



EuroTAP

Consumer Protection by Motoring Clubs

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EuroTAP

Consumer Protection by Motoring Clubs:
European Tunnel Assessments



23e Congrès mondial de la Route - Paris 2007



Basic facts

- European consortium of 12 EuroTest automobile clubs from 11 European countries
- Project management ADAC, coordination FIA Brussels
- Technical realisation since 1999: DMT GmbH (Deutsche Montan Technologie)
- Support by EU Commission during the years 2005-2007
- No comparable programmes in Europe



The categories



Landeck (Landeck, A)

1. Prevention (47 %)

- Traffic, traffic surveillance (17%)
- Tunnel system (14%)
- Lighting, Energy supply (8%)
- Emergency management (8%)

2. Incident management (53%)

- Fire protection (18%)
- Escape, rescue (13%)
- Communication (11%)
- Ventilation (11%)





The safety potential



Wattkopf (Ettlingen, D)

- describes all constructional, technical and organisational measures that are to prevent or limit the extent of an incident. It is calculated as the sum of the points awarded in the described categories
- must be considered in the light of the result of each tunnel's risk assessment, which is shown in the risk potential





The risk potential

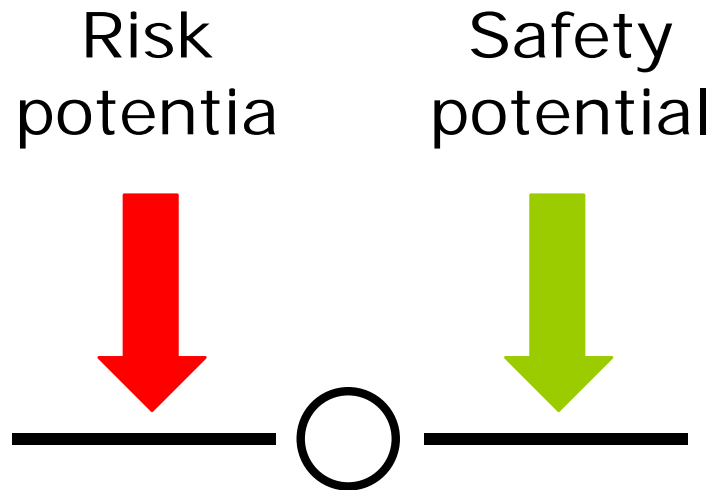
- describes statistical incident probability and expected damage severity
- calculates the parameters: traffic volume per year (in relation to the tunnel length), share of HGV per day and tube, traffic type, vehicles per hour and lane, situation of hazardous goods, longitudinal inclination, intersections, entries/exits
- improves the result of the safety potential by up to 40%



Baregg (Zurich, CH)



