Belarus lithium-ion battery technology

Belarus lithium-ion battery technology

Belarus is in discussions with the Russian state corporation Rosatom to establish a comprehensive factory dedicated to the production of energy storage cells. Stanislav Levitsky, CEO of Rosatom Bel, announced this development at a recent news conference.

The project, a joint venture between Belarus and Rosatom, focuses on creating a factory capable of handling the entire production cycle of lithium cells. This includes manufacturing electrolytes, plates, packaging, and industrial energy storage devices, as well as traction batteries. The initiative represents a significant step forward in the energy storage and electric vehicle (EV) sectors.

Details regarding the project are currently being negotiated with the Energy Ministry of Belarus. The terms of the project, including investment, timeline, and capacity, are subjects of ongoing discussions.

Rosatom has an established relationship with BKM Group (Belcommunmash), a Belarusian electric transport manufacturer. In the past year, Rosatom supplied 97 sets of batteries for trolleybuses with extended autonomous travel capabilities, and an additional 28 sets this year. Plans are in motion to renew and expand the cooperation framework with BKM Group, which may involve further integration into the upcoming lithium cell factory project.

This project signifies a major advancement in Belarus" technological and industrial capabilities, particularly in the growing field of renewable energy and electric vehicles. For Rosatom, it represents an expansion of their portfolio into the lithium battery market, indicating a strategic shift towards diversifying energy solutions.

With the changes in technology of energy storage and its use threatens to replace traditional lead-acid technology. The analysis showed that rapid changes in the market of electric batteries is not expected. Despite the rapid development of technology transfer, for example, lithium-ion batteries, traditional lead-acid battery field, is slow, and the positive dynamics of the world market of lead-acid batteries will continue.

According to calculations based on data from the National statistical Committee of the Republic of Belarus, in 2017 the capacity of the primary and secondary Belarusian market of starter lead-acid batteries totaled 676 648 cars Imported to the Republic of Belarus starter battery 938 247 PCs.

According to the Association interbat [2] in Russia in 2016 produced 8 418 400 PCs of starter lead-acid batteries (168 368 tonnes) and exported 4520 tons, imported -- 50521 T. Major importers of starter batteries in Russia: China 35.7% and Germany 17,4%, Vietnam 10.8 per cent, the Philippines at 5.8%, Poland 4.7% of (2 393t). Of lead-acid batteries except the starter produced in Russia 73 665 PCs (cell 2V, the average weight of the cells 38 kg), which is 2 799 tons (estimated), imported 50521 tons of lead-acid batteries except the starter, exported & mdash; 1614 T.

All used batteries must be disposed of and subsequent recovery of lead, for use in the manufacture of new batteries. Extracted from the recycled lead accounts for more than half of its worldwide metal. In the U.S., 80% of lead is obtained by recycling in Europe -- 60%.

Starter lead-acid batteries in 2017 in the Republic of Belarus imported on 13 533t that in 4-5 years will have to be disposed of. Only physical persons in the Republic of Belarus in 2016, collected 10 055 t lead-containing raw materials (waste batteries lead-acid batteries). Estimated in 2017 from individuals established 10 434 t lead-containing raw materials. There is a tendency to increase the amount of battery scrap which is subject to safe utilization.

Processing of lead waste to produce secondary lead is dictated by the environmental necessity of recycling waste batteries, and economic effectiveness even for the camp is rich in natural resources. In Russia there are deposits of all known species on Earth minerals, including lead, however organized enterprises for processing battery and the production of fine lead-free (apart from the economic question is the issue of recycling starter battery, for example, in 2016 the Russian market remained 214 369 tonnes of batteries which 4-5 years should be disposed of).

European countries is estimated to account for 15% of global consumption of lead, of the total volume of production of lead-acid batteries account for about 60% lead. Accordingly, the manufacturing plants lead-acid batteries and metallurgical enterprises for processing and recovery of lead is in almost all European countries, as in Russia and Ukraine.