service of the Lubbe Group which has left no stone unturned to sort out any teething problems we have had," he says.

The Lubbe Group is the highly successful Smith Power Equipment dealer in Namibia.

Etienne Lubbe says that one of the teething problems was that the machines tended to overheat at peak production in the warmer parts of the country - like in Oshakati. "In our experience all forklifts overheat in these conditions and we know for a fact that our main competing forklift overheated all the time and the problem was not resolved for years. The difference is that we sorted out the problem in a month by replacing the standard engine fan with a much larger fan, with fins of a more aggressive gradient than the original fan," he says.

He adds that another major difference between the Kipor forklifts and those of the opposition at the breweries is that the Kipors have 4-cylinder engines (as opposed to 3-cylinders). This provides more power, making our unit more efficient for faster loading. With the extra power it is possible to lift the forks en-route to the truck where as the 3-cylinder forklifts must drive right up to the truck, stop and only then lift the forks." Lubbe says they have an excellent relationship with Namibia Breweries. "It's easy for them to work with us. We have an exceptional company footprint in Namibia – six branches and 14 service centres throughout the country – through which we offer them excellent after-sales service, a fully stocked parts warehouse, workshops on demand with on-the-road service vehicles," he says.

He adds that Namibia Breweries is an efficient operation. "They always take the bottom line into account without affecting their high standard of operation. With the Lubbe Group in Namibia they found that, together with a well-priced and quality product, they could up their production and lower their capital outlay as well as their running costs."

The Kipor Diesel series has an advanced, streamlined design, with solid sturdy frame, an all-new suspended and movable seat providing comfort for the operator. A hoist cylinder at the rear of mast makes the operation view wider, while the rear lamps are installed on the top cover, which ensures safety and, for even greater productivity, the tilt angle of the steering column can be adjusted freely.



CONSISTENT POLICIES AND CONTINUOUS TESTING are key to curbing alcohol abuse in the workplace

By Rhys Evans, Director of ALCO-Safe



he festive season has been over for some time already, but this is no reason for organisations to reduce their efforts to curb alcohol consumption in the workplace. The reality is that South Africa has a drinking culture, and alcohol abuse is a problem throughout the year and not just over the December period. Applying policies and testing solely during this time is simply not the most effective method, nor is it compliant with health and safety regulations. In 2015 organisations should look to implementing alcohol testing policies that are consistently enforced throughout the year, and not selectively during the festive season, for more effective control and improved health and safety compliance.

For many organisations, especially transportation and logistics companies, the festive season is particularly challenging with regard to ensuring drivers do not operate under the influence of alcohol. The holiday period typically sees an increase in alcohol consumption as well as an increase in traffic accidents and road deaths. In order to minimise the dangers of drivers operating under the influence, these companies often enforce random alcohol testing. While this is an effective way to address the issue in the short-term, in the long-term it is generally ineffective at controlling the use of alcohol in the workplace. Aside from creating resentment from employees and extra stress for management, selectively enforcing alcohol testing only during certain times





"Alcohol use in the workplace and on the roads is a problem all year round, and not only over the festive season."

By Rhys Evans

of the year does nothing to create the desired culture of responsibility and accountability with regard to alcohol consumption. Achieving this requires a combination of effective policies and procedures, education to help change culture, and quality testing equipment that can be used to enforce policies consistently throughout the year.

Developing effective policies and procedures and importantly, enforcing these policies and procedures, is essential to ensure that random testing takes place on a regular basis. In addition, awareness of policies needs to be created throughout the organisation, not only around the existence of policies and the process followed but also the need for these policies in improving safety for all concerned. Further to this, education is also an essential foundation in minimising alcohol consumption in the workplace. Often, employees are not aware of the harmful consequences of alcohol usage on their health, the safety of the workplace, and in the case of transport and logistics, of other road users. Education can help employees to understand the reasons for alcohol testing, how to drink more responsibly, the impact of alcohol on their health, how breathalysers work and so on. It is also essential to help ease the transition to a culture of continuous testing and enforcement of policies throughout the year.

Supporting policies and procedures, organisations should also implement appropriate high-quality alcohol testing equipment. A variety of different breathalyser solutions are available to meet the needs of workplaces across industries, and are essential in enforcing policies and ensuring compliance with health and safety regulations. Purchasing leading solutions from a reputable supplier will ensure that organisations continue to benefit from their breathalyser investment throughout the year and for many years to come.

