RIG FOR RECOVERY

Bentec, now an independent business unit of the Abbot Group, serves the international oil and gas drilling industry from its base in Germany. Due to its unique combination of operational drilling expertise and more than 100 years experience as a manufacturer, the company is one of the leading high-quality manufacturers and API-authorised repair shops for drilling equipment worldwide. Here the Managing Directors, Norbert Gebbeken and Arend Loedden speak to Frank Richardson. Written by Michael Poxon.

The roots of Bentec go back over 100 years to 1888 when Heinrich Lapp, a drilling engineer, founded a company in Aschersleben, Germany. During this era of technological optimism a lot of money was invested so that by the turn of the century there was a fleet of 25 steam-driven rigs, principally drilling for salt and coal, with oil drilling getting underway in 1905 and the company opening offices in Budapest and Germany. After WWI, the company was renamed DEUTAG, and this was in turn taken over by the Hannover-based Preussag group in 1990. "The company you see today," says Mr Gebbeken, "was outsourced in 1994, formed with the intention of covering all new rig building, repairs and so on, so that this gives us the products and services portfolio we have today." The company was then acquired by the Abbot Group in 2001, but retains its status as an independent company within this group.

Products and services

"We have a range of rigs for the different operational areas that we cater for," says Mr Loedden. "For example there is the Euro Rig, which reflects the market and the culture of Europe." For decades drilling rigs have been seen as noisy, polluting and dangerous work places, but this picture has changed since safety and environmental concerns became part of the daily operational culture, and as he explains: "The Euro Rig conforms to the legal requirements for certification and so on. Our company tends to put a stress on rigs being modular and transportable, and the modules from which the Euro Rig is assembled are suitable for the European road system." The dimensions of the mast parts are reduced to European road transport limitations. There are no exceptional road permissions required, except for drawworks and mud pumps.

The equipment fitted to the rig allows performance drilling, a good choice for operators and contractors. The overall required rig location size is minimal, as all rig equipment is placed very compactly around it. The rig is built in compliance with the latest European regulations; low emission and fully ATEX certified. The maximum sound level is 80 dBA in one metre distance to noise sources. As a matter of fact, the demanding European Health, Safety and Environmental standards form the company's basic working format, so that even in states that do not have such strict codes, these are still followed by default.

However, the advantages of transportability are best illustrated by another type of rig that Mr Loedden tells us about – the Cluster Slider type, available in several versions and designed for conditions such as those met with in Siberia. "Completely ↘

different to the Euro Rigs in layout and design, these can cope with temperatures as low as -45°," he says. "They are available in 250 and 350 tonne sizes. These rigs' modules can be broken down into units that can be accommodated by the Russian railway system's rolling stock, and this modularity and thus transportation is a big factor in the marketability of our products," he adds.

In more detail, a full winterisation package is incorporated into the rigs' design, with all direct drilling-related subsystems installed on a rail track, allowing fast skidding in one direction. The rig design incorporates not only modern and high performing items, but a particular focus is also set on creating a safe and well protected work area. Components that require a certain level of maintenance are easily accessible and well illuminated. The power supply of the rig can be from the mains power lines, or self generated with generator sets, which given the remoteness of many parts of Siberia and other Arctic regions, may be a necessity. The rig was built in full compliance with the rules and regulations of the Russian mining authorities GOST, so that Bentec is GOST certified, and the rig can be operated following initial commissioning without delays for additional licensing.

The other type of rig is that produced for desert conditions, called the Nomad type, is a state-of-the-art, highly mobile desert rig which is a result of a joint engineering effort by the rig builder and decades of proven oilfield experience by the operator. This combination of skills and experience has resulted in the fabrication of one of the most modern rig designs worldwide. Due again to the modular construction, this rig type allows for tailored solutions in accordance with individual customer's requirements.

"Looking back to the 1990s, we were assembling components from other manufacturers, but since then we have developed our designs," says Mr Loedden, who adds that the company is engaged in developing a separate portfolio for the land rigs. "But we also do servicing, such as electrical support, and 'mechanicals', for instance on pipework, drill cores and so on," he says.

