PROJECT

SPEED-EU

Damping device to solve the pantograph-line capture problems, especially for the EU high-speed railways lines

Funding: European (Horizon 2020)
Duration: Feb 2018 - Jul 2018
Status: Complete
Total project cost: €71,429
EU contribution: €50,000

CORDIS RCN: 213634

Objectives:
Officina Fratelli Bertolotti S.p.A. was founded in 1901 as a small blacksmiths workshop. From 1920, it specialised in iron carpentry and in the post-war period it becomes a modern industry thanks to the acquisition of customers in the industry "Electricity transmission". Today the company brand is linked with some of the most important Electrical and Transport companies in various countries. The proposed innovation was started in order to respond to the emerging needs of the railway sector for the high-speed trains infrastructure. The effectiveness of electricity uptake by the overhead line has been a problem since the abandonment of the "third rail", but the increase in speed and power demands made it even more difficult to ensure continuous contact between catenary and crawling, with the consequent formation of electrical arcing that can damage fixed installation, pantograph and electrical systems of the train. The ability to maintain a continuous and fluid contact between these two elements is one of the main factors that limit the speed of trains. The most direct solution, - the stringing of conductors - has considerable issues related to the substitution of the infrastructure resulting in high costs and rail traffic interruption. Our innovation exploits the non-linear kinetic-dynamic made by the specific construction, it is mechanically simple, does not use materials sensitive to temperatures, nor dissipation by Joule effect, works for small and large oscillations, does not use fluids that may be dispersed in the environment, and can be inspected visually. Furthermore, it is much less expensive than the replacement of the conductors and of support structures, allowing to save 90% of replacement costs. From the exploitation of SPEED-EU we expect to create 15 new jobs, enter into the rail sector and increase revenues of €56 million in a 4-years commercialization period.

Parent Programmes:
H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport

Institute type: Public institution
Institute name: European Commission
Funding type: Public (EU)

Lead Organisation:

Officina Fratelli Bertolotti Spa

Address:
VIA MILANO 4
10088 VOLPIANO
Italy
EU Contribution: €50,000

Technologies:
Rail vehicle design
Diagnostic pantograph
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