Guidelines for the identification and control of hazards during the proving of road tanker loading gantry meters

2nd edition

GUIDELINES FOR THE IDENTIFICATION AND CONTROL OF HAZARDS DURING THE PROVING OF ROAD TANKER LOADING GANTRY METERS

Second edition

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FOREWORD

This edition of this publication has been prepared by members of the Energy Institute's (EI) Distribution & Marketing Committee. It replaces the first edition (1995), which was reaffirmed in 2002.

This publication has been prepared to assist terminal operators and meter proving contractors who carry out loading gantry meter proving work to develop safe work procedures for this operation.

Whilst written in the context of the United Kingdom (UK) legislative and regulatory framework, the principles set out in this publication can similarly be applied in other countries providing national and local statutory requirements are complied with. Where the requirements differ, the more stringent should be adopted. A similar legislative and regulatory framework generally applies elsewhere in the European Communities.

Although it is anticipated that following this publication will assist those involved in the proving of road tanker loading gantry meters at distribution terminals, the information contained in this publication is provided as guidance only. While every reasonable care has been taken to ensure the accuracy of its contents, the EI, and the technical representatives listed in the acknowledgements, 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.

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1 INTRODUCTION AND SCOPE

The proving of road tanker loading gantry flowmeters, using reference meters or volumetric vessels, involves product handling and tanker loading procedures which differ from normal tanker loading practice. Experience has shown that significant additional hazards may be introduced by the operation. In order to ensure the protection of personnel and the environment, and to safeguard equipment and property during meter proving, it is important that all hazards are fully understood by those engaged in the operation and that safe operating procedures be adopted.

This publication has been prepared to assist terminal operators and meter proving contractors who carry out loading gantry meter proving work to develop safe work procedures for this operation. It is based on the experience of several oil companies and meter proving contractors and also incorporates the results of a major programme of research work into electrostatic hazards associated with meter proving that was conducted by a consortium of oil companies in the UK in the 1990s.

Another important input to the first edition were the results of a review of the loading gantry meter proving procedures used by the principal UK oil companies, contractors and terminal organisations. The review was followed by a risk assessment of the operating procedures to focus on the critical hazards and key controls for a safe system of work during meter proving. The risk assessment covered the complete range of activities rather than specific cases and established key points to assist terminal operators and contractors to develop the controls that are critical for safe meter proving. This has been revalidated in the preparation of this second edition.

Users of this publication should be aware that petrol and diesel may contain up to 5 % bioethanol or fatty acid methyl ester (FAME) respectively. For further information relating to petrol see EI *Guidance for the storage and handling of fuel grade ethanol at petroleum distribution installations*. Terminal Operators should be consulted on the implications of this for meter proving operations.

This publication, although comprehensive, cannot cover the detailed circumstances applicable to every individual site. It is therefore recommended that, for each location, the company and the contractor (where appropriate) should jointly carry out a risk assessment before finalising the site procedures.

It is recommended that this publication should be followed by those responsible for meter proving operations in the preparation or revision of their detailed procedures and risk assessments. Contractors' procedures should be agreed with the installation where the work is to be carried out. Contractors should be able to demonstrate the knowledge and competence of both the company and its employees engaged in this work.