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Climate chamber simulates snow and sun

Ralf Roman Rossberg reports on the opening of the €65m rolling stock climate chamber in Floridsdorf that replaces older facilities at Wien Arsenal



Among the first vehicles tested at Floridsdorf was one of two Itino DMUs being built by Bombardier for Swedish local authority Tåg i Bergslagen. Following delivery in December and later this month, the 100-seat part-low-floor railcars are due to take over services between Borlänge, Mockfjärd, Vansbro and Malung in the Dalarna region later this year

ON DECEMBER 10 Ingolf Schädler, representing Austrian Transport Minister Mathias Reichhold, marked completion of the rolling stock climate chamber at a ceremony in Wien Floridsdorf. Replacing the site at Wien Arsenal used for testing European rail vehicles since 1961, the Floridsdorf centre offers superior facilities able to verify the performance of a wider range of vehicles, including double-deck cars, in any type of weather (RG 5.99 p278).

At Floridsdorf the main building houses a 100 m climate chamber. There is a smaller chamber 31 m in length, together with a vehicle preparation shop and a pre-warming chamber. Both climate chambers can generate temperatures ranging from -50°C to +60°C. To simulate the effect of the sun, solar arrays are

installed, totalling 200 m² in the larger chamber and 135 m² in the smaller. Artificial rain, snow and high humidity can all be produced.

Both chambers can be used as wind tunnels, with the larger chamber able to simulate wind speeds of nearly 300 km/h; 120 km/h is possible in the smaller chamber. The large chamber also incorporates a roller-rig for dynamic vehicle testing using one driven and one unpowered roller.

Access for rail vehicles is via a spur from the Nordbahn near Siemensstrasse S-Bahn station. There are six tracks in the test centre, which also has provision for climate testing of buses and lorries.

All staff at the Arsenal site, which has now closed, have transferred to Floridsdorf, retaining the expertise built up over 40 years of testing.

The centre was built by SCHIG, the Austrian railway infrastructure finance organisation, which is leasing it

to a consortium known as Rail Tec Arsenal. RTA includes Bombardier Transportation, Alstom, Siemens, AnsaldoBreda and Firema Trasporti, and shareholders include the Austrian state which has a stake of 26%.

RTA is a neutral organisation that guarantees data protection and provides test results only to the commissioning organisation. RTA envisages that the centre will be used for a number of European research projects, and it will also contribute in the development of European norms for international bodies such as the UIC. ■

