Petroleum road tankers: Recommendations for a standard method of inspection for a safe loading pass (SLP)

energy institute

PETROLEUM ROAD TANKERS: RECOMMENDATIONS FOR A STANDARD METHOD OF INSPECTION FOR A SAFE LOADING PASS (SLP)

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FOREWORD

This publication has been prepared by Robert Harris, Amber Engineering Consultancy Ltd, on behalf of members of the Energy Institute's (EI's) Road Tanker and Distribution Contractors Panels. It is aimed at organisations and their personnel who carry out inspections and tests on those tankers which carry the main petroleum fuels products (petrol, kerosene/jet fuel and diesel/gas oil). The principles may be readily extended to other tankers including those which carry liquefied petroleum gases, bitumen and lubricating oil.

This publication provides recommendations for the inspections required for an industry Safe Loading Pass Scheme (SLPS). Sister publications provide recommendations for the other occasions when inspection and testing of petroleum road tankers is practised, being:

- statutory periodic and intermediate inspections and exceptional checks (where necessary) required by ADR, and
- preventive maintenance inspections, normally carried out every six – eight weeks.

This publication supersedes the following EI publications, which are hereby withdrawn:

- *Model Code: the maintenance of road tankers used for the conveyance of petroleum fuels*
- *A model written scheme for the examination, testing and certification of petroleum road tankers*
- *Additional requirements to 'A model written scheme for the examination, testing and certification of petroleum road tankers' for ADR tankers*

The publication is presented in the format of a 'tester's manual' to assist on-site inspection and testing activities.

The EI is not undertaking to meet the duties of employers to warn and equip their employees, and others exposed, concerning health and safety risks and precautions, nor undertaking their obligations under local and regional laws and regulations.

This guidance is intended as a supplement to the European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR). If there is any conflict between the information contained in this guidance and the provisions of ADR then the provisions of ADR take precedence. If there is any doubt, advice should be sought from a specialist/Dangerous Goods Safety Adviser.

The information contained in this publication is provided as guidance only, and while every reasonable care has been taken to ensure the accuracy of its contents, the EI cannot accept any responsibility for any action taken, or not taken, on the basis of this information. The EI shall not be liable to any person for any loss or damage which may arise from the use of any of the information contained in any of its publications.

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Suggested revisions are invited and should be submitted to the Technical Department, Energy Institute, 61 New Cavendish Street, London, W1G 7AR (technical@energyinst.org).

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INTRODUCTION AND SCOPE

This publication defines the standard inspection method for road tankers used for the carriage of liquid petroleum fuels.

It covers the type of tanks typically used for the carriage of petrol (UN1203), kerosene (UN1223), aviation turbine fuel (UN1863), diesel and gas oil (UN1202) and therefore specifically excludes tanks which are:

– pressure tanks (i.e. with a working pressure exceeding 0,5 bar);
– lined or coated tanks;
– insulated tanks;
– vacuum insulated tanks;
– tank containers;
– portable tanks, and
– tanks made from materials other than metallic.

There are three principal occasions when inspection and testing of petroleum road tankers is practised. Firstly there is a need to comply with the statutory periodic and intermediate inspections and exceptional checks (where necessary) required by ADR and the referenced standard EN 12972 – *Tanks for the transport of dangerous goods – testing, inspection and marking of metallic tanks*. Secondly, there is a need for preventive maintenance inspections, normally carried out every six – eight weeks, and which should include the tank and its equipment. Finally there may be an inspection required for an industry SLPS. In principle these inspections are similar, it being predominantly the extent of the inspections which varies and not the way in which an inspection of a particular item is performed.

The standard inspection method defined by this publication is intended to cover the inspections recommended for an industry SLPS. The standard inspection method is intentionally specific to road tankers used for the carriage of liquid petroleum fuels only, although the principles and format of this publication may be extended to cover any design of tank.

This publication has been developed with the engagement of UK inspection bodies and industry specialists, in accordance with EI policies for the development of EI technical publications, and is therefore considered to fulfil the criteria for a 'standard inspection method' as defined in ISO 17020 *Conformity assessment – Requirements for the operation of various types of bodies performing inspection*, clause 7.1.

Inspections and tests described in this publication should be undertaken at facilities which conform to the recommendations of EI *Design, construction and operation of workshops for petroleum road tanker maintenance*, 2015.

The format for the document has been inspired by the UK's Driver and Vehicle Standards Agency's *Heavy goods vehicle inspection manual*; the interpretation of descriptions of 'reasons for failure' such as 'worn to excess' used throughout this publication are as follows:

Excessive travel

Abnormal amount of movement such that a component has reached a stage when it requires remedial action to enable it to:

– operate effectively as designed;
– prevent it from reaching the end of its permitted travel, or
– prevent it from exceeding the manufacturer's known maximum permitted limits.

Excessive wear

Worn to such an extent that a component is:

– likely to fail;
– clearly not functioning effectively as designed;
– visibly worn beyond the manufacturer's known permitted limits, or
– likely to affect the operation or condition of another safety related component.

Insecure

In a defective condition such that a component:

– has relative movement (looseness) either at its fixings or in relation to an associated component where there should be none, or
– is not safely or completely attached either at its fixing or to an associated component.