DYNAFREIGHT
Project ID: 730811
Funded under:
H2020-EU.3.4.8.5. - Innovation Programme 5: Technologies for sustainable and attractive European rail freight

Innovative technical solutions for improved train DYNAmics and operation of longer FREIGHT Trains

From 2016-11-01 to 2018-06-30, closed project | DYNAFREIGHT Website

Project details

| Total cost: | Topic(s): |
| EUR 999 822,50 | S2R-OC-IP5-02-2015 - Improved vehicle/train dynamics |
| EU contribution: | Call for proposal: |
| EUR 999 822,50 | H2020-S2RJU-OC-2015-01-2 See other projects for this call |
| Coordinated in: | Funding scheme: |
| Belgium | Shift2Rail-RIA - Research and Innovation action |

Objective

DYNAFREIGHT stands for Innovative technical solutions for improved train DYNAmics and operation of longer FREIGHT Trains. The project will provide inputs for the development of the next railway freight propulsion concepts within S2R. Two main areas will be addressed:

1. Freight running gear for locomotives: DYNAFREIGHT will design and develop the necessary concepts that will allow a locomotive freight bogie to reduce wheel and track wear, to have lower noise and lower LCC, by focusing on:
   • Materials with freight vehicle applicability that allow a lighter bogie frame.
   • Noise optimized wheelsets and absorbing structures to reduce running gear related noise.
   • Passive and mechatronic systems for radial steering, improving running performances compared to conventional bogies. Reduction of wheel wear and damage, improved traction in curves and reduced resistance to motion in sharp curves will be achieved.
   • Monitoring of the most maintenance cost-intensive bogie elements, reducing LCC and improving the reliability and availability of the locomotive.

2. Operation of long freight trains: following the outcomes of MARATHON, DYNAFREIGHT will prepare the path for regular operations of long freight trains:
   • Defining functional, technical and homologation requirements for a radio remote controlled system.
   • Proposing safety precautions in train configuration and brake application by simulating the longitudinal forces and the derailment risk of long freight trains.
   • Identifying infrastructure adaptions for the operation of long freight trains.

By the end of the project, the main achievements will be:
• Improved performances: traction, speed, running dynamics and wheel/rail efforts
• Reduced rail freight noise at the source
• Enhance capacity/traffic throughput with the operation of longer trains
• Reduced of operation and maintenance costs (reduce wheel and rail wear, smarter maintenance, etc.)

Related information

Report Summaries
Periodic Reporting for period 1 - DYNAFREIGHT (Innovative technical solutions for improved train DYNAmics and operation of longer FREIGHT Trains)
Coordinator

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EU contribution: EUR 87,625

Activity type: Higher or Secondary Education Establishments
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Participants

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EU contribution: EUR 181,093,75

Activity type: Private for-profit entities (excluding Higher or Secondary Education Establishments)
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EU contribution: EUR 62,750

Activity type: Other
Contact the organisation

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EU contribution: EUR 111,125

Activity type: Higher or Secondary Education Establishments
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