Wheelset Integrated Design and Effective Maintenance

Fact Sheet

Project Information

WIDEM
Grant agreement ID: 516196

Funded under
FP6-SUSTDEV

Start date
1 January 2005
End date
30 June 2008

Overall budget
€ 3 766 500

EU contribution
€ 1 949 900

Coordinated by
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Objective

The economic efficiency and competitiveness of the rail transportation mode depends on safety, availability and maintenance of its individual highly loaded structure components such as railway wheelsets. The WIDEM project aims to improve efficiency and competitiveness through a fundamental re-examination of wheelset design, which in turn will facilitate improved maintenance practices. Combining inputs from reliable service measurement of wheel-rail forces carried out by means of an innovative instrumented wheelset and extensive assessment of actual material properties, an original endurance strength design concept will be developed and validated through a comprehensive testing programme on full scale wheelset prototypes.

A flexible numerical tool is also proposed as an upgrading of existing knowledge. Additionally, the project will develop and evaluate alternative NOT (non-destructive testing) techniques that allow a greatly increased detection probability and a size...
testing) techniques that allow a greatly increased detection probability and a size estimation of cracks to set up a schedule for NOT periodicity inspection. The research work will lead to the definition of wheelset design procedures and maintenance methods to be implemented into existing standards for quick and easy optimisation of the process.

**Programme(s)**

**Topic(s)**

**Call for proposal**

FP6-2003-TRANSPORT-3

**Funding Scheme**

STREP - Specific Targeted Research Project

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