

KB Actuator tests Test report

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V01	22.08.2024	Initial report

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Abbreviations and acronyms

Abbreviation / Acronym	Description
DAC	Digital automatic coupler
ERJU	Europe's Rail Joint Undertaking
HVLE	Havelländische Eisenbahn
IFB	Institut für Bahntechnik GmbH
TTL	Train Test Lab
KB	Knorr Bremse

EXTRACT - 24.02.2026
(Confidential information excluded)

1 Aim of installation

The supplier Knorr-Bremse needs to test the correct functionality of their optimized actuator. Therefore, actuators with measurement cells were installed in the couplers of two wagons. Couple tests were executed.

2 Infrastructure boundary conditions

2.1 Wagon

2.1.1 Shimmns_9383

Model: Shimmns-ttu

Type: 722

Description: Coil transport wagon

Number: 31 80 4675 938-3

Config:

Wagon	Config.	Date	Change
Shimmns_9383	#006	12.08.2024	Initial status before tests: Coupler A: Screw coupler Coupler B: KNN Load state: full

Loading:

Load state	Weight	Source / description / remark
full	82.800 kg	Sources: - Wagon-inscription (see above) - Coil-inscriptions (Coil 1: 31,5 t and Coil2: 27,7 t) Remarks: - Measurement system not included. - Screw coupler exchanged with DAC.

Photo documentation:



Figure 1: Shimmns_9383.



Figure 2: Loading of the Shimmns_9383 with 2 steel coils.

2.1.1 Samms_1781

Model: Samms

Type: 489

Description: Flat wagon

Number: 31 80 4852 178-1

Config:

Wagon	Config.	Date	Change
Samms_1781	#006	09.07.2024	Initial status before tests: Coupler A: V1 Coupler B: K2 Load state: full

Loading:

Load state	Weight	Source / description / remark
full	94.200 kg	Sources: - Wagon-inscription. - Manufacturer information (24 concrete blocks with a weight of 2,7 t each). Remarks: - Screw coupler exchanged with DAC.

Photo documentation:



Figure 3: Samms_1781 (loaded).



Figure 4: Concrete block with a weight of 2,7 t.

2.2 Test-location

The tests were executed on track 3 of the HVLE in Berlin-Spandau (Schönwalder Allee 51, GER-13587 Berlin).

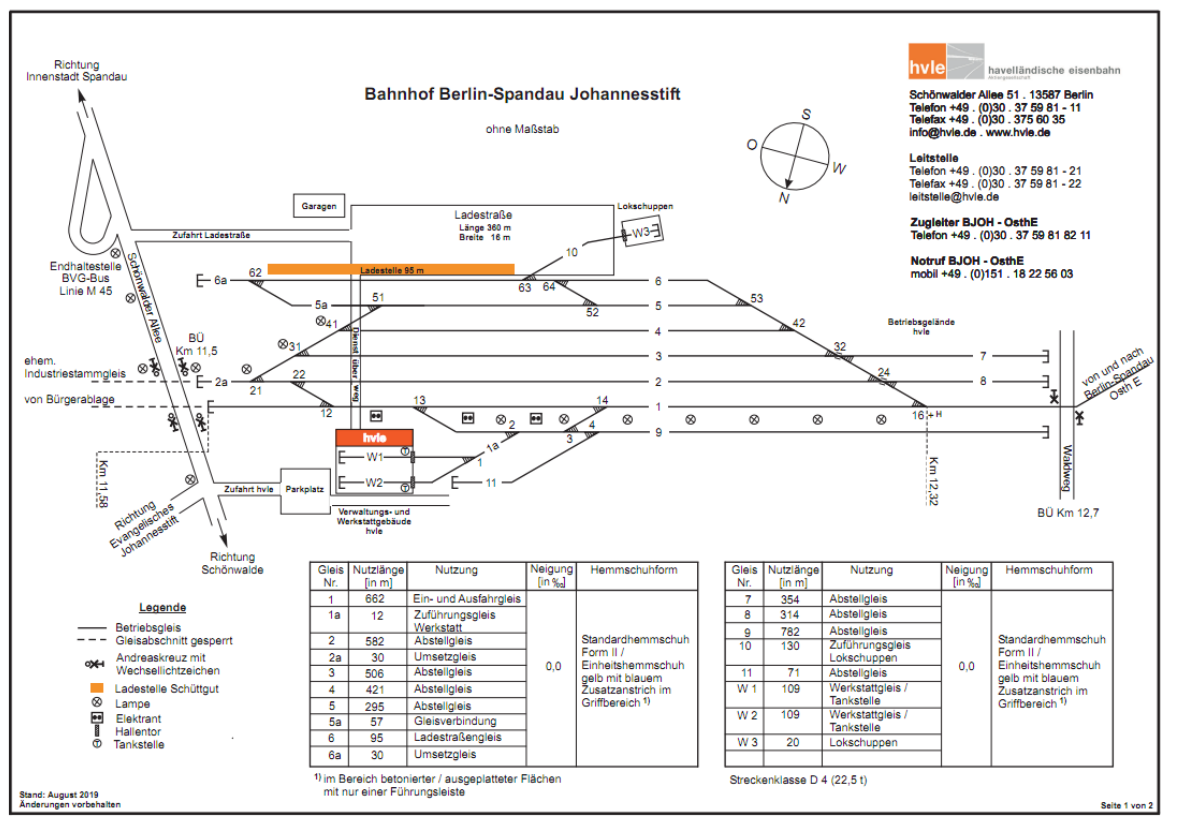


Figure 5: Track layout of the HVLE, location Berlin-Spandau [HVLE_TL].