

SWITZERLAND

Gotthard Base Tunnel
The story of the world's
longest rail tunnel

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Pan-European TGVs
SNCF unveils next-
generation Duplex

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INTERNATIONAL

Banishing Alpine barriers



SIEMENS

Flushed with success



The test bench is installed at Alstom's Barcelona plant.

TOILETS: To support the design of Coradia Polyvalent trains for France (RG 6.11 p80), Alstom has developed a train toilet test bench which enables testing of elements including the suction system, cabin doors and tanks.

'Toilet cabins, unlike other facilities, are not standardised, which means we have to check the performance of each component', said Technical Team Leader to Jose-Julio Muyo. ☞

Virtual staff

ASSISTANCE: Tensator has launched a customisable 'virtual assistant', which back-projects a video image onto a shaped acrylic screen to create the impression of a real person. The assistant can provide information, brand or promotional messaging, with the identity and language customised to suit any environment.

In addition to the hardware, Tensator can commission actors and write the scripts in conjunction with digital advertising firm MediaZest. ☞

Hammer attachment eases electrification

PILING: A specially commissioned hydraulic hammer attachment for road-rail excavators is allowing Terrawise Construction to install an average of 11 electrification mast piles in an 8 h shift as part of the expansion of Manchester's Metrolink light rail network.

The DX-RT from BSP International Foundations can be quickly erected from its transport position, and can be positioned 5° from vertical to cope with cant. During piling the hammer is guided using the excavator's boom and dipper arm attachment configuration. The 800 mm drive cap can be adapted for piles of various sizes, including 610 mm steel piles commonly used for structure foundations. The hammer can also drive sheet piles, small bearing piles or tubular steel.

'We have been carrying out extensive research over the last two years in the development of piling equipment to drive steel tubular piles focusing on piling hammers that can easily attach and interchange with commonly-used road-rail excavators', said James Crossen, Project Director at Terrawise. 'As



Two models are available, offering ram weights of 1.5 and 2.0 tonnes and maximum impact energy of 20 kNm and 25 kNm with a rate of 80 blows/min.

the company was unable source suitable impact hammers on the world market we decided to commission the design of a purpose-built hammer ourselves.' ☞

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Sonar spots rail breaks

RAIL FAULTS: Underwater sonar has been adapted for remote rail defect detection by South Africa's Council for Scientific & Industrial Research and the Institute for Maritime Technology.

A transducer bolted to the rail creates ultrasonic vibrations which propagate up to 1.5 km, and an electronic sensor sends alerts to the control room if the

signal is not detected.

It warned of two rail breaks and thus prevented potentially costly derailments during a year-long trial on South African freight operator's Transnet's Sishen – Saldanha heavy-haul ore line where temperatures range from -10°C to 50°C. It has also been tested in Canada, on the New York subway, in Hong Kong and in Japan. ☞

Eat that tree!

VEGETATION: Network Rail has taken delivery of the first of three LUF Bushfighter automated vegetation clearance machines from Austrian supplier Rechner's GmbH.

Equipped with a 75 kW four-cylinder turbocharged Deutz powerpack, the vehicle is controlled remotely and can operate on embankments at an angle of up to 45°. It can also be used to carry forestry tools to difficult locations. ☞



NR demonstrated the Bushfighter's ability to clear vegetation and small trees at a plant exhibition on May 26.

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