



Electric traction system

Modernization of light rail trains

Light Rail Manila Corporation

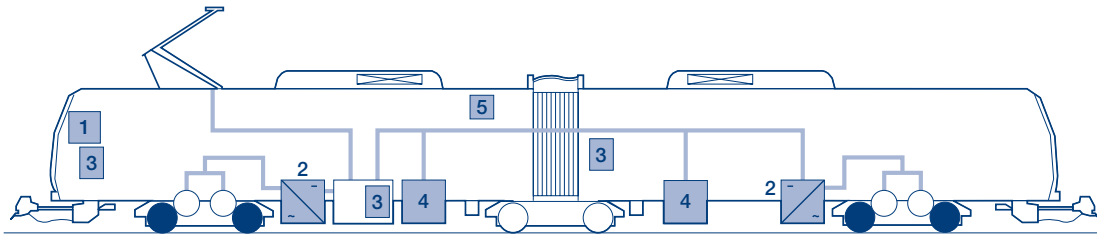
More than 400.000 passengers are using the 20.7km long LRT1 line in the Philippine capital Manila per day.

In January 2018, Voith has been awarded with the modernization of the traction-, auxiliary and vehicle control systems of 24 light rail trains from the 2nd generation. These trains are operated by Light Rail Manila Corporation between the stations Roosevelt in the North and Baclaran in the South of Line LRT1.

Voith replaces the existing systems with its new components by using present interfaces. The modernization will be executed in 2018 to 2020 and will lead to a substantial increase of the remaining vehicles life time.

Vehicle manufacturer	Hyundai / Adtranz, Korea
Operator	Light Rail Manila Corporation, Philippines
Year of manufacturing	1999
Track gauge	1 435 mm
Vehicle length	26.5 m
Tara weight	37.4 t
Axle arrangement	Bo' 2' Bo'
Maximum speed	60 km/h
Catenary wire voltage	750 VDC
Maximum power	680 kW

Traction system



- 1 Diagnostic system
- 2 Traction inverter
- 3 IO control unit
- 4 Auxiliary inverter
- 5 Vehicle control system

Traction system components

Traction inverter EmCon I1000-9AU

The I1000-9AU traction inverter (with integrated break chopper) with 350 kVA continuous power and a max. short time power of 600 kVA is the core product of the traction system. State-of-the-art power electronics, compact and low-inductive power stack design with best switching characteristics and high performance air cooling circuit are the technical base for the excellent performance of the traction inverter designed for underfloor mounting.



Vehicle control and display

The existing vehicle control system is replaced by a modern control and diagnostic system. The originally available functions are kept and a new diagnostic display offers additional user-friendly information for driver and workshop.



VPort IO control unit

The Voith VPort IO control unit provides further interfaces used for the implementation of decentral control systems. The integrated processor enables the realization of additional vehicle control functions.



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