

TRACK MAINTENANCE

IAF in Münster
High-output strategy
speeds renewals

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TURKEY

Reforms gathering pace
Open access competition
to start this year

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Railway Gazette

INTERNATIONAL

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26th International Exhibition
for Track Technology
28th-30th May 2013 in Münster



Plasser & Theurer

Track technology to the fore

INNOVATION With large yellow machines occupying almost 3 km of track in the outdoor area, the IAF exhibition provides a focus for track maintenance specialists from around the world.

More than 200 companies from 21 countries are expected to take part in the 26th IAF international exhibition for track technology in Münster on May 26 – 28.

Organised by the VDEI-Service subsidiary of the German Railway Engineers' Association, the event is expected to be significantly bigger than the previous show in 2009, filling three halls and 5000 m² of outdoor space including more than 3000 m of track. VDEI-Service Managing Director Siegfried Krause is expecting a record 20000 visitors.

Under the patronage of Federal Transport Minister Peter Ramsauer, the exhibition will be officially opened by VDEI President Prof Dr-Ing Frank Lademann, accompanied by the Lord Mayor of Münster Markus Lewe and the new Chairman of DB Netz AG Frank Sennhenn.

Among the innovations at this year's fair is the IAF Salon, where exhibitors will be able to make short presentations. The 'IAF job market' will enable exhibitors to seek new recruits and encourage young engineers into the rail sector. VDEI will be promoting its extensive training programme, including three seminars

The 3000 m of outdoor tracks adjacent to the exhibition centre make an ideal venue for displaying both large and small maintenance machines.



Photo: Christoph Müller

Vossloh's HSG-city and Speno's RR 64M grinding machines will be on show at IAF.



arranged by the VDEI Academy.

Ahead of the exhibition, apprentices from DB Bahnbaugruppe GmbH and the Essen-based Vocational Training Centre for the Construction Industry have been working with VDEI members, DB ProjektBau and Strabag Rail to relay 500 m of track in Westfälische Landes-Eisenbahn's Münster Ost yard used for the outdoor displays, as a live project rather than a training exercise.

The range of exhibitors includes suppliers of track components, monitoring and measurement equipment and small tools, as well as infrastructure maintenance contractors and the manufacturers of maintenance machinery large and small.

Big machines on parade

Under the theme of 'quality cuts costs', Plasser & Theurer will be showing no less than 16 heavy-duty machines this year. As well as two newly-developed continuous-action ballast cleaners and tamping machines for turnout maintenance (p51), the company is presenting a new road/rail welding machine. The APT 1500 RL incorporates a new welding robot mounted on an adapted lorry chassis. Plasser has also developed a portable version of its 09-3D tamping simulator, as used in its two operator training centres at Linz and Bingen.

Speno International SA will be

displaying a driving and control vehicle and an intermediate grinding car from its latest RR 64 M modular grinding train. This 64-stone machine offers very high metal removal rates with a high degree of accuracy. It is equipped with real-time profile measurement systems for both transverse and longitudinal planes, with the longitudinal system separately recording very short, short, medium and long wave irregularities. The company's HC-Grinding Scanner has been developed to assess and reporting the depth and density of rolling contact fatigue (p55). On its indoor display, Speno will be showing a grinding trolley specifically designed for the reprofiling of switches.

In conjunction with DB Bahnbau, Freilassing-based Robel will be showing sample vehicles from its specialist model 40.61 rail delivery train, including the sprung-loaded chutes designed to transfer the rail ends from train to trackbed without jarring, and the manipulator gantry which supports and feeds the rail during the laying process. To improve safety, Robel has developed remote-controlled support rollers and clamps which are swung back as each layer of rails is removed; this allows the entire operation to be undertaken with no staff on the wagons apart from the operator in the manipulator cabin.

Robel is also showing two versions

of its model 69.70 Mobile Maintenance System, including a three-car trainset formed of a new UIC-compliant working car and intermediate wagon being developed as a demonstrator for use in Germany coupled to an existing traction and supply unit. The second will be one of five two-car MMU Compact machines being supplied to ÖBB for tunnel cleaning work. This model 69.60 machine has been developed for maintenance and welding work in urban railway tunnels. The shorter vehicle is carried on four wheels instead of two bogies, and has the staff facilities positioned above the working area in a double-deck configuration. Like the bigger MMUs, the side walls can be extended outwards to protect the track workers. A driving cab is located at one end of the machine, and a small work room at the other. Combined with a rinsing wagon the vehicle can also be used for tunnel cleaning and drain clearance work.

Sweden's Railcare AB will be showing its SR700 snow melting machine, developed in co-operation with Trafikverket. Designed to clear tracks at strategically important stations and yards, it can clear up to 1200 m³ of snow per hour. Large brushes at the front of the machine collect the snow over a width of 5 m, and feed it into a duct leading to the melting unit. From here the water is stored in a 50 m³ tank until it can be discharged at a designated location. The machine only requires two people to operate: one to control the snow brush and the other to drive the separate locomotive which propels the machine.

Goldschmidt-Thermit Group is to unveil a new road-rail planing machine, developed with Möser Maschinenbau to tackle corrugation and other railhead irregularities. Based on a lorry chassis, the compact machine is designed for rapid deployment on tasks that are traditionally tackled using hand-held machines.

