



# In China, Saft onboard batteries ensure reliable backup power for metro trainset fleets

CRRC Changchun, China's state-owned rolling stock manufacturer, is fitting Saft SRM+ nickel-based onboard battery systems on metro trainset fleets currently under construction for the two emerging Tier 2 cities of Chengdu and Nanchang.



## Chengdu and Nanchang metro development projects

China has around 15 emerging Tier 2 cities characterized by their size and economic significance. Light rail and metro rail projects are a high priority for these cities to reduce the significant congestion and pollution issues associated with major population centres.

It is China's continued investment in urban rail that is a major contributory factor to the anticipated strong growth of the Asia-Pacific rail market – estimated at 4.1 percent for 2014-19.

Chengdu, the country's 10th largest city in western China, opened its first metro line in 2010. By 2020 the city will have 10 lines and 350 km of track carrying over 13 million passengers every day. In Nanchang in southeastern China, the Nanchang Metro Line 1 is the first rail transit line ever constructed in the city and it will exceed 120 km in length in 2020 after Phase 2 is finished. CRRC Changchun is supplying a total of 78 six-car trainsets for the metro projects – 51 for Chengdu Lines 3 and 4 and 27 for Nanchang Line 4. Each trainset will be fitted with two battery systems comprising 158 Saft SRM+ batteries.

## SRM+ batteries for CRRC Changchun - Key benefits

- Total reliability to ensure passenger's security and comfort
- 50 percent reduction in battery weight compared with lead-acid batteries
- 15-year plus service life for Optimized Total Cost of Ownership
- Minimized maintenance with only two years topping-up intervals
- Local system engineering and service support by Saft's Zhuhai facility.

## Case study



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## Providing emergency backup power for critical onboard services

From 2014 to 2015, Saft supplied 156 onboard battery systems to CRRC Changchun for installation on Type B rolling stock for Lines 3 and 4 of the Chengdu Metro and Line 1 of the Nanchang Metro. The battery systems are based on Saft's specialised SRM+ rail batteries. If there is any interruption to the main power supply, the batteries will provide up to 45 minutes of emergency backup power for critical onboard services including lighting and ventilation.

## Nickel-based batteries ensure extended maintenance intervals

A major advantage of SRM+ nickel-based batteries for CRRC is that they need no special attention between normal rolling stock maintenance examinations. Topping up with distilled water is only required at two-year intervals and there is no need to change the electrolyte during the battery's lifetime. Furthermore, compared to an equivalent lead-acid battery, SRM+ solution can achieve a 50 percent reduction in battery weight for applications operating at around 0°C, helping to optimize Total Cost of Ownership (TCO).

## SRM+ batteries for CRRC Changchun - Key features

- 156 SRM+ batteries for Chengdu and Nanchang metro lines
- 45 minutes of backup power for critical services
- Robust sintered/PBE construction for high energy backup
- Wide operating range from - 20°C to + 50°C
- Purpose-designed to save operating costs throughout a long service life.



*“The onboard battery systems are critical to the successful operation of the metro projects in Chengdu and Nanchang. Saft’s specialised SRM+ rail batteries have been specified due to their proven quality and reliability combined with the high level of local system engineering and service support provided by Saft’s Zhuhai facility.”*

**Glen Bowling**, Saft Group Senior VP Sales



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