

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods

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Tanks

Tanks: UK experience with improperly manufactured and wrongly certificated road tank vehicles

Transmitted by the Government of United Kingdom

1. Working paper ECE/TRANS/WP.15/AC.1/2015/22 submitted to the Joint Meeting at its session in Bern 23-27 March 2015 provided information on the United Kingdom's experience with improperly manufactured and wrongly certificated road tank vehicles. At that session the United Kingdom proposed to keep subsequent sessions of the Joint Meeting apprised of the research it is funding to obtain a fuller understanding of the safety of road tank vehicles.
2. Since presenting the outcomes of the research to the 23-27 March 2015 session, the United Kingdom has commissioned further research of around £0.5 million on the fuel tankers manufactured and incorrectly certified in South Africa, and new work on a tanker of a similar design manufactured and properly certified in the United Kingdom. The research, published on 30 November 2015 at <https://www.gov.uk/government/publications/petroleum-fuel-tankers-technical-assessment-november-2015>, found no reason to extend further the use of the remaining South African tankers, which were all to be withdrawn by 31 December 2015 as planned.
3. In addition, in going beyond the scope of the normal inspections required by legislation, the research found the fuel tanker from the United Kingdom to contain some defects in the circumferential welds which were of a lesser significance than those found in the tankers from South Africa. A full scale test of the tanker was undertaken during the research and found that unlike the South African tankers the safety of the United Kingdom tanker was not compromised by the defects in that the tanker survived the full scale test without rupture to either the circumferential welds or the end dishes, and without loss of integrity between any of the six internal compartments. The United Kingdom Health and Safety Executive have checked that the tanker was properly certified and the defects are being addressed by the manufacturer who is working to improve the welding procedures.
4. The remainder of the research, on both the South African and United Kingdom tankers, points to improvements that can be made to future design, construction and regulation that would reduce the possibility of end dish ruptures in rollover incidents, and ensure that welds which could be vulnerable in such incidents or in the event of a rear or side impact are included in regulatory inspections – at present, the legislation allows some discretion when the welds are sampled for non-destructive x-ray (or ultrasonic) examination.
5. The United Kingdom has brought these findings and submitted proposals to the informal working group on the inspection and certification of tanks led by the United

Kingdom under the mandate provided by the Joint Meeting during the 23-27 March 2015 session. The United Kingdom proposals to reduce the possibility of end dish ruptures have subsequently been put to the CEN working group responsible for EN 13094 on the design and construction of low pressure metallic tanks and were agreed in principle at the first meeting of the group on 24-25 February 2016 to discuss the next revision to the standard. The United Kingdom proposals to ensure that welds which could be vulnerable in rollover incidents or in the event of a rear or side impact are included in regulatory inspections is under consideration and merits further discussion at the Joint Meeting during the 14-18 March 2016 session.
