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SOUTH AFRICAN NATIONAL STANDARD

Industrial thermoprocessing equipment — Safety requirements for combustion and fuel-handling systems

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Table of changes

Change No.	Date	Scope

Foreword

This South African standard was approved by National Committee SABS/TC 1019, *Gas supply, handling and control (fuel, industrial and medical gases)*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in January 2014.

This document supersedes SANS 329:2008 (edition 1).

Reference is made in 3.5(a), 3.5(b), 3.14, 5.1.6, 5.2.2.7, 5.3.2.9 and 5.7.2 to the "relevant national legislation". In South Africa this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Reference is made in 5.2.2.7 to the "relevant national legislation". In South Africa, this means the Environmental Regulation for Workplaces (section 5: Ventilation) in terms of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

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

This document was written in order to support specific South African regulations and includes references to South African legislation. It therefore might not be suitable for direct application in other jurisdictions where conflicting legislation exists.

Annexes B and C form an integral part of this document. Annex A is for information only.

Introduction

This document was prepared to provide a means of compliance with the essential safety requirements of the Pressure Equipment Regulations in the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

The extent to which hazards are covered is indicated in the scope of the standard. This document assumes that the equipment is operated and maintained by trained personnel.

Where, for clarity, an example of a preventative measure is given in this document, this should not be considered as the only possible solution. Any other solution leading to the same risk reduction is permissible if an equivalent level of safety is achieved.

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Industrial thermoprocessing equipment — Safety requirements for combustion and fuel-handling systems

1 Scope

1.1 This standard specifies the list of hazards, the safety requirements and associated measures, as well as the user instructions relating to fuel-handling and combustion equipment, and its design, ordering, construction and use.

It specifies the requirements to be complied with by either the manufacturer or the installer (or both) for commissioning, start-up, operation, shutdown and maintenance, as well as in the event of foreseeable faults or malfunctions.

1.2 This standard applies to all combustion and fuel-handling equipment used in industrial thermoprocessing equipment and systems that operate above 0,5 GJ/h. It also applies to the handling of fuel immediately adjacent to the equipment but downstream of, and including, the main plant fuel shut-off valve.

It applies to all forms of gaseous, liquid and solid fuel and any combinations of these in combustion with air or other gas that contains free oxygen.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. Information on currently valid national and international standards can be obtained from the SABS Standards Division. .

AISI 321, *Stainless steel, annealed sheet*.

API Spec 5L, *Specification for line pipe*.

ASTM A106, *Standard specification for seamless carbon steel pipe for high-temperature service*.

ASTM G63, *Standard guide for evaluating nonmetallic materials for oxygen service.*

ASTM G93, *Standard practice for cleaning methods and cleanliness levels for material and equipment used in oxygen-enriched environments.*

ASTM G127, *Standard guide for the selection of cleaning agents for oxygen systems.*

EIGA 13-12/E, *Organisation – Human reliability*.