

Case Study: Russian Railways saves \$15,000 p.a. on every train using Nanoprotech

Almost every railway train in Russia needs to have its electrical parts, including the blowers of the traction engines, maintained. Due to low temperatures and adverse conditions of operation, anti-corrosion and moisture protection measures must be taken at least three times per year. In order to enable staff to clean vulnerable parts of motors, the whole locomotive should be lifted and partially disassembled. The original procedure would take more than 5 days and use approximately \$5,000 worth of materials as well as work hours. This is not even taking into consideration the opportunity cost of the train's absence from the tracks.

By using simple spraying of Nanoprotech Anti-corrosion on electrical parts, Russian Railways was able to cut time spent on maintenance* and ensure faultless work without disassembly. Work using this new method can be completed in just one day; saving \$15,000 every year**.

Key Facts & Figures about RZD:

- The second-largest network in the world with 85,200 km of track – 43,100 km of which is electrified

- Carries over 0.95 billion passengers and 1.2 billion tons of freight annually across 11 time zones
- Responsible for 42.3% of Russia's total freight traffic (including pipelines) and more than 32.7% of passenger traffic
- Employs over 975,000 people
- A major contributor to the fast-growing Russian economy
- Assets worth over 3189.9 billion Roubles
- Russia's fourth-largest company by revenue – over 1195.1 billion roubles for 2010 (according to IFRS)



*See [Tech report №0211/1](#) - for test results.

**Savings to be considered as estimates.

