



Above: Electrical vehicle powered by European batteries

Cell formation

European Batteries has selected PEC to deliver the automated cell formation lines that are to be installed in its new facility

Established in 2003, European Batteries (EB) produces large lithium-ion battery systems that have been developed specifically for the energy, industrial, and automotive sectors. Such is the capacity of EB that it provides these advanced battery systems from development and production through to engineering and testing.

As part of its growth strategy, EB is investing in a large-scale manufacturing facility for high-capacity power cell units. The company chose PEC to undertake cell formation line delivery within the new plant, which is located in Varkaus, Finland.

Martti Ukkonen, CFO of EB, explains

why PEC was chosen: "PEC has an innovative solution for the automated formation of lithium-ion cells. Its system offers a substantial operational cost reduction through complete automation and integration of all processes after the electrolyte filling, including the aging, degassing, grading, and sorting of the cells."

EB has set a tight construction schedule for the facility. The first phase of the factory is due to begin operating during the second quarter of 2010, at which point it will employ about 60 people.

"The standard building blocks approach, as well as the experience of PEC, not only

allow us to achieve all our development timing targets, but also reduce the project risk to a point where it almost does not exist," explains Ukkonen.

The main portion of the system is standard available, thereby reducing the needed project engineering to a strict minimum. The only possible alternative, within the same timeframe, would have been a complete manual system, which was not withheld for obvious reasons. As a result, the system design is completely modular, thus allowing European Batteries to extend the line according to their continuously growing needs – and this is done without having to interfere with production processes.

Ukkonen says: "The modularity of the system allows us to expand it according to our customers' demands. The PEC formation system is managed completely by a standard manufacturing execution system, which controls all aspects of the line, including flow control, quality control, materials handling, and even maintenance tasks. The software guarantees embedded tracking of all cell movements, collected process data, capacity results, and grades, with extensive reporting capabilities."

PEC designs, develops, manufactures, and supports its systems from several locations in Europe, the Americas, and Asia-Pacific. **E&H**



Above: Automation of all processes - formation, degassing, ageing, grading, sorting