THE UN ECE WORLD FORUM FOR HARMONIZATION OF VEHICLE REGULATIONS (WP.29) – RECOGNIZED LEADER IN DEVELOPMENT OF SAFETY REQUIREMENTS FOR THE ROAD VEHICLES

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THE HISTORICAL NOTE

The World War II led to destruction of means of production, opening of the markets and expansion of the international trade.

Absence of harmonization in technical requirements caused occurrence of technical barriers, repeated confirmation of compliance and increase of costs.

Necessity of unification of requirements to vehicles and development of a mechanism of a mutual recognition of compliance assessment results.

- **1949** Adoption of the Convention on Road Traffic
- **1952** Establishment of the WP.29 Working Group with a view of realization of the technical provisions stipulated in the 1949 Convention
- **1956** Conclusion of the Rome 4-party agreement on adoption of the first agreed provisions to headlights
- **1958** Conclusion of the Geneva Agreement and appointment of WP.29 as the administrative body of the Agreement
- **1997** Conclusion of the Vienna Agreement (technical inspections) under the WP.29 aegis
- **1998** Conclusion of the Global Agreement under the WP.29 aegis
- **2000** WP.29 transformation into the “World Forum for Harmonization of Vehicle Regulations (WP.29)”
WP.29 PARTICIPANTS

Countries – UN members
- European countries
- American counties (the U.S.A., Canada, Brazil, Argentina)
- Asian countries (Japan, Korea, the People Republic of China, India, Thailand)
- South Africa
- Australia, New Zealand

Regional organizations of the economic integration
- European Union

Non-governmental organizations
- Manufacturers’ organizations (OICA, CLEPA, IMMA, etc.)
- Standardization organizations (ISO, IEC, SAE, etc.)
- Consumer and environment protection organizations (CI, CONCAVE, etc.)
- Organizations related to vehicle utilization (AIT/FIA, CITA, UNATAC, etc.)
- Other organizations
WP.29 INTERNATIONAL AGREEMENTS

1958 Geneva Agreement

«Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles... and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions» (127 UNECE Regulations)

50 Contracting Parties
Russia since 1987

- The UNECE Regulations are voluntary applied by the Contracting Parties with a mutual recognition of results of compliance assessment

1998 Global Agreement

«Agreement concerning the establishing of global technical regulations for wheeled vehicles...» (12 GTR)

32 Contracting Parties
Russia since 2000

The Contracting Parties transpose the CTR provisions into the national legislation

1997 Vienna Agreement

«Agreement concerning the adoption of uniform conditions for periodical technical inspections of wheeled vehicles and the reciprocal recognition of such inspections» (2 Rules)

11 Contracting Parties
Russia since 1997

The Rules include roadworthiness requirements for vehicles in operation
WP.29 structure and activity

United Nations Economic Commission for Europe

Inland Transport Committee

The World Forum for Harmonization of Vehicle Regulations

WP.29

UNECE

ITC

GRPE

The Working Party on Pollution and Energy

GRSG

The Working Party on General Safety

GRRF

The Working Party on Braking and Running Gear

GRE

The Working Party on Lighting and Light-Signalling

GRB

The Working Party on Noise

GRSP

The Working Party on Passive Safety

Informal Working Groups

14

6

4

1

5

10

Working Parties

14

6

4

1

5

10
SAFETY REQUIREMENT DEVELOPMENT STRATEGY

Effective realization of actions for safety increase of a design provides for reduction of number of road accidents and decrease in burden of their consequences, despite to growth of the vehicle fleet and increase of the total travelling distance.

- UN R66 Strength of bus superstructure
- UN R43 Glazing
- UN R44 Child restraint systems
- UN R46 Rear-view mirrors
- UN R36 Bus general safety
- UN R25 Head restraints
- UN R21 Interior fittings
- UN R13 Braking systems
- UN R16 Seatbelts
- UN R13-06 ABS
- UN R94 Occupant protection at frontal collision
- UN R95 Occupant protection at lateral collision
- GTR 9 Pedestrian protection
- UN R13-H ESC Passenger cars
- UN R16-05 Signaling device for unbuckled seatbelts
- UN R13-11 ESC Commercial veh.
- UN R16-04 Seatbelts with automatic retractors
- UN R123 AFS
ESTABLISHMENT OF SAFETY REQUIREMENTS

The number of objects of requirements applied to the different vehicle categories

<table>
<thead>
<tr>
<th>Safety Kinds</th>
<th>Vehicle Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cars M1</td>
</tr>
<tr>
<td>Active Safety</td>
<td>13</td>
</tr>
<tr>
<td>Passive Safety</td>
<td>16</td>
</tr>
<tr>
<td>Post-crash Safety</td>
<td>2</td>
</tr>
<tr>
<td>Ecological Safety</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

The numbers of the UNECE Regulation are specified in brackets.
APPLICATION OF THE UN REGULATIONS BY CONTRACTING PARTIES

- Adoption of the UN Regulations
- Application by the Russian Federation
- Application by Japan
- Application by the European Union

- Вступление в силу Правил ЕЭК ООН
- Присоединение РФ к применению Правил ЕЭК ООН
- Япония
- ЕС

- 1986
- 1988
- 1990
- 1992
- 1994
- 1996
- 1998
- 2000
- 2002
- 2004
- 2006
- 2008
- 2010
- 2012
DRAFT NEW UN REGULATIONS

