

Dependable Workhorses

There's a huge variety of equipment and components in the drilling sector, and the strength of offerings from major manufacturers show the undoubted importance to the construction and quarrying industries. Katherine Weir reports

Klemm Bohrtechnik – part of the Bauer Group – introduced the KR 806-4GM anchor drilling rig for overburden drilling with an automatic MAG 6.1 drum magazine for double-head drilling. The manufacturer said the goal with this machine was to be below the weight class of the KR 807-7 series; it has a net weight of 21.9 tonnes (without pipes) and allows for a maximum load of 1,100 kilograms (kg).

The maximum diameter for the casings is 178 millimetres (mm) and the usable length of the pipe pairs is 3,000mm. Both plain drill rods and drilling augers can be used as internal rods, the manufacturer explains. The upgraded MAG 6.1 drum magazine has a rotatable drum, which ensures that the equipment operator always has a good view of the drill rod to be positioned.

It also has a newly developed kinematics system, Klemm said.

For the drive system, Klemm used the 'proven design' of the KR 806-3G, with a VolvoPenta diesel engine and an output of 160kW, complying with the latest emissions regulations.

The machine was presented for the first time at the ConExpo, Las Vegas, exhibition in March.

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system uses two load-sensing primary pumps, and the optimal power distribution is automatically adjusted by the patented power sharing feature, which is part of the energy efficient power (EEP) system. The EEP system is also said to have an adaptive speed control feature that adjusts the speed of the diesel engine to the current drilling situation.

Along with lower noise emissions, this also gives fuel savings of up to 25 percent compared to previous models.

On the implementation of EEP, Roy Rathner, managing director at Klemm, said, "Reduction of energy consumption on construction sites is an ecologically as well as economically justified objective. In addition to reducing emission of CO2 and other pollutants, reduction of expenditures on diesel is a highly motivating factor, contributing to the efficiency of a construction site.

"Our latest generation of drilling rigs also have energy optimised primary and secondary loads, for example the summation control of main control blocks or use of temperature-controlled fan drives. Smart

functionality is another feature. The control algorithms for increasing efficiency are automatically activated by default and do not require any additional user input."

KEEPING A SAFE DISTANCE

In terms of emerging trends in this sector, Rathner said, "The demand is leading towards bigger drilling diameters and drilling with remote operation. Also mechanised and automated rod handling systems are requested due to safety reasons. This includes magazines attached to the drill rig as well as external rod handling systems mounted to excavators."