

# Saft batteries will ensure all-weather reliability for new Lanxin line Bullet trains in Northwest China's demanding operating conditions

- Saft MRX battery systems will ensure reliable emergency and traction backup power for CRH5 EMUs in extremes of heat, cold, ultraviolet radiation, high winds and sandstorms
- Fast-track Euro multi-million contract will see Saft complete the delivery of 320 battery systems to China CNR Corporation by the end of 2014

**Zhuhai, December 10, 2014 –** Saft, the world's leading designer and manufacturer of high-tech industrial batteries, is completing a Euro multi-million, six-month, contract for China CNR Corporation Limited to supply the onboard battery systems for the CRH5 high-speed Bullet EMUs (Electric Multiple Units) destined for the new Lanxin line that traverses three provinces in Northwest China. This contract is the latest in a series, beginning in 2006, that Saft has been awarded for MRX batteries for CRH 5 EMU trainsets, with around 1,600 battery systems already in services on high-speed routes across China.

The Saft MRX batteries will provide backup power to support vital emergency services and traction functions, ensuring total reliability for the Lanxin line Bullet trains in some of the most demanding operating conditions ever experienced by rolling stock, including extremes of hot and cold, ultraviolet radiation, high winds and sandstorms.

In the six years since China's first high-speed railway connected Beijing with the port of Tianjin in 2008, the country's high-speed track in service has reached 10,000 km - more than in all of Europe - linking more than 100 cities and carrying around 2 million people daily.

While the initial focus for high-speed development was on China's densely populated east and centre, work began in 2009 on the Lanxin Railway Second Double-Tracked Line to connect the north-west of the country. Scheduled for opening at the end of 2014, it stretches 1,776 km from Lanzhou, the capital of the western province of Gansu, to Urumqi, the capital of Xinjiang, bordering on Central Asia. The world's longest high-speed rail line constructed in a single project, it traverses a vast stretch of barely inhabited terrain to incorporate into the network three provinces that comprise around 30 percent of China's total land mass.

To provide 250 km/h services on the Lanxin line, CNR, one of China's leading rolling stock companies, has developed the CRH5, a locally manufactured non-tilting version of the Alstom ETR Pendolino. The eight-car trainsets, capable of carrying up to 622 people, have been designed to withstand temperatures that can vary from -40°C to +40°C, high winds that can reach 37.6 metres per second and the sandstorms of the Taklimakan Desert that can cause sand ingress into equipment enclosures.

With this focus on all-weather reliability, CNR decided that Saft's well-proven MRX nickel-based batteries were the ideal onboard backup power solution for the CRH5 trains. In May 2014, Saft was awarded a fast-track contract to supply 320 battery systems, each comprising two strings of 20 MRX230 batteries. Deliveries started in August 2014, in readiness for the inauguration of the first segment of the Lanxin line in November, with deliveries scheduled for completion in December 2014.



"The Lanxin line rolling stock pushes all the onboard components to the extremes of performance and reliability so CNR's decision to select Saft batteries is a tribute to the excellent reputation established by our MRX design," says Xavier Delacroix, General Manager of Saft's IBG Division. "The CRH5 contract is also a perfect illustration of Saft's capability to deliver large scale projects on a fast-track basis."

#### Saft MRX rail batteries

Saft MRX batteries are the ideal choice for this type of high-speed rail application as they have been purpose-designed to deliver maximum performance, reliability and low TCO (Total Cost of Ownership). They provide the low maintenance and long service life benefits of sintered/PBE technology within a slim, light-weight block battery package that shows a major size and volume advantage of around 30 percent compared with conventional batteries.

The MRX design is extremely reliable and does not suffer from the 'sudden death' which can affect some batteries, even in extreme temperatures ranging from - 30° to + 70°C.

#### **About Saft**

Saft (Euronext: Saft) is a world leading designer and manufacturer of advanced technology batteries for industry. The Group is the world's leading manufacturer of nickel batteries and primary lithium batteries for the industrial infrastructure and processes, transportation, civil and military electronics' markets. Saft is the world leader in space and defence batteries with its Li-ion technologies which are also deployed in the energy storage, transportation and telecommunication network markets. More than 3,800 employees in 18 countries, 14 manufacturing sites and an extensive sales network all contribute to accelerating the Group's growth for the future.

Saft batteries. Designed for industry. www.saftbatteries.com

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