A Case Study for Assessment of Risks of Transportation Dangerous Goods by Rail

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5) Organizational unit: Departement Maschinenbau und Verfahrenstechnik, direkt, Institut für Energietechnik, direkt, Kroger, Wolfgang, kroeger@mavt.ethz.ch, LZ=03292

6) Project leader(s):
- Birchmeier, Jurg, birchmeier@mavt.ethz.ch, Maschinenbau u. Verfahrenstech, I. für Energietechnik

7) ETH researcher(s): no entry

8) External researcher(s): no entry

9) Funding source(s):
- Industry

10) Partner organizations: no entry

11) Short Summary: New approach and decision support tool, application and validation within a case study in cooperation with SBB; use of GIS data, hot spot identification, accident scenarios development and release frequency assessment; feasibility study on methods for accident prediction, risk performance indicators

12) Keywords: Safety Technology, Transport Technology

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13) Project description:

The amount of hazardous material transported by rail is continuously increasing. Therefore, and under the constraints of competition, the assessment of risks becomes a major concern. As state-of-the art approaches will not take into consideration the complexity and the dynamic aspects of the transportation systems, a more sophisticated approach is required.
Research activities at ETH Zurich first concentrate on the identification of potential hot spots, the characterization of risk profiles (accident scenarios, accidental releases, consequences / impacts / frequencies, potential countermeasures as a whole) and the comparison with results of calculations with regulatory methodology. The work is based on the recent methodology and tools developed by KOVERS at the ETH Zurich. The objective of further tasks will be the development of an IDSS tool (Integrated Decision Support System, see Figure 1) for supporting emergency response related activities, in real accident situations due to transportation of dangerous goods.

14) Popular description:

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15) Graphics: no entry

16) Publications: no entry

17) Links to important web pages: no entry