Wagon Workshops and Maintenance – an Advanced Set Up for the Safety of Rail Transport
Four Systems Influence the Safety of a Wagon

- Infrastructure and Traction System
- Maintenance System
- Workshop System
- New Build System

Freight Wagon
Each System Consists of Various Building Blocks

- **Construction and quality of the railway infrastructure**
- **Passive safety measures in the area of infrastructure**
- **Inspection of wagon by RU upon reception**
- **Speed of transports (phases of acceleration and braking)**
- **Loading and unloading facilities**

**Maintenance System of the keeper / certification system for ECM**
- **Technical rules**
- **Inspection of tanks by official experts**
- **Revisions**
- **Industrial safety regulations**

**TSI compliance**
- **Allowance for entry into service**
- **Hazardous goods regulations**
- **Technical rules**
- **Certification of the manufacturer**
- **Quality system of the keeper**

**Maintenance System of the keeper**

**Maintenance System of the keeper / certification system for ECM**
- **Technical rules**
- **Inspection of tanks by official experts**
- **Revisions**
- **Industrial safety regulations**

**Freight Wagon**

**Infrastructure and Traction System**

**Workshop System**

**New Build System**

**Technical Assessment**
- **Certification of workshops**
- **National concession for workshops**
- **Technical methods for manufacturing and testing**
- **Quality system of the keeper**

8 September 2009
The Lifecycle of a Wagon –
The Main Drivers of Safety

**New Build System**
- TSI compliance check by Notified Bodies
- Tank approval by tank experts in accordance with RID
- Putting into service approved by NSA

**Workshop System**
- Approval for non destructive testing and welding by independent bodies
- ISO certification by independent bodies
- Quality control by keepers

**Maintenance System**
- Based on maintenance regulations of former UIC railways
- Improved on the basis of failures detected in daily business
- Attempts to get more standardisation in order to prevent mistakes in workshops

8 September 2009
An Example for the Steps in the Maintenance of Axles During a Main Revision

- Visual inspection of axles to determine mechanical damage, general condition, and defects of the wheel bearings
- Report on any extraordinary damages that are not yet covered by maintenance procedures
- Maintenance according to VPI Maintenance Manual
- Complementary instructions to VPI Maintenance Manual
- Ultrasonic inspection of wheel rims
- Internal stress examination of wheel rims through ultrasonic inspection
- Magnetic particle inspection of axles and axle journal
- Ultrasonic inspection of parts of axles
- For specific axles: additional magnetic particle inspection of the wheel disc
- Documentation of all tests and the maintenance completed
Development of Maintenance Requirements –
A Growing List that Requires Coordination

Recent requirements –
with a huge time challenge
- Scrapping of heavily corroded axles
- Shorter revision periods for axles with some major corrosion scarring

New requirements following new interpretation of existing rules
- Blasting of axles during a main revision of wheelsets
- Ultrasonic and/or magnetic particle inspection of complete axles
- New painting of axles

Requirements until July 2007 (example)
- Wheelset maintenance on the basis of the technical rules of the historical national railways
The Europe Wide Harmonisation of Minimum Maintenance Criteria is Essential

- Different Countries have a different understanding of non-harmonised standards and technical regulations

- Little information about the maintenance and critical limits for various parts of a wagon are available in EN standards and Europe wide acceptance

- Maintenance procedures are mainly based on the experience of railway undertakings or keepers and can therefore differ substantially

- The developed experience in the maintenance systems for freight wagons has not been reflected in the standards for new built components
Let’s not Pave the Way for More Road Transport!

• What we must prevent for the sake of the safest and most environmentally friendly mode of transport
  → Intrusion into the free rail freight transport
  → Hampering of rail freight transport
  → A shift towards road transport

• Therefore the following must be taken into account
  → Additional non coordinated inspections on a national basis to be eliminated
  → Immediate inspection of all axles is not feasible due to lack of workshop and technical equipment capacities and lack of qualified staff
  → General reduction of axle load until further inspection would result in a massive increase of transport costs

8 September 2009
Conclusions - 1

• The sector has in place a sophisticated, state of the art, and reliable system for building and maintaining safe wagons

• In particular for wheelsets and axles additional sensible measures for the enhanced quality of maintenance will be taken and have to be implemented immediately

• As individual Countries differ in their maintenance criteria and procedures a European wide harmonization is required
  → To define the minimum requirements for maximum wagon safety
  → To enable the seamless transport flow on the European railways

• A strong role of the European Railway Agency for the coordination of the NSAs is strongly supported
Conclusions - 2

- Any additional uncoordinated inspections at national level have to be eliminated

- The minimum criteria to be fulfilled by the maintenance system have to be defined and assessed in the short term by a Task Force to be set up following this safety conference

- Any premature conclusions or consequences for the maintenance or load on wagons – coming on top of the ones already decided - have to be avoided
About UIP

• The International Union of Private Wagons (UIP) encompasses 16 European associations from 16 European Countries. The associations and the UIP represent owners, loaders, users and other parties interested in about 180,000 private rail freight wagons running in Europe.

• The UIP’s main objective is to guarantee a future for the private wagon within a liberalized rail freight sector.

• Within the framework of its European activities UIP actively supports together with its partner organizations all corresponding European liberalization policy endeavours.
About CLECAT

- CLECAT represents the interests of 22 national organisations of European freight related service providers.

- CLECAT members voice the interests of more than 19,000 companies employing in excess of 1,000,000 staff.

- CLECAT member companies offer services of any kind relating to the carriage, storage, handling, packing or distribution of goods as well as ancillary services.
Thank you for your attention!