Basic principle



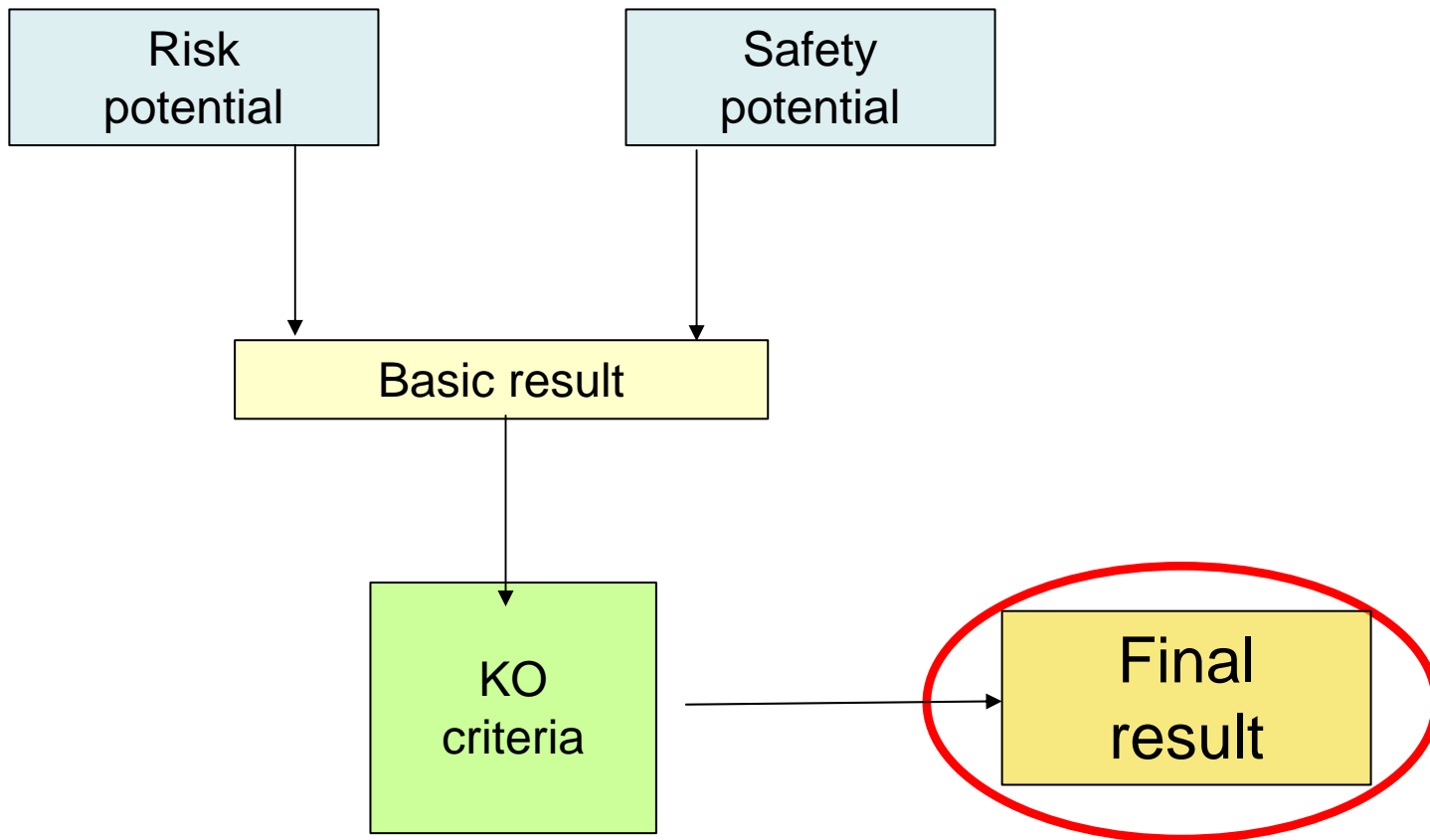
Two weights balance out each other:
The higher the risk, the higher should be
the supply of safety measures.

K.O. Criteria

- Update of methodology in 2006
- New quantitative element in the fundamentally qualitative assessment
- Reflection on the fact, that certain deficiencies cannot be compensated by other safety measures
- Presentation of these interdependances in single sheets



San Juan (Alicante, E)





Test results 2007

- Very good: 18
- Good: 11
- Acceptable: 12
- Poor: 3
- Very poor: 7



Kappelberg (Stuttgart, D)

Total of 51 tunnels in 13 countries tested





Test fails



Wattkopf (Ettlingen, D)

- 1999: 8 out of 19 tunnels: 42 %
- 2000: 8 out of 25 tunnels: 32 %
- 2001: 4 out of 16 tunnels: 25 %
- 2002: 8 out of 30 tunnels: 27 %
- 2003: 11 out of 25 tunnels: 44 %
- 2004: 4 out of 27 tunnels: 15 %
- 2005: 8 out of 49 tunnels: 16 %
- 2006: 13 out of 52 tunnels: 25 %
- 2007: 10 out of 51 tunnels: 20 %

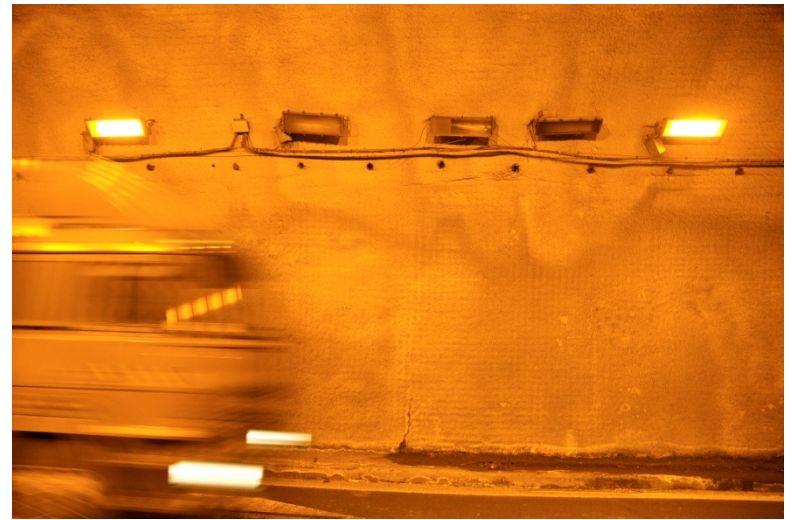


The most frequent deficiencies in EuroTAP 2007



Paci 2 (Scilla, I)

