

New 80ft InnoWaggon Sggns: PJM carried out overall approval tests of Innofreight's rail vehicle innovation

Graz, March 2023: Innofreight, the innovative rail logistics specialist, is continuously expanding its wagon fleet. The latest new development is the one-piece 80ft InnoWaggon Sggns. The primary requirements were reduced wagon weight but more train load, in order to make rail transport even more economical and efficient for Innofreight customers. For the overall approval, Innofreight relied on the know-how of the ISO/ IEC 17025 accredited testing laboratory PJM. "The new 80 ft InnoWaggon enables even more efficient transports of biomass and other light bulk goods. This allows us to shift more goods from road to rail as well as to optimize existing transports. PJM is a longtime partner who has supported us in these further developments," says Peter Lackner, CEO of InnoWaggon GmbH which is part of the Innofreight Group. The individual test areas were evaluated in several stages:

- Fatigue strength: The strength tests were carried out by the PJM engineering experts according to EN 12663. Another task of the engineering team was to optimize the strength. The static tests were carried out by means of a mobile pressure frame at the site of MFL Liezen. The buffing impact tests took place mainly in St. Michael, not far from Innofreight's headquarters.
- Brakes: The static and dynamic tests according to TSI WAG:2020 were also carried out in the St. Michael area. The uncoupling tests were carried out with various loading conditions.
- Acoustics: The acoustic measurements according to TSI NOI 2014/1204/EU were used to determine pass-by noise, rail roughness and track decay rate.



This project included two novelties:

- Uncoupling device: For the first time, a new device developed by PJM was used for the suspension tests. The new component has proven itself very well since it is lighter, smaller and easier to operate.
- Solar energy: The measuring instruments were supplied with energy by means of a solar panel. The panel can be set up in just a few steps and provides sufficient power for the measurement tests in good weather.

"With its numerous innovations, Innofreight not only provides customers with immediate added value, but also makes a significant contribution to the further development of rail logistics. Thanks to innovative concepts and ongoing development like Innofreight, environmentally friendly rail freight transport is strengthened," says Martin Joch, CEO of PJM. "With our broad expertise in engineering as well as a testing facility, we are able to ideally accompany and support all development steps in the implementation of new rail vehicles."

Innofreight at a glance

Innofreight provides overall logistics solutions in rail freight transport. The company's activities focus on the development of innovative wagons, containers and unloading systems for and in cooperation with its customers. As a specialist for innovative, patented freight transport and logistics systems, Innofreight is responsible for the new and further development of freight wagons in special areas of application. Innofreight equipment is in use in 20 countries and rolls on all three common track gauges. In addition to its headquarters in Bruck an der Mur, Innofreight is internationally represented with locations in Germany, the Czech Republic, Slovenia, Sweden and Switzerland and employs around 140 people.

PJM at a glance

PJM is an internationally renowned railway system specialist and has successfully implemented projects in 30 countries on 6 continents. As an accredited test facility according to ISO/IEC 17025, PJ Messtechnik GmbH carries out approval tests of rail vehicles worldwide. These include, for example, the Mountaineer in Canada, the regional train TILO, the S-Bahn in Berlin or the subways in Chicago and London. PJ Monitoring GmbH is a technology leader in the automation of rail freight transport with forward-looking comprehensive solutions.

PJM was founded in 2006. 60 employees at the Graz site ensure "100 % Made in Austria": R&D, hardware and software development, production & administration come exclusively from Austria.

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For the static strength test according to EN 12663, the mobile pressure frame was used, which is an in-house development by PJM. The vehicle frame is subjected to different loads in order to determine the distortions and stresses that occur.

Credit: PJM, free of charge

The acoustic measurements according to TSI NOI 2014/1204/EU were performed to determine pass-by noise, rail roughness and track decay rate.

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