Alcohol use in the workplace and on the roads is a problem all year round, and not only over the festive season. Random testing and consistently enforced policies throughout the year are essential in creating a culture that alcohol abuse is never acceptable at work. This not only dramatically improves health and safety, it also prevents additional stress during the holiday period, as alcohol testing and policies are no longer an issue that is only applicable at a certain time of year. High-quality equipment, effective policies and education and consistent enforcement will enable businesses, particularly those in the transport sector, to better control the number of workers operating under the influence, with positive knock on benefits all round. O





ATLAS COPCO LT RAMMER RECEIVES RENOWNED IF DESIGN AWARD.

The international iF Product Design Award 2015 goes to the Atlas Copco LT 6005 Rammer series. For over 60 years, the iF Design Award has been recognized all over the world as a label of design excellence, identifying outstanding achievements in design.

"Thorough research and a tight cooperation between R&D and our Industrial Design Team has been success factors in the development of the new LT Rammers," says Fredrik Hägglund, Manager Technical Development Light Compaction Equipment. "With a strong user focus, we managed to increase the balance of the machine, making it extremely easy to handle."

The new Atlas Copco LT Rammers are designed for compaction work in confined areas. The product is a result of research and customer input. One of the major improvements is the slimmer design that facilitates handling. For example the visibility is considerably enhanced. In order to get full visibility of the foot, the operator needs to lean 50 % less to the side. The user grip area is increased by 300 % for better control. Improved safety, reduced weight, high compaction efficiency and ergonomics are other user-friendly features that the jury found appealing.

"Easy service is a high priority for our customers. With the new design we have managed to meet those high expectations. And even though receiving the iF Product Design Award was an honour, the real joy lays in the knowledge that we can offer our customers a great product." concludes Fredrik Hägglund.

INTEGRATED LOGISTICS COMPANY BUYS GROVE CRANES IN KUWAIT



Mega moves are a daily exercise for the largest crane rental company in Kuwait, Integrated Logistics Company (ILC), which relies on a fleet of 17 new Grove all-terrain cranes to serve the high demand for heavy-lifting cranes in the region.

ILC's latest purchase of 10 Grove GM-K4100L cranes expands the company's expansive fleet of over 500 cranes, including mobile cranes ranging from 25 t to 1200 t and crawler cranes ranging from 50 t to 1600 t capacity. The 100 t capacity Grove GMK4100L features a 60 m boom on a compact four-axle



carrier that can travel on most highways without the need for special permits.

The market demand for crane capacities of up to 100 t is high, and Saleh Al-Huwaidi, CEO of ILC, explained why the additional Grove cranes are an invaluable addition to their fleet.

"Our Grove cranes are strong, reliable, and have exceptional resale value," he said. "We recently bought 17 new Groves, including 10 GMK4100L cranes last year, as well as three GMK5130-2 and four GMK6300L all-terrain cranes in 2013, in order to keep up with demand for upcoming projects in the region. The four-axle model is compact in size and has a longer boom compared to other cranes of similar capacity."

The Grove cranes work on a variety of projects including oil and gas, fertilizer and petrochemical plants, steel structures, refineries, wind turbines and power construction projects. During each project, the cranes are in operation daily for up to 24 months.

The Grove GMK4100L is highly maneuverable and can reach almost any job site thanks to its MEGATRAK suspension system and all-wheel steer. The cranes were delivered by Equipment Company W.L.L, one of the leading distributors in Kuwait for construction and industrial machines.

"ILC is a key player in the Kuwaiti market which is always striving to have the best equipment in its fleet to meet the differing array of job both in the State of Kuwait and to a lesser extent in both the Eastern Region of Saudi Arabia and Qatar," said Waleed Raouf, Grove crane sales manager, Manitowoc Middle East.

Established in 2005, ILC has over 2 500 employees with operations spread across the region. It is a leading company in heavy-lift cargo handling, erection of heavy lifts and transportation of large cargo. ILC's cranes are regularly maintained in the workshop based in Kuwait, and the company plans to add more cranes to its Grove fleet in the future.

WANDED TOUGH JOBS FOR THESE RUGGED TRUCKS



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