

CLIENTE	<b>Rollon</b>	TESTATA	<b>Railway Gazette-Metro Report International</b>	DATA	<b>Settembre 2014</b>
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## SAFETY

# Fire prevention in København

When the fully automated Cityringen metro line opens in København in 2017, the AnsaldoBreda trainsets will be equipped with a fire detection and suppression mechanism based on water mist from underfloor tanks.

Like the trains themselves, the fire protection is being supplied by Italian companies. ISE is defining and planning the configuration, and supplying the electronics. Carabelli is integrating the mechanism and is responsible for complete outfitting, including piping distribution. SA Fire Protection has designed and built the water mist system, and Rollon has supplied the components used to move the tank holder frame.

The underfloor traction equipment is being fitted with heat detectors, in accordance with requirements for category 2-A trains in DS/CEN/TS 45545-6, with a separate detection and alarm circuit for each traction package. Each trainset also includes smoke detectors based on photoelectric detection by Tyndall effect, coupled with thermal probes, in the passenger compartment. Point-type detectors were chosen over aspirated-type smoke detection, because they are more robust and reliable. The safe and redundant architecture of the SILFI-Guard fire detection system by ISE ensures that the system can always work with almost no performance degradation,

including in the presence of ordinary faults.

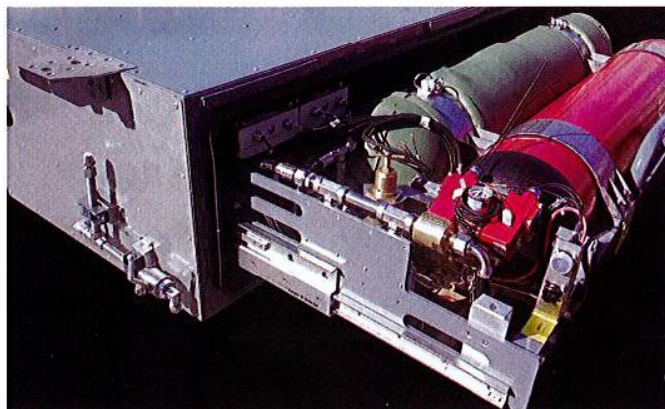
If a fire is detected, underfloor tanks spray pressurised water mist into the passenger compartment from nozzles. As well as being harmless to the passengers, water mist has a high extinguishing power, as it abates smoke and prevents fire from spreading. Other fire suppression methods require up to 200 litres of water, compared with 60 litres for this technology. Thermal protection and temperature monitoring of the tanks allows them to function in temperatures between -30°C and 50°C.

The design of the automated trainsets requires the water tanks to be under the floor. One advantage of this arrangement is that the tanks are not visible to passengers, and so do not require aesthetic finishes, helping to lower the final cost. They are also less at risk from vandalism and theft.

One of the most important issues for Metroselskabet is rapid maintenance of the equipment. Easy access allows quick visual inspections and the removal and replacement of the tank units within 30 min, so maintenance can take place off-site. The greatest mechanical challenge was to adapt the supply unit and switch valves to the available space.

The tank units are fastened with electronic, mechanical and hydraulic quick-release systems. A mobile frame in a rigid lightweight alloy integrates Rollon's DSS 35 telescopic guides, 610 mm in length. These allow the tank to be pulled out fully so that the door can be opened and closed from an ergonomic position. The tempered raceways are resistant to shocks and vibrations, and are treated with RollonAlloy anti-corrosion coating.

The fire suppression tanks are designed for any type of passenger train, and will be on display for the first time at InnoTrans 2014 on Carabelli's stand and on the Cityringen metro car. ■



The water tanks can slide out for easy access.

## INNOVATIONS Products

### ALTERNATIVE ENERGY

## Solar-powered passenger information

New York Metropolitan Transportation Authority is trialling solar-powered passenger information points at Woodlawn station on the Metro-North commuter rail network.

Refreshed every 15 sec, the screens display real-time running information for Metro North, and connecting metro services and buses. A photovoltaic panel on top of the screen captures solar energy and feeds it into a battery. The screens consume 70 Wh per day and can remain active for up to 10 days without recharging.

In addition to being off-grid, the screens receive information through wi-fi, so there are no wires at all.

MTA is evaluating whether the screens, solar panels and batteries are suitable for use in all weathers. ■

### DATA

## Moving crowds FASTER

Singapore Land Transport Authority, SMRT, StarHub and IBM are working together to implement fusion analytics to improve crowd management on the metro.

Fusion analytics for public transport emergency response (FASTER) will use data-driven analytic models to provide situational awareness, impact prediction and actionable insights. LTA and IBM will combine smart card data with station CCTV footage provided by SMRT and anonymised telecommunications data from StarHub.

In the event of an incident or during special events when large crowds are using the metro, the data will be used to provide better information to employees and passengers, improve resource allocation and pre-emptively manage crowds. ■

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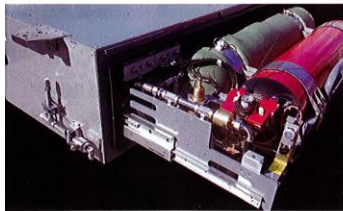
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### FARE COLLECTION

## Ticketing alliance

Five national smart ticketing bodies have officially launched the Smart Ticketing Alliance, two years after signing a memorandum of understanding.

The initial full members are ITSO (UK), MVV (Germany), ETS Calypso Network Association, AFIMB (France) and UTP, which will act as the secretariat.

The alliance is setting up working groups to examine contactless interfaces, near field communications, certification and media security. The goal is to implement a single transport specification for NFC phones across Europe and cross-border acceptance facilitating the implementation and deployment of NFC-enabled devices. ■

### HEATING

## Peplemover heating optimisation

A heating optimisation system has been put into operation on the CDGVAL and LISA automated peplemovers at Paris Charles de Gaulle Airport by Siemens.

When temperatures fall below 4°C and humidity is above 80%, the guideways must be heated to maintain traction of the rubber tyres and to ensure good current collection.

The system is controlled by Aéroports de Paris. According to Siemens, it could result in energy savings of up to 50% at temperatures between 0°C and 4°C. The equipment was installed without interrupting services.

Siemens plans eventually to implement this on other VAL lines. ■