Vossloh Rail Services will be showing a road-rail welding truck incorporating a mobile flash butt-welding unit, able to operate at 80 km/h on road and up to 50 km/h in the rail mode. Able to undertake up to 40 welds per shift, the welding module offers a 600 kN upsetting force and automatic deburring, along with automatic weld monitoring and data logging.

Vossloh Rail Infrastructure is launching a compact version of its high-speed grinding train, known as the HSG-city. This is targeted at urban rail applications as a cost-effective



Railcare's SR700 snow melting machine is capable of clearing 1200 m³ of snow per hour.

approach to rail maintenance and noise reduction. The company will also be promoting mobile rail milling as a complement to preventive rail grinding regimes, and unveiling its Flexis hand-held grinding system for tackling both longitudinal and transverse railhead defects in turnouts.

Track components

Sleeper manufacturer Leonhard Moll Betonwerke has developed a low-profile concrete sleeper with the same 150 mm height as a wooden sleeper, allowing simple replacement of wooden or steel sleepers without changes to the track and ballast profile. Weighing twice as much as a wooden sleeper at 287 kg, the FS150 is rated for 22.5 tonne axleloads at up to 160 km/h.

Meanwhile, concrete specialist Railbeton has developed cast platform face modules with a built-in 'safety zone' under the edge where people can escape from the track. Approved by EBA, the BSK42 module is designed for use at S-Bahn stations with platforms 960 mm above rail.

As well as its Easy Switch and other turnout components, Vossloh Cogifer will be highlighting its patented BTW monitoring system to tackle the growing problem of cable theft. This uses a sensor developed by cable infrastructure and surveillance specialist WiN MS, in conjunction with sophisticated monitoring equipment that can identify in real-time the exact position and length of any cable cut, and immediately alert both police and infrastructure manager. This allows the operators to respond much faster to get the affected lines back in service. The company believes the real-time monitoring will act as a strong deterrent to both theft and sabotage.

In addition to its established Strail range of level crossing elements, Kraiburg Elastik will be showing its Strail-Lastic rail damping products. Manufactured from a synthetic elastomer compound, these are designed to be

clamped to the rail foot using rust-free clips which are easily attached and removed when necessary. Vossloh Fastening Systems will be promoting the use of 'cellentic' – a special material aimed at reducing structure-borne noise and vibration.

Measurement and testing

Optical sensor supplier NextSense will present its Calipri portable non-contact measurement system for analysing rail and switch profiles. The modular technology can be deployed for individual assessment of rails and turnouts, as well as measuring both tracks using a shared reference co-ordinate system. According to the supplier, the ability to record a wide range of profiles with a single device opens up a broad spectrum of applications whilst reducing the cost of purchase, calibration and training.

Denmark's Greenwood Engineering will be showing the latest version of its successful Mini-Prof wheel and rail profile measuring system, including a twin-head version able to assess both wheels on one axle simultaneously. Balfour Beatty Rail will be promoting its MR.pro software for maintenance management, including advanced analytical functions and an improved graphical display.

Ba-Be-D Daimer is launching a new transverse railhead profile measurement system. The DQM III is

Mobile welding equipment will be demonstrated by Vossloh (below) and Plasser & Theurer (bottom).





Condor's SPOT safety fence is designed for rapid attachment using clamps which fit into the rail web.

derived from an earlier model, but fitted with Bluetooth communications so that data measurement and analysis can be undertaken using a tablet PC. The system can also measure the gauge face and rail inclination to calculate equivalent conicity.

Rothbucher Systeme will be promoting its position monitoring technology, which uses small location tags attached to track and structures which can be monitored from a safe location. Developed initially for the



Zagro is now offering its E-Maxi L battery-powered road-rail shunting unit with a cab.

construction sector, and for use on bridges, the system has been used to measure the subsidence of rail tracks in the Netherlands over the past six years. Adopted for a high speed line in Germany a few years later, it has also been applied in the UK, France and the USA, according to the supplier. The tags can be surveyed remotely in three dimensions, and the results



collated in a database to enable the analysis of long-term trends.

A new exhibitor this year is PJ Messtechnik of Austria, which has been accredited as a testing facility for rolling stock and maintenance machinery, including road-rail vehicles. PJ Messtechnik's axle-mounted wagon tracker technology has also been incorporated into the OTM

monitoring system for on-track plant and road-rail vehicles developed by System 7 Rail Support.

Safety focus

Condor Group's SPOT portable safety fencing can be installed rapidly by using clamps that fit between the rail head and foot, avoiding the need to disturb the ballast under the rail. A series of standard fence units is attached to horizontal supports which can be adjusted between 2.8 m and 3.2 m to suit different track spacings.

Rail lubrication specialist Moklansa is showing a centralised control system for its E3S lineside rail lubricators. This allows remote monitoring and preventive maintenance, reducing the need for staff to work on the track.

Zagro will be showing its latest vehicle shunting unit, based on the successful E-Maxi L remote-controlled machine but modified with a cab to create a battery-powered road-rail vehicle able to tow loads of up to 300 tonnes. Designed to meet the latest ergonomic standards, the cab provides all-round visibility for the operator, and can optionally be fitted with air-conditioning. 

Elastic Solutions for Track Superstructure

Getzner's range of elastic components for track superstructures consists of the following:

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- Sleeper pads
- Ballast mats
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