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SOUTH AFRICAN NATIONAL STANDARD

Power-operated dispensing devices for flammable liquid fuels

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Table of changes

Change No.	Date	Scope
Amdt 1	2013	Amended to update referenced standards and to move reference to legislation to the foreword.

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable assistance derived from publications of the European Committee for Electrotechnical Standardization (CENELEC), International Electrotechnical Commission (IEC) and Underwriters' Laboratories (UL).

Foreword

This South African standard was approved by National Committee SABS/TC 065, *Explosion prevention*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in November 2013.

This document supersedes SANS 1020:2003 (edition 2).

A vertical line in the margin shows where the text has been technically modified by amendment No. 1.

Annex B forms an integral part of this standard. Annexes A, C and D are for information only.

Reference is made in NOTE 1 and NOTE 2 to the scope to "relevant national legislation". In South Africa this means the Trade and Metrology Act, 1973 (Act 77 of 1973).

Reference is made in 3.5(a) and 3.5(b) to "relevant national legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), respectively.

This document is referenced in the Machinery and Occupational Safety Act, 1983 (Act No. 6 of 1983).

Introduction

In this second edition of SANS 1020, provision for the current status of dispenser and metering pump technology has been made, including high hose designs, remote submersible pumps and onboard suction pumps, and single and multiple delivery hoses connected to the main unit or a satellite unit.

Requirements for constructional and operational safety of electrical apparatus, structural components and hydraulics have been introduced or upgraded. This includes the requirements that peripheral devices such as those used to monitor and control fuel supply electronically should be explosion protected and that they should be installed in such a way as to preserve the explosion protected features of the existing installation.

The hazardous locations caused by a dispenser or metering pump have been re-defined, excluding the hazardous locations caused by the filling of vehicle fuel tanks and other fuel containers. (The latter locations are defined in SANS 10089-3.)

The concept of and requirements for a vapour barrier separating hazardous and non-hazardous locations have been introduced.

Prototype and lot testing to be conducted by a third-party testing authority have been described, as well as routine (quality control) testing to be conducted by the manufacturer.

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Power-operated dispensing devices for flammable liquid fuels

1 Scope

This standard covers the basic requirements for the components of free-standing power-operated dispensing and metering pump devices for flammable liquid fuels.

Remote pumping units are excluded from the scope of this standard.

This standard may also be applied to devices for the dispensing of other flammable liquids, provided that different requirements that may apply are met in such a manner that safety is ensured.

NOTE 1 Dispensers and metering pumps that perform a measuring function and are intended for use in trade are required, in terms of the relevant national legislation (see foreword), to be of an approved model and to be certified before being so used or supplied for such use. **Amdt 1**

NOTE 2 Compliance of a dispenser or metering pump or any part of such a device with this standard, does not in any way imply that it is approved in terms of the said relevant national legislation (see foreword). **Amdt 1**

2 Normative references

The following standards contain provision which, through references reference in this text, constitute provisions of this standard. All standards are subject to revision and, since any reference to a standard is deemed to be a reference to the latest edition of that standard, parties to agreements based on this standard are encouraged to take steps to ensure the use of the most recent editions of the standards indicated below. Information on currently valid national and international standards can be obtained from the SABS Standards Division.

ASTM E28, *Standard test methods for softening point of resins derived from naval stores by ring-and-ball apparatus.*

EN 228, *Automotive fuels – Unleaded petrol – Requirements and test methods.*

EN 1360, *Rubber hoses and hose assemblies for measured fuel dispensing – Specification.*

EN 13012, *Petrol filling stations – Construction and performance of automatic nozzles for use on fuel dispensers.*

EN 13483, *Rubber and plastic hoses and hose assemblies with internal vapour recovery for measured fuel dispensing systems – Specification.* **Amdt 1**

EN 13617-1, *Petrol filling stations – Part 1: Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units.*

SANS 342, *Automotive diesel fuel.*