

How we tested in a nutshell

There's just no stopping ADAC and its 15 partner clubs in 14 European countries. This year, for the twelfth time in succession, the ADAC Tunnel Test was carried out within the scope of EuroTAP (European Tunnel Assessment Programme), the programme dedicated to greater safety in Europe's road tunnels. There is an unprecedented amount of construction work currently underway in tubes throughout Europe in order to bring the tunnels in line with the requirements of the EU Directive on road tunnel safety from 2004. We now wanted to find out just how far operators have come towards reaching the ambitious aim pursued by the Directive, i.e. making all of Europe's tunnels safer by 2019 at the latest. So, once again, the tunnel experts packed their cases and set out on a long journey. 26 tunnels in 13 countries were on the agenda: four in Spain, three in Germany, Italy, Austria and Switzerland, two in France and Norway, one in Belgium, Croatia, the Netherlands, Slovenia, the Czech Republic, and for the first time in the history of our test, in Iceland.

As always, the criteria for selecting the tunnels to be tested included tunnel length, location in the trans-European road network and importance for holiday traffic. Three of the tunnels had been tested before: Austria's Katschberg tunnel was rated Poor as a single-tube tunnel in 1999 and then, in 2002, received a rating of Acceptable following initial refurbishment. A rating of Acceptable also went to Tanzenberg tunnel, also in Austria, when it was tested in 2001, and the same rating went one year later to the French Maurice Lemaire tunnel.

As in previous years, ADAC commissioned DMT GmbH & Co. KG, an international technology services company specialising in raw materials, safety and infrastructure, to conduct the test. DMT's experts carried out their on-site inspections of the 26 tunnels between 12 April and 20 May 2010. Following inspection of the respective tubes, the experts spoke with operators, clarified safety relevant issues and inspected the related documents. Prior to testing, operators were given a data list to record the most important technical tunnel parameters which was checked again on site.

Checklist

A checklist, which is prepared by the traffic experts at ADAC and DMT and revised each year, serves as an objective foundation for testing. This checklist is based on the high standards that apply to road tunnels in Germany, Austria, Switzerland, France and the UK, as well as on the EU Directive on minimum safety standards for tunnels in the Trans-European Transport Network. The checklist is broken down into eight categories: Tunnel system (weighting: 14 percent), Lighting and power supply (7 percent), Traffic and traffic surveillance (17 percent), Communication (11 percent), Escape and rescue routes (14 percent), Fire protection (18 percent), Ventilation (11 percent) and Incident management (8 percent).

Safety and risk potential

The so-called safety potential of a tunnel is rated using the more than 200 sub-items of this checklist. It describes all the structural and organisational measures which are designed to prevent emergencies or limit their severity. In addition to the above, the so-called risk potential is also calculated. This serves as a parameter for the risk of becoming involved in an accident while driving through the respective tunnel and for the seriousness of the consequences which must then be expected. The safety and risk potential are then brought together to reach an overall tunnel rating.

Knock-out criteria

The safety measures in the individual categories can supplement each other or compensate for each other, such as the measures for detecting and managing incidents. However, they can also be more or less independent of each other, as for instance in the area of prevention. The strongest links exist within and between the Escape and rescue routes and Ventilation categories. Serious shortcomings here cannot be subsequently compensated for by other measures. In the tunnel test, this means that if a tunnel is given an overall positive rating, then ideally all eight safety potential categories must have a positive result, and at least none of them should be found to be very poor. Otherwise, the so-called knock-out criterion is used to lower the overall rating according to a precisely defined scheme.

On the whole, the EuroTAP ratings of Very good, Good and Acceptable are in the positive range whilst Poor and Very poor are in the negative range.