- LED Lighting devices
- Pedestrian safety
- Line departure warning systems (LDWS)
- Automatic emergency braking systems (AEBS)
- Child restraint systems
DEVELOPMENT OF GLOBAL TECHNICAL REGULATIONS (GTR)

**Adopted (implemented through UN Regulations)**

- 1 - Doors locks and door retention components (R11)
- 2 – Worldwide motorcycle test procedure (WMTC)
- 3 – Motorcycle brake systems (R78)
- 4 - Worldwide heavy duty engine test procedure (WHDC) (R49)
- 5 - On-board diagnostic systems (OBD) (R49)
- 6 - Safety glazing materials (R43)
- 7 - Head restraints
- 8 - Electronic stability control systems (ESC) (R13H)
- 9 - Pedestrian safety (R[ ])
- 10 - Off-cycle emissions (OCE) (R49)
- 11 – Non-road mobile machinery emissions (R[96])
- 12 – Motorcycle identification of controls

**Under development**

- Head restraints (phase 2)
- Pedestrian safety (phase 2)
- Doors locks and door retention components (amendments)
- Worldwide heavy duty engine test procedure (WHDC) (amendments)
- On-board diagnostic systems (OBD) (amendments)
- Tyres for vehicles with GVW up to 4,536 kg(10,000 lbs)
- Hydrogen and fuel cell vehicles
- Electric vehicles
- Worldwide light vehicle test procedure (WLTP)
- Pole side impact (PSI)
- Side impact dummies
- Quiet vehicles
INTERNATIONAL REGULATIONS IN CONTRACTING PARTIES NATIONAL LAWS (1)

Only five Contracting Parties to the 1998 Agreement are not the Contracting Parties to the 1958 Agreement and do not use the mechanism of the mutual recognition of the compliance assessment.

<table>
<thead>
<tr>
<th>Country</th>
<th>National compliance assessment system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>Self-certification</td>
</tr>
<tr>
<td>US</td>
<td>Self-certification</td>
</tr>
<tr>
<td>China</td>
<td>Third party approval</td>
</tr>
<tr>
<td>India</td>
<td>Third party approval</td>
</tr>
<tr>
<td>Moldova</td>
<td>Third party approval</td>
</tr>
</tbody>
</table>

- Implementation through direct reference to the UN Regulations or UN GTR
- Integration of the UN Regulation and UN GTR provisions into the national legislation
INTERNATIONAL REGULATIONS IN CONTRACTING PARTIES NATIONAL LAWS (2)

National Legislation:
- **US**: Road Safety Act
- **Russia**: Federal Law On Safety of Road Traffic
- **Japan**: Road Vehicles Act
- **Korea**: Road Traffic Act and Automobile Management Act

- **Russia**: Direct references to the UN Regulations (GTR) in the Technical Regulation On Safety of Wheeled Vehicles
- **EU**: Direct references to the UN Regulations (GTR) in the WVTA Framework Directive (2007/46)
- **US**: Implementation of the UN Regulations (GTR) in the FMVSS
- **Japan**: Implementation of the UN Regulations (GTR) in the national regulations
- **Korea**: Implementation of the UN Regulations (GTR) in the vehicle safety standards

Adopted by WP.29
1997 AGREEMENT ON VEHICLE TECHNICAL INSPECTIONS

- Rule № 1: Vehicle emission requirements
- Rule № 2: Requirements to vehicle identification, braking systems, steering, visibility, lighting devices, wheels, tyres, chassis, etc.
- Scope: Vehicle categories М2, М3, N2, N3, O3 and O4
- WP.29 decided to extend the scope to М1, N1, O1 and O2 vehicle categories

Countries with developing economies, not having national system of periodic vehicle technical inspections, are invited to employ the WP.29 experience and apply the Rules № 1 and № 2 in the national legislation
Objective 3: Make Vehicles Safer

UN Member States are invited:

- To apply and promulgate motor vehicle safety Regulations developed by the WP.29
- To make all information of vehicle safety available to consumers
- To provide for vehicle fitting with the seat belts complying with the UN Regulations
- To introduce the advanced systems of active safety (electronic stability control, advanced braking systems etc)
- To apply safety Regulations concerning pedestrian protection
WP.29: OPENING PROSPECTS

- Development of provisions adapted to the technical progress
  - Intelligent Transport Systems (ITS)
  - Priority of driver’s control
- Development of the International Whole Vehicle Type Approval procedure (IWVTA)
- Development of an electronic Database for the Exchange of Type Approval documentation (DETA)
REVISION OF THE 1958 GENEVA AGREEMENT

- A possibility for type approval pursuant to separate UN Regulations or set of requirements for a complete vehicle (IWVTA)

- Improvement of responsibility of technical services

- Introduction a database of type approval documentation and related information

- The various levels of stringency of requirements can be established in the UN Regulations
International WHOLE VEHICLE TYPE APPROVAL (IWVTA)

- First stage - for M₁ vehicle category

- Formation of the list of separate UN Regulations, composing the IWVTA requirements
  (UN Regulations and generally applicable regional requirements, which will be converted to UN Regulations)
The type approvals can be granted pursuant to the lower level of requirements of the UN Regulations

The Contracting Parties oblige to accept type approvals of higher level of the UN Regulations
THANK YOU FOR ATTENTION!

The WP.29 documents are available in the Internet: