

Saft batteries take to the seas with Royal Caribbean International

SPH rechargeable nickel-cadmium (Ni-Cd) batteries provide backup power for on four Radiance Class luxury cruise ships.

Backup for critical systems

Four luxury cruise ships have been fitted with Saft SPH Ni-Cd batteries to provide power for main backup and UPS (Uninterruptible Power Supply) systems. With worldwide cruising schedules, weighing 90,000 tonnes, with 15 decks and with a capacity of more than 2,000 passengers, a reliable backup power supply is critical.

- Saft SPH 190 Ni-Cd cells supply at least 30 minutes of power at 188 kW
- Each main battery is made up of 616 cells providing a nominal voltage of 1.2 V and a capacity at C₅ rate of 190 Ah
- Nine smaller UPS on each ship contain Saft SPH cells with capacities ranging from 13 kW to 27 kW
- Compact batteries are an important consideration on board a ship, where space is tight
- The SPH range offers a 20-year life span with low maintenance



Case study



SAFT

Reliable and compact

Saft's SPH rechargeable Ni-Cd batteries were specifically designed for critical applications and offer the capability of high discharge across a narrow voltage window for 30 minutes or more – ideal for UPS systems on Royal Caribbean International's cruise ships to power key services such as lighting and emergency steering.

Saft battery systems – key features

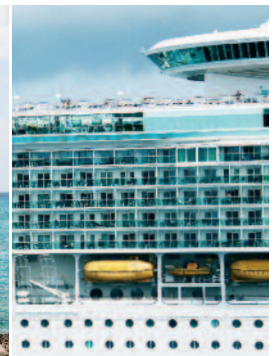
The SPH range has many advantages:

- Cells that are smaller and lighter than comparable lead-acid batteries
- Reliable operation in extreme temperatures with little maintenance
- A long life with low maintenance giving low total cost of ownership
- Capability to do the same job with a smaller capacity battery by providing high power in a constrained voltage window
- No risk of unpredictable 'sudden death' failure
- Robust construction and resistant to electrical abuse



Saft SPH batteries – key benefits

- Long lifetime of over 20 years
- Specifically designed for instant power and critical applications in hospital, traffic control power generation plant and offshore industries
- Operating temperature range of -20°C to $+50^{\circ}\text{C}$ and can tolerate extremes of -50°C to $+70^{\circ}\text{C}$ for short periods
- SPH cells can remain in storage for many years before commissioning without affecting subsequent performance
- Resistant to internal corrosion, so no risk of sudden death
- Can provide very high currents of up to 20 times the battery's nominal capacity
- Well-proven design with sintered / plastic bonded electrode design



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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