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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Road Transport

Ad hoc Meeting on the
Implementation of the AGR
(Nineteenth session, 6-7 May 2003)

**CONSIDERATION OF PROPOSALS FOR AMENDMENTS TO ANNEX II OF THE
EUROPEAN AGREEMENT ON MAIN INTERNATIONAL TRAFFIC ARTERIES (AGR)**

Transmitted by Italy

Introduction

At its 18th session (10-11 June 2002), the Ad hoc Meeting on the Implementation of the AGR considered the final recommendations of the Ad hoc Multidisciplinary Group of Experts on Safety in Tunnels (TRANS/AC.7/9 and Add.1) as formally approved by the Inland Transport Committee at its sixty-fourth session. The Ad hoc Meeting identified the recommendations which could be incorporated into Annex II to the AGR and the recommendations which it considered should not be incorporated into Annex II to the AGR. The Ad hoc Meeting discussed possible ways of incorporating the measures selected into the AGR, whether as additions to chapters throughout Annex II, as a new chapter or paragraph or as an additional annex or appendix.

The delegate of Italy offered to make a concrete proposal in this regard which could be considered by the Working Party on Road Transport (SC.1) at its ninety-sixth session in October 2002. The Italian proposal was made available to SC.1 as Informal document No.6. The Working Party decided that the proposal should be further discussed by the nineteenth Ad hoc Meeting on the Implementation of the AGR to be held in May 2003 and asked the ITC for its approval for the convening of that meeting.

The proposed amendments refer to the consolidated text of the AGR which appears in document TRANS/SC.1/2002/3 and to the measures for tunnel safety which appear in TRANS/AC.7/9 and Add.1.

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At the end of III.3 (... of safety and comfort) the following text should be added:

“In this respect, since tunnels and bridges are an integral part of the road system, the same number of lanes should be maintained inside and outside tunnels.

In the case of double carriageway roads, two separated tunnel tubes should be used as well as in cases of particular traffic composition, tunnel length and topographical conditions.

Lay-bys should be provided inside long tunnels at distances not exceeding 1000 meters.”

(ref. measure 3.01 of recommendations on tunnels).

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At the end of the first paragraph of IV.2.1 (...the project in general) the following text should be added:

“Tunnels should be equipped with road signs and/or markings in order to help users to maintain an adequate distance from the vehicle in front (generally 20-50 metres).”

(ref. measure 1.09 of recommendations on tunnels).

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At the end of the second paragraph of VI.1 (... effects on traffic flow), the following text should be added:

“and safety.” (to be added after the words “traffic flow”).

“Complete or partial closure of lanes in tunnels should be avoided.”

(ref. measure 2.08 – partially – of recommendations on tunnels).

“In case of long or short-term closure of tunnels, the best possible alternative itinerary should be planned and indicated in advance to users at the diversion location.”

(ref. measure 2.13 of recommendations of tunnels).

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After the third entry of the first table in III.2.1 (...not to be exceeded) the following new entry should be added:

“Maximum longitudinal gradient in tunnels 5 5 5 5 5”

(ref. measure 3.08 – partially - of recommendations on tunnels).

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Chapter V and VI should be renumbered respectively VI and VII and the new Chapter V should be as follows:

“V. MANAGEMENT, SAFETY DEVICES AND GENERAL ARRANGEMENTS
FOR TUNNELS

V.1 Monitoring of compliance with traffic regulations

Monitoring of compliance with traffic regulations should be improved through the use of automatic systems for detecting and sanctioning violations, including speed limits.

V.2 Traffic management systems

Tunnels with high traffic volume should be equipped with traffic management systems in order to avoid traffic congestion, including in the case of accidents.

V.3 Control centre

For tunnels starting and ending in different countries or falling under the control of different national regions, one single control centre should be designated as being in control at any given time.

V.4 Emergency exits

If appropriate, after a very careful assessment, in conjunction with other safety measures, to minimize the risks, emergency exits should be provided at a distance not exceeding 500 meters. Shelters without an exit leading to escape routes to the open should be avoided.

In twin tube tunnels, and in the event of an accident in one tube, the other tube could be used as an escape and rescue route. In such a case, some of the cross connections, at a distance in any case not exceeding 1 400 meters, should be designated for the passage of emergency service vehicles. In the case of an accident, traffic should be stopped in both tubes. Appropriate means should be used to stop the propagation of smoke and gases from one tube to the other.

V.5 Long tunnel equipment

V.5.1 Safety improvement devices

In addition to the equipment already envisaged in other chapters, the improvement of safety may be achieved by the use of the following additional equipment and/or devices:

- Signs of escape routes (to be located at least at lay-bys);
- Signs indicating the presence of fire extinguishers;
- Radio to be used by fire brigades;
- Over heating control systems for heavy goods vehicles (to be installed outside tunnels);
- Longitudinal and smoke velocity monitoring systems;
- User information systems (radio, loudspeakers, variable message signs, etc.);
- Traffic lights and barriers to stop vehicles when appropriate.

V.5.2 Ventilation and fire extinguishing systems

Appropriate ventilation systems should be provided for air and for smoke control and extraction.

Fire extinguishers should be installed at the entrance and along tunnels at regular intervals (no more than 500 meters). In addition, water supply for fire brigades should be provided.”

(The new Chapter V reflects measures 1.10, 2.08 – partially – 2.10, 2.11, 2.12, 3.02, 3.03, 3.05, 3.08 – partially – of the recommendations on tunnels.
