



# SRM+ batteries pack high energy into a compact package for the Chennai Metro



**Lightweight and compact SRM+ batteries help minimise the weight of Alstom's rolling stock for this prestigious new metro rail project.**

With a growing population of 8 million, Chennai is India's fifth largest city agglomeration and it is now introducing a new metro system to ease congestion by providing a fast, reliable and economical new mode of public transport.

The new 4-car train sets for the service are supplied by world-leading rolling stock manufacturer Alstom and are mainly built in its new Sri City plant in India. The 42 trains will run on two interconnected lines, serving 32 stations over a 45 km route and carrying more than 500,000 passengers daily.

## **Low cost and reliability**

Alstom's rolling stock for the Chennai Metro is designed to meet a number of criteria, of which reliability, light weight and low maintenance were particularly important for battery selection. Alstom needs high energy batteries to deliver 60 minutes of back-up power in the event of a failure of mains power for passenger safety and comfort systems, including lighting, door control, air conditioning and communications systems.

Chennai Metro's controlling criteria for its rolling stock was that it should operate at a low annualized cost and so reliability, low energy consumption and high efficiency of subsystems and components were vital.

Case study



**SAFT**



## High energy railway backup

Alstom selected Saft's SRM+ batteries to supply reliable backup power in a compact and lightweight form. The SRM+ is based on nickel-cadmium (Ni-Cd) cell chemistry that is well proven in rail operations. Two battery systems, each comprising 85 of SRM+ rail batteries are being fitted to each of Chennai Metro's 42 train sets.

### Key features:

- Up to 60 minutes of backup power
- Capacity range of 40 – 360 Ah per battery
- 25% weight and footprint reduction compared with earlier battery designs
- Low maintenance requirements and 15 year plus service life
- Wide operating temperature range from - 20°C to + 50°C

## Total reliability

The SRM+ is based on a well established battery design with a proven record over millions of track kilometres, offering total confidence that it will deliver the high energy output when called upon.

### Key benefits:

- Reliable backup power in extreme temperatures
- Low weight helps to minimize energy usage
- Contributes to energy efficiency of rolling stock
- Small size frees up space for passengers
- Requires minimal maintenance
- Long calendar life



## Saft recognized as a world-class supplier



“

*To deliver world-class solutions for the expansion of India's rail infrastructure, we need to work with world-class suppliers. Saft is therefore the ideal partner for the Chennai metro project based on the proven reliability and performance of its railway batteries. Furthermore, the premium service support provided by Saft's Bangalore facility will help us achieve our target for a high level of localization.* ”

Henri Poupart-Lafarge,  
President of Alstom Transport



## Saft

12, rue Sadi Carnot  
93170 Bagnole - France  
Tel. : +33 1 49 93 19 18  
Fax : +33 1 49 93 19 64  
www.saftbatteries.com

Document N° 21896-2-0614  
Edition: June 2014

Data in this document is subject to change without notice and becomes contractual only after written confirmation.

Photo credits: Saft, Alstom Transport, Fotolia.  
Studio DT - R294/2

© Saft – Société par Actions Simplifiée au capital de 31 944 000 €  
RCS Bobigny B 383 703 873