

# Performance batteries for better railway maintenance

**FLASH BATTERY IS SUPPORTING THE RAILWAY MAINTENANCE SPECIALIST NEOTEC TO GO ELECTRIC THANKS TO ITS SAFETY, PERFORMANCE AND PREDICTIVE ANALYSIS**

▶ The railway maintenance specialist machinery segment is among those leading the way in the shift towards hybrid and electric. Applications with lithium batteries offer high levels of energy efficiency, reduce operating costs for maintenance to zero, are safe, and eliminate noise and pollutant emissions, fully embracing the objectives of the European Green Deal.

While many businesses are moving towards this conversion, there are also the true trailblazers, those who are leading the way and who are now making their know-how available to more and more markets.

One example of this kind of forward thinking is Neotec, a French company founded in 1991 which designs and produces bogie axles, hydrostatic drives and various kinds of specialist machinery. These include machines developed for aeronautics and aerial platforms for railway maintenance.

## Hybrid propulsion

Since 2015, the latter has been the focus of a transition to hybrid propulsion across the entire range, split into two categories: Hybrid-E and Green-E, now electrified also thanks to the significant contribution of Flash Battery, who provided lithium batteries custom made for the specific requirements of this application.

"The transition to hybrid was an entirely natural decision, in keeping with the spirit of innovation that has always set us apart," says Neotec founder Pascal Roux. "The main difference between the Hybrid E line and the Green E line is in the power of the engines. The first is an electric machine with a small diesel engine which acts as a range extender and which delivers about half its available power electrically: this makes it possible to guarantee a whole day of electric operation, while the combustion engine is mainly used for transport. An additional advantage is that it offers up to a week of operation without having to charge the batteries.

"The Green E line, on the other hand, retains the usual dimensions of a diesel engine, with the addition of a small electric engine which delivers about 1/3 of the power of diesel. This is more suitable for large, energy-intensive machines, which



**LEFT: The Flash Battery 51.2V-200Ah-10kWh lithium battery solution**

**INSET: The Neotec Road Railway platform Hybrid-Sky C10**

and Flash Battery for designing a custom battery that would meet the needs of the manufacturer."

The result was a 51.2V, 200Ah solution, with 10kWh of power. Its mechanics adapt to the shape of the application while respecting the IP rating. Combined with an integrated heating system, this protects the life of the battery even in extremely low temperatures.

travel and operate outdoors a lot. Thanks to the electric power supply, they can carry out almost an entire work shift electrically, with a 50% charge in less than 30 minutes due to the high performance of their Flash Battery lithium batteries."

## Vision for the future

The collaboration with lithium battery producer Flash Battery is one that fully embraces the quest for innovation, an integral part of the vision of both companies.

"We came into contact with Neotec through our French dealer, EFA, a powertrain system integrator that helped them to develop the electric system for the range's first hybrid application, the Road Railway Application Sky C10 Hybrid-E, used for catenary maintenance," says Elisabetta Orlandi, Flash Battery's business development manager. "This collaboration project got off the ground three years ago, with a technical committee involving Neotec's R&D department, EFA engineers for analysing the machine's electrification needs,

## 24/7 reassurance

Moreover, the remote diagnostic system and predictive maintenance offered by Flash Battery's Flash Data Center is greatly reassuring to Neotec and its network of clients in the various global markets in which it operates, as they can check the condition and usage of its machines around the world in real time, 24/7.

The mutual trust established led to a second project, involving the Green-E range for a road rail lifting basket Sky C14. Neotec opted to maintain the same characteristics as the C10, standardising a single solution that can be used for both applications, whose differences mean they can be used for different duty cycles.

Production at the Toulouse-based company currently numbers around 60 to 100 machines a year. The next target? Going fully electric by 2026, offering its clients solutions with more added value than ever: an ambitious goal which, with the right technological partnerships, could advance even further. **ivT**



**FREE READER ENQUIRY SERVICE**

To learn more about this advertiser, visit [www.magupdate.co.uk/pivt](http://www.magupdate.co.uk/pivt)