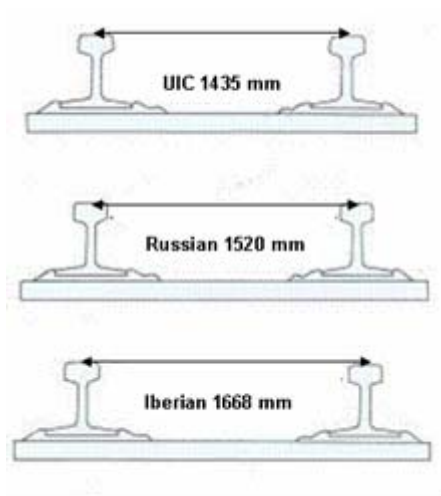


Study on European Automatic Track Gauge Changeover Systems (ATGCS)



Mirosław Kanclerz
Manager CEE

How to overcome differences in track gauges?

- **Change of track gauge**
- **Transshipment**
- **Exchange of bogie or wheelset**
- **Gauge-adjustable wheelset + changeover facility = automatic track gauge changeover system (ATGCS)**

Different ATGCS 1

- **Currently there are four ATGCS**
 - TALGO
 - CAF
 - DB Rafil
 - PKP SUW2000
- **Main differences**
 - Technology
 - Type of traffic
 - ...

- **Different ATGCS but one unique opportunity**
 - to reduce total transport time
 - to avoid a source of damages
 - to increase transport reliability
 - to make railway transport more friendly to environment
 - to reduce transportation costs

Former UIC activities in this field

- **2002-2003 Study on defining a common infrastructure for ATGCS: TALGO, DB Rafil and PKP SUW 2000**
- **Conclusions**
 - **DB Rafil and PKP SUW 2000 are technically compatible and thereby 'interoperable'**
 - **Three systems are not compatible**
 - **Development of common infrastructure possible – necessary modifications to both gauge-adjustable wheelsets and changeover installation**
 - **NO simple, cost-effective solution at that time**

Current study proposal

- **A new UIC study proposal on comparative assessment of the European track gauge changeover systems was submitted by PKP to the members of CEEA**
- **CEEA approved and developed proposal**
- **PTR Steering Body supported the proposal and decided to launch a feasibility study together with CEEA**

Why such a study?

- **Are ATGCS represent modern technologies or kind of an experiment ?**
- **Is application of these systems economically viable?**
- **What RUs (including new entrants) and IMs should know about ATGCS to decide whether to apply them or not**

➤ **Comparative assessment of the European ATGCS**

- **Technical characteristics**
- **Scope of application**
- **Experiences in operation**
- **Directions of development – technical, legal**
- **Guidelines**

➤ **Commercial aspects**

- **Traffic flows**
- **Types of traffic**
- **ATGCS and alternative solutions**

Objective of the study

- **To compare existing ATGCS from the point of view of their optimum business utilization and performance in the specific areas in Europe and worldwide**
- **To promote newest technologies in the context of compatibility of different railway systems
1435/1520/1668**

The first step – feasibility study

- **Two meetings of UIC working group – June, September 2007**
 - Poland (PKP, SUW 2000)
 - Germany (DB, Rafil)
 - Spain (CAF, Talgo, ADIF, RENFE)
 - Lithuania (LG)
 - Finland (VR)
 - Slovakia (ZSR)
 - Romania (CFR Marfa)

- **The final meeting – November 2007**

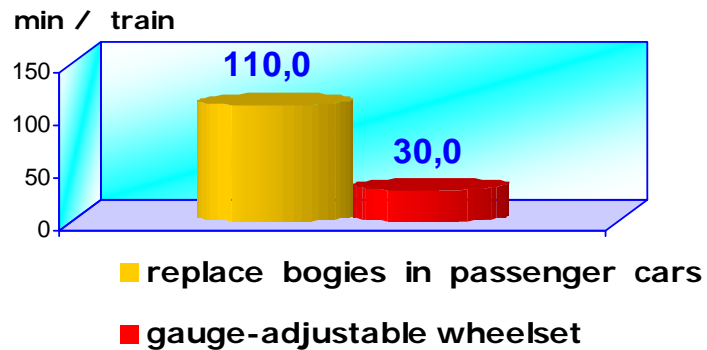
First remarks 1



ATGCS in passenger traffic (high speed)

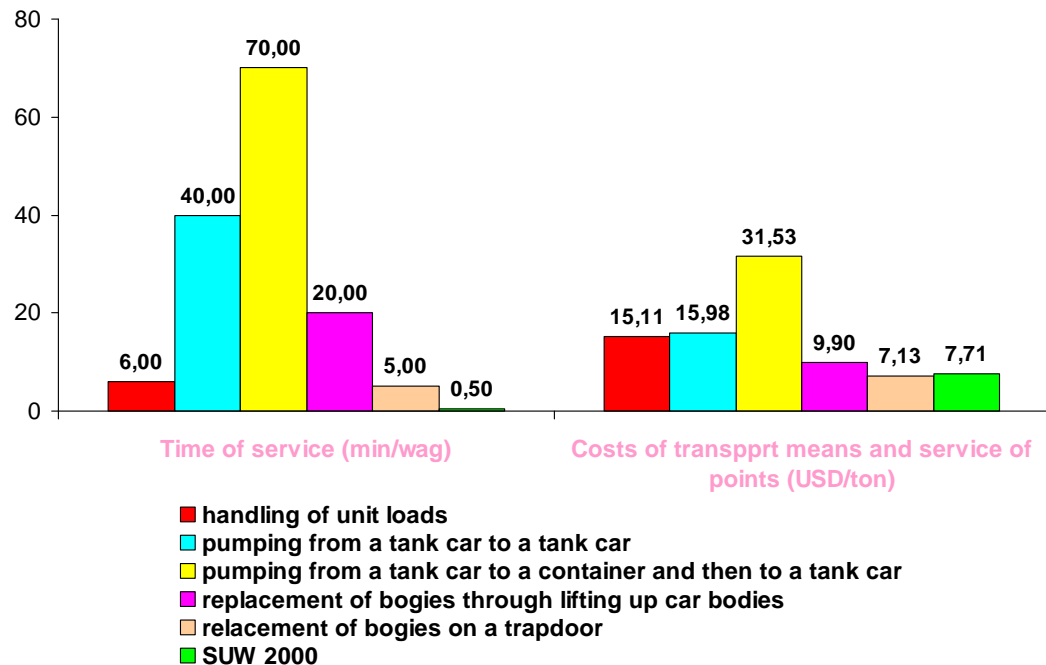
Variable gauge systems	Country	Max. speed (announced by manufacturers)	Comments
SUW 2000	Poland	160 km/h	No high-speed
DBAG/Rafil Type V	Germany	120 km/h	No high-speed: only for freight
CAF BRAVA	Spain	250 km/h	Started service $v_{\max}=250\text{km/h}$ in 2005
Talgo RD	Spain	250 km/h	Currently in service up to 220km/h
Japan RTRI	Japan	300 km/h	Top speed reached in tests 246km/h
Korea KRRI	Korea	?	First results to be shown in 2008

➤ Time savings – passenger traffic



First remarks 4

➤ Time & cost savings – freight traffic



Conclusions

- **Strong involvement of all concerned parties: railways and manufacturers of the systems**
- **A lot of data and information have been provided by participants so far**
- **The results of the feasibility study will be used to support the decision making process concerning launch of the main study in 2008**

Thank you for your attention