



HiTe calls on Saft's on-site service for optimized operation of innovative hybrid-powered RTG crane in China



Saft's on-site installation, commissioning and training service has ensured the successful implementation of the hybrid diesel generator and Li-ion battery power system for a new generation Rubber Tyred Gantry (RTG) crane in China.

Shanghai Hi-Tech Control System Co Ltd (HiTe), a Chinese system integrator, was engaged by Rainbow Cargotec to develop a new hybrid power system for its innovative new generation of RTGs designed to help port and terminal operators reduce carbon emissions and cut fuel costs. To ensure the success of the prototype unit, HiTe called on additional support from Saft's service team for installation, commissioning and training.

Optimizing battery system operation in a demanding regenerative braking application

As air pollution continues to be a major issue in China, HiTe has developed a hybrid power system that utilizes a smaller than usual diesel genset operating in combination with a Saft Li-ion battery. This approach significantly reduces the genset run time to cut both emissions and fuel costs.

For Rainbow Cargotec, HiTe developed a hybrid power system capable of hoisting up to 15 fully loaded TEUs (Twenty Foot Equivalent containers) of 41 tons in continuous operation. The ESSU (Energy Storage System Unit) is based on Saft's SLFP™ (Super Li-ion Iron Phosphate) technology, with 22 SLFP™ modules capable of delivering continuous current of 500 Amps with an energy storage capacity of 57 kWh. The use of regenerative braking requires the ESSU to handle very large, short duration currents – 220 kW for 5 seconds.

Key features

- Specialist battery technicians on site for 11 days in total
- Installation included inspection, charge and discharge testing and capacity testing in compliance with regulations
- Training delivered on site by field-experienced trainers
- Mix of theoretical and hands-on training
- Contributes to a long service life estimated at 5 years

Key benefits

- Saft support ensured smooth operation of the hybrid system from day one
- Saft service has minimized operational risk of introducing innovative battery systems
- Saft has helped HiTe's operators to become comfortable with operation of Li-ion batteries





The result – delivery of a successful prototype

Following the construction of the prototype RTG, Rainbow Cargotec submitted the unit to a stringent programme of testing and evaluation. Ultimately, Saft’s service ensured that the hybrid power system met its performance specifications and contributed to the success of the prototype.

Service ensures reliable through-life performance

Saft mobilised quickly and sent qualified technicians to HiTe’s facility in Shanghai. During their time on site, Saft’s technicians qualified HiTe’s operation and set up a performance index for the batteries. This ensured that HiTe’s manufacture of hybrid systems will be both high quality and repeatable.

HiTe’s team also benefit from a dedicated portal to manage after-sales claims. This ensures rapid and customized responses to enquiries around the clock.

“The RTG hybrid power project has been in operation for several months. After all the tests, it has proved that this system was stable; the test data met the design requirements. Saft’s battery system performance meets the design standard. As a development project, after sales services were also very important to us. We would like to thank Saft for their support and we look forward to a further cooperation in future.”

Mr. Cao Feng, HiTe Project Manager

Saft’s vision for service

Saft has always been known for the quality of its products and technology. These are now complemented with quality and timely service of battery systems. Training, installation, maintenance, fleet management and e-supervision are all included under Saft’s growing ‘Service’ umbrella.



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

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