

News from Mobility

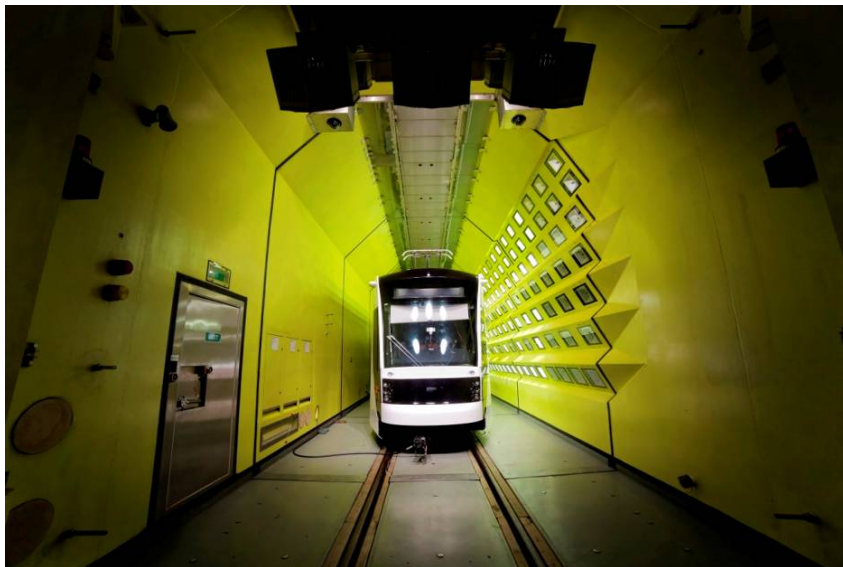
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Avenio tram for a desert country withstands extreme heat

Extreme heat and high humidity are typical of the climate in the Emirate of Qatar. And the Avenio tram scheduled to enter service in the capital of Doha in 2016 will have to function flawlessly under these conditions. To ensure it's ready for these extremes, the tram undergoes comprehensive tests in temperatures ranging from zero to more than 40 degrees Celsius in the Climatic Wind Tunnel testing facility of Rail Tec Arsenal (RTA) in Vienna, Austria.



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In 2016, 19 Avenio trams are scheduled to begin serving a new line in the capital of Qatar – and manage this without overhead contact lines. The trams are equipped with Siemens' Sitras HES hybrid energy storage system that quickly charges even during the shortest station stops. A heavy-duty air conditioning system and special shading on the tram roof protect against the desert country's intense sun and high temperatures.



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Before the tram leaves for Doha, it is subjected to numerous tests in the Climatic Wind Tunnel. To simulate its later operating conditions, an Avenio – which is a stately 27 meters long and 2.55 meters wide – is completely shoved into the huge climate chamber and undergoes various test scenarios.

Inside the tram, humidifiers and heating pads simulate the future passengers. Sunlight is artificially produced with a solar field that can be varied in intensity up to 1,000 watts per square meter.

The facility makes it possible to test the tram under typical climatic conditions for both winter and summer operation. The test data shows whether the tram's climate controls can operate flawlessly in temperatures ranging from zero to more than 40 degrees Celsius. Tests also show, for example, if a fully occupied tram, operating in over 40-degree ambient temperature at 30-percent humidity can maintain a programmed inside temperature of 25 degrees Celsius and continually provide passengers with sufficient fresh air. Various charging cycles of the Sitras HES hybrid energy storage system are also tested at all temperatures. «

All photos are available at: www.siemens.com/press/avenio-qatar

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