

# Railway Gazette

INTERNATIONAL



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# Talent and innovation drive the modern railway



**GHH-BONATRANS**

Pioneers of wheelset solutions

**DETECTION**

## Vibration-based train detection

Omnitrax subsidiary Chicago Rail Link is carrying out the first North American trials with a rail-vibration based train detection system developed by Spanish company Next Generation Rail Technologies.

The system is being tested at a level crossing where local industrial, weather and drainage conditions mean traditional track circuits suffer from false activation. The NGRT system avoids this, and can also be used to count axles and detect wheel flats.

CRL is operating the technology in shadow mode during the trial, and plans to obtain safety certification which would enable permanent use.

'We are excited to begin testing this promising technology on one of the most challenging crossings in our network,' said Dave Arganbright, Vice-President of Government Affairs at OmniTRAX. 'The potential industry-wide benefits from a successful pilot of NGRT's detection system are limitless. This technology could enhance worker safety, detect broken rails, count axles and allow railroads to more efficiently spend their capital budgets.' ■

### NEWS IN BRIEF

TÜV Rheinland Rail Certification has issued interoperability certificates for ZTE's GSM-R equipment.

Addnode Group's TechniaTranscat subsidiary is to supply Stadler with more than 2000 user licenses for its product lifecycle management software which is used to optimise product development and improve information flows.

**SUSTAINABILITY**

## Solar-powered guard's van

A guard's van equipped with solar panels and a toilet with biological waste digestion has been unveiled by Indian Railways.

The Brake Van Z-frame Improved vehicle was modified by Indian Railways Organisation for Alternate Fuels with the assistance of Northern Railway's Amritsar workshop. The four roof-mounted solar



panels charge a 100 Ah battery which can provide 24 h of power for the onboard lighting, cooling fan and mobile device charging point.

Inspecting the vehicle at Delhi Safdarjung station, Minister of Railways Suresh Prabhu said it would improve working conditions for guards, and also help to reduce IR's carbon footprint. ■

**HEARING**

## In-ear protection test

Companies can ensure that their employees working in noisy environments have adequate hearing protection equipment and are using it correctly using 3M's E-A-Rfit testing system.



E-A-Rfit uses small microphones which are embedded in earplugs. The employee inserts the earplugs into their ear as normal, then the system plays a burst of white noise. The in-ear microphones pick up the sound which has not been attenuated by the earplugs, and the control unit produces a spectrum for each ear showing the level of protection which has been obtained. This highlights whether earplugs are being worn correctly: 3M says many users initially fail to squash foam earplugs sufficiently to insert deep into the ear canal and thus fill it, and people often struggle to insert earplugs adequately into both ears.

The system can be used in initial staff training or to ensure competence levels over time. It produces a personal attenuation rating for each member of staff, highlighting that even the best protective equipment will not help if it does not fit or is used incorrectly.

3M says previous testing systems required soundproof rooms and laboratory-style conditions, but the briefcase sized E-A-Rfit can be taken into the workplace. ■

**LIGHTING**

## Versatile LEDs

LMT Leuchten + Metall Technik expects to receive certification by the end of this year for rail applications of its Varyo family of LED luminaires.

Developed to illuminate station platforms, pedestrian underpasses, car parks and industrial buildings such as cold stores, the Varyo lights meet the IP 65 rating protection class II.

The linear Varyo 2542 has a cross-section of 161 x 86 mm and is available in standard lengths of 704 or 1274 mm; bespoke lengths can also be supplied. The LED boards are available with a flux of 1000 or 2200 lumen per 300 mm module. Depending on the specification, power consumption ranges from 22 W to 88 W. LMT anticipates a minimum service life of 80000 h.

The standard version provides a 4000 K neutral white light. The anodised aluminium housing can be fitted with a curved PMMA or polycarbonate cover or with flat glass. A light mixing chamber with diffuser ensures that luminaire is glare-free.

The Varyo range was designed for use in lighting strips, but can also be deployed as stand-alone unit. Variants are available with symmetrical and asymmetric light distribution. ■

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