Added to the services are many pieces of hardware and software, such as entire German-produced Power Control Rooms, with the standard format containing, in addition to the obvious power source, such features as generator controls, the main switchboard, onboard air conditioning and transformers to power up the complete rig. A fine example of software Bentec produces is the Anti Collision System (ACS) which protects crucial equipment against collisions and damages when operating the travelling block. A micro-computerised safety surveillance system is continuously monitoring all of its movements, and safety is achieved by controlling the position of the travelling block with precisely predictable stops in any position within the safety zone. Thus high levels of protection can be provided preventing personnel injury and damage to drilling equipment.

As an example of the mechanical features one may mention the Bentec gear driven drawworks, which are again state-of-the-art units for modern drilling systems and suit onshore or offshore rigs. Their light weight and small dimensions ↘

make them ideal for frequent rig moves or limited offshore crane capacity. They feature air-cooled electromagnetic brakes, with gear switching and brake operation maintained by compressed air, so the units just need air and electricity. There is no cooling water that could freeze and no hydraulic systems that could leak. In fact their inherently simple design allows for flexibility by using this simplicity as a base from which to develop. "Product development is a very important area for us," says Mr Gebbeken. "We have built rigs that operate with less than half a per cent downtime, and to achieve this requires good technical knowledge and innovation, and our own in-house R&D department will sometimes work with universities where necessary for this."

A quality service

"Our main customers are the drilling contractors," says Mr Gebbeken, "and our main focus at the moment is definitely Russia, although we also have interests in the Caspian states such as Turkmenistan and Kazakhstan in addition to North Africa, the Middle East and Europe; and we have one eye on South America for the future too." He goes on to say that "our ownership of the designs allows us to remain independent from suppliers, with all the attendant price fluctuations, delivery problems and so on. But to return to Russia, we have just opened a fabrication plant in Tyumen, Western Siberia from which we expect to deliver 10 rigs per year into the Russian market. There is a very high demand for rigs, and this looks set to continue – even with the current situation in place, since the market basics are still there. So far we have sold 24 rigs in Russia, and that makes us the most successful western rig fabricators in Russia. If the market works as it should, oil prices will return to a level where our customers will invest again. But these prices will return, if these states want to export their oil and gas."

How does Bentec compare to its competitors, and who are they? "We certainly have competitors," says Mr Gebbeken, "especially in Russia, but also we do not forget the USA and China, though the Chinese compete with us only in price. However we have many advantages – we meet market prices, we deliver western levels of quality to the market, and we deliver within budget and on time," to which Mr Loedden adds that the company has never missed a single delivery date during the past two years. "For customers, these things are very important due to the large overhead costs which can be incurred; so we also provide out of phase services, which means that a customer is not going to be left on his own with a high-tech rig. I feel these are some of the key factors in our company's success."

He continues: "We have a relatively small group of customers, but since we established branch or representative offices in these markets, we are able to observe and recognise coming projects and trends, so I think we are pretty well-informed. For instance, drilling is now taking place in increasingly difficult environments such as points farther east in Siberia, where high-tech equipment is having to prove itself. Our products can definitely meet these challenges.

Looking ahead

The company seems to be establishing itself well in the Russian market, so presumably it will continue to concentrate its efforts there. "Certainly we will be continuing this emphasis," says Mr Gebbeken. "We want to stabilise ourselves in Russia by getting our fabrication facility properly up and running, but we are also keen to develop our presence in the Middle East and North African region. At the moment they are heavily influenced by the Americans but, with the help of our innovative designs and levels of customer satisfaction, we think that we will have some good opportunities. With our partner IDtech, we are based as joint venture in Oman since 23.7 2005. Looking back over the past three years, our turnover in 2008 was more than three times that in 2005. It will increase in the future," he says, adding with a smile, "but I won't mention any numbers yet!" Even with the benefit of numbers, his confidence in the company's future seems to be an assured one. □