

Toyo Denki Wins Order for 2,000 kW Regenerative Power Storage System for Tokyo Tama Intercity Monorail

Tokyo, December 18, 2015 — Toyo Denki Seizo K.K. (hereinafter Toyo Denki) announced today that it has won an order for a DC/DC converter E3 Solution System regenerative power storage system with an output of 2,000 kW from Tokyo Tama Intercity Monorail Co., Ltd. (President: Hitoshi Kawashima, Headquarters: Tachikawa, Tokyo Metropolis). The system will be installed at Tokyo Tama Intercity Monorail's Hino Transformer Station, and operations are scheduled to commence in June 2016.

Toyo Denki's DC/DC converter has an output of 1,000 kW per set. By providing two sets for the Tokyo Tama Intercity Monorail, 2,000 kW high-capacity operations will be realized. In addition, the power unit installed in the DC/DC converter is highly reliable, exceptionally practical, and has been applied to many Toyo Denki power conversion units for trains. Further, the DC/DC converter has a touch panel for easier configuration, making for improved operability on site. Even away from the site, a contact input signal makes it possible to perform stop and go commands.

Toyo Denki's DC/DC converter will be used along with storage batteries manufactured by GS Yuasa Corporation (President: Osamu Murao, Headquarters: Minami-ku, Kyoto). Two types of storage batteries are used: the LIM25H-8 regenerative absorption lithium-ion battery with high input/output, and the LIM50EN-12 emergency running lithium-ion battery with large capacity. The regenerative absorption lithium-ion battery stores regenerated power from train braking, and then releases it at the time of train acceleration, recycling power to achieve energy saving. The emergency running lithium-ion battery provides energy in emergencies, such as when trains are stopped between stations due to power failures at transformer stations, so that trains can safely evacuate to the nearest stations, contributing to safe rail transportation.

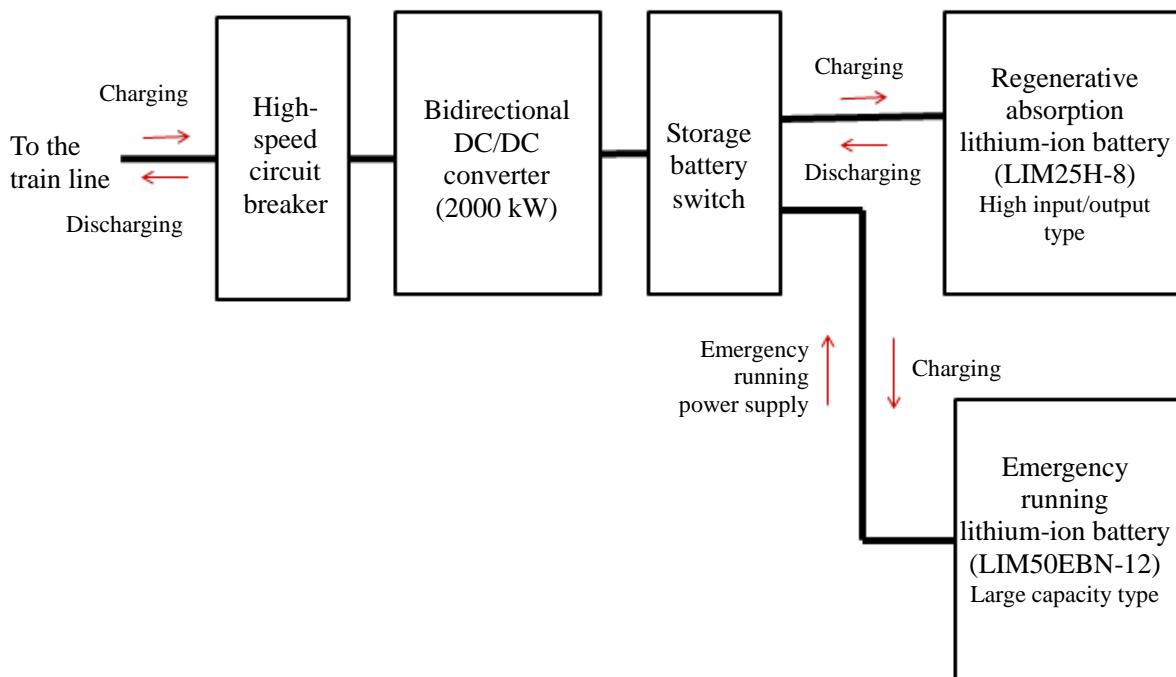
GS Yuasa's lithium-ion batteries can support large capacity and high input or output applications, as well as many others. The batteries have been widely adopted for regenerative power storage systems, large-scale power storage system, and industrial uses such as hybrid cranes and automatic guided vehicles (AGV), as well as in various fields including special applications such as rockets and artificial satellites. Toyo Denki and GS Yuasa Group will continue to contribute to disaster countermeasures and an energy-saving society through the spread of systems using storage batteries.

System Overview

1. System Capacity

Item	Rated Capacity	Remarks
Bidirectional DC/DC converter	2000 kW	1000 kW converter × 2 units
Regenerative absorption lithium-ion battery	74.88 kWh	LIM25H-8: 26 units connected in series/ 4 units connected in parallel
Emergency running lithium-ion battery	202.46 kWh	LIM50EN-12: 16 units connected in series/ 6 units connected in parallel

2. System Structure Diagram



Contact

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