

Grand Central, Liebherr and Newcastle University Consortium Receives Grant from UK RSSB to Develop Active Radial Suspension System

April 2018 – A consortium of Liebherr-Transportation Systems and NewRail, led by Grand Central Rail have been awarded a grant by the UK Rail Safety and Standards Board (RSSB) for the development of an Active Radial Suspension System in order to reduce wheel and track wear.

Liebherr-Transportation Systems, Grand Central Rail (part of Arriva Group) and NewRail (The Centre for Railway Research at Newcastle University) have received a grant from the RSSB, with funding from the UK Department for Transport, to develop an Active Radial Suspension System (ARSS) which can be retrofitted to an existing bogie.

The ARSS uses electro-hydraulic actuators originally developed and manufactured by Liebherr for aerospace applications to actively steer wheels on rail vehicle bogies, thus reducing wheel and track wear. The reduction of track wear is of particular significance, as track wear is a notable contributor to the Variable Usage Charge (VUC) Train Operators pay to operate trains on the UK rail infrastructure. The ARSS solution is expected to considerably reduce track wear, and the project aims to validate this, and its potential reduction of VUC.

During the project, the consortium will first model the effects of retrofitting the Liebherr ARSS to an existing UK bogie design – the BT-10. Should the modelling demonstrate the expected benefits, the system will be installed on a trial vehicle and tested in the UK.

The project is expected to be completed by late 2019, which if successful could then be made available for commercial use by Liebherr, both in the UK and other world markets.

Liebherr-Transportation Systems – Renowned Manufacturer of Railway Technology

Liebherr-Aerospace & Transportation SAS in Toulouse (France) is one of eleven divisional control companies in the Liebherr Group and coordinates all activities in the fields of transportation and aviation equipment. It employs around 5,400 people worldwide.

Liebherr's transportation systems division supplies cab and saloon heating, ventilation and air conditioning (HVAC) systems, hydraulic actuation systems, dampers and hydraulic load levelling equipment for rail vehicles of all kinds. Liebherr has many years of experience in the development, manufacture, and field service of these technologies, offering support throughout the entire product lifecycle. In addition to its own sales and service centres, the division has access to the Group's extensive and unique technologies as well as development and service facilities around the world. This global set-up means that Liebherr-Transportation Systems is there for its customers wherever they may be.

Grand Central Railway Company Limited

Grand Central Railway Company Limited is an established train operator which provides direct rail connections from towns and cities in Yorkshire and the North East England with London. Grand Central is part of the Arriva group, one of the leading providers of passenger transport in Europe. Arriva employs more than 60,000 people and delivers over 2 billion passenger journeys across 14 European countries each year.

NewRail – Centre for Railway Research at Newcastle University

NewRail acts as an interface between rail industry and academia, focusing on railway research activities across Europe, and undertakes university research that is of relevance to the rail industry. NewRail has achieved significant capabilities in design, analysis & modelling of novel railway technologies and solutions, being involved in leading EU and worldwide rail research for over twelve years.

RSSB

Through research, analysis, and insight RSSB supports our members and stakeholders to deliver a safer, more efficient and sustainable rail system. Our vision is to be a centre of excellence, valued by its members and stakeholders as an essential

contributor to their success. Our independent evidence based approach is built on strong technical capability, and the enabling of collaborative industry engagement for the benefit of the whole rail system.

Caption

bogie-design-BT-10-copyright-grand-central-rail.jpg

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Contact person

Ute Braam

Corporate Communications

Phone: +49 8381 46 4403

E-mail: ute.braam@liebherr.com

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Liebherr-Aerospace & Transportation SAS

Toulouse, France

www.liebherr.com