- Escape (31% failed): no additional escape routes in tunnels with one tube (6), entry of smoke into rescue routes because doors not tight/ no ventilation (8), distance between emergency exits too long (>500m/10), no indication of escape directions/distances (10)
- Fire ventilation (18 % failed): no mechanical ventilation (2), no control of longitudinal ventilation (14), ventilation devices not temperature resistant (5), entry of smoke into 2nd tube (7)



Paci 2 (Scilla, I)

The most frequent deficiencies

- Fire protection: (33 % failed): fire brigades stationed too far away from tunnel (>20 min./4), no automatic fire alarm system (9), fire resistance of cables not sufficient (14), no fire extinguishers (3)
- Others: one tube only (17), no video surveillance (5), no regular emergency drills (15), no regular training for tunnel control centre (12), no emergency phones (2) etc.



Three Years Programme

Results of categories 2005 - 2007

Best

- Lighting and Power Supply 5 % negative
- Tunnel system 10 %

Worst

- Traffic and traffic surveillance 27 % negative
- Fire protection 28 %
- Escape and escape routes 32 %


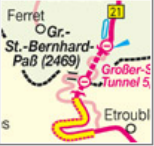
Three Years Programme Aims Achieved in 2005 - 2007

- Realisation and publication of 152 tests in 20 European countries
- 152 tunnel info sheets online on partner's web sites
- Distribution of 2.5 million leaflets (9 languages)
- Unique Database
- Final event in Brussels with technical report and awards for Europe's best tunnels

Tunnel Info Sheets

Großer St. Bernhard

- > Location: T 2 Turin/ Italy – Villeneuve/ Switzerland, near Aosta between Saint-Rhemy-en Bosses/ Italy and Bourg Saint Pierre/ Switzerland
- > Start of operation: 1964
- > Length: 5,798 metres
- > Number of tubes: 1
- > Toll duty: yes
- > Internet address: <http://www.letunnel.com>
- > Test rating: acceptable (2001)

bi-directional traffic


Traffic radio not throughout the tunnel

Traffic rules:	Emergency facilities:
Speed limit 80 kph	Lay-bys every 600 metres
No overtaking	Emergency phones every 120 metres
No U turn	Fire extinguishers every 120 metres
No stopping	No emergency exits



Information about traffic regulations and relevant safety installations

The Leaflet

Safe Driving in Road Tunnels



EuroTAP
European Tunnel Association

Distribution by clubs, tunnel operators, industry and national authorities



Campaign "Safe Tunnels"



- Since 2004: 200 tunnel info sheets
- Since December 2004: PC game "Safe in the Tunnel" (8 languages)
- Since December 2005: DVD „Safe in the Tunnel“ (7 languages)



Unique media platform

Extensive Europe-wide media coverage of EuroTAP contents and messages



- Example 2005 tunnel test:
 - TV: 58 million viewers
 - Radio: 25 million listeners
 - Print: 84 million circulation
- Example 2007 tunnel test Germany only:
 - TV: 27,5 million viewers, 59 min.
 - Radio: 29,5 million listeners, ca. 100 min.
 - Print: 16,2 million readers (panel of 59 objects)

First conclusions

- EU Directive and major efforts by many Member States are the cause for positive trends in European road tunnel safety standards
- Approximately 25 % of European TERN road tunnels with a minimum length of one kilometre still fail the EU defined minimum standards. Significant investments are still outstanding.
- Apart from the technical standards car drivers, tunnel staff and rescue teams are playing a key role in the tunnel safety concept. Better education and training are needed



The future of EuroTAP

- Continuation with all elements like Europe wide tests, tunnel info sheets, awareness campaign and the exchange of information with international experts
- Availability of the data base to external parties
- Accentuation of different issues like crisis management and training of the staff involved, maintenance of safety installations, psychological aspects of driving through tunnels and extensions of the programme to non TERN tunnels



L'Olleria (Olleria, E)



EuroTAP 2005 – 2007

Final Event

26 November, Brussels,
Bavarian Representation

- Press Conference in the morning
 - Launch of Final Technical Report
 - Tunnel Awards “Best European Tunnel”
 - EuroTAP video
- Experts Workshop in the afternoon

END



Robert Sauter
20 September 2007, Paris