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Edition 5

SOUTH AFRICAN NATIONAL STANDARD

Refrigerating systems, including plants associated with air-conditioning systems

WARNING

This document references other
documents normatively.

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Table of changes

Change No.	Date	Scope

Acknowledgement

The SABS Standards Division wishes to acknowledge the valuable technical input of the Southern African Refrigerated Distribution Association (SARDA), GEA Refrigeration Africa, Anglo American, WSP Industrial, Hatch, Johnson Controls, Ammonia Training Solutions, the South African Refrigeration and Air Conditioning Contractors' Association (SARACCA), MetraClark, Palfridge, and HC Heat-Exchangers in the development of this document.

Foreword

This South African standard was approved by National Committee SABS/TC 086, *Refrigeration and air-conditioning*, in accordance with procedures of the SABS Standards Division, in compliance with annex 3 of the WTO/TBT agreement.

This document was published in October 2014.

This document supersedes SANS 10147:2009 (edition 4.1).

This document is referenced in the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), and the Skills Development Act, 1998 (Act No. 97 of 1998).

Reference is made in 3.4 to the "relevant national authority". In South Africa, this means the South African National Accreditation System (SANAS).

Reference is made in 3.5 to a "government-endorsed body". In South Africa, this means the South African National Accreditation System (SANAS).

Reference is made in 3.14, 6.1.3, 6.1.4, 6.9.1, 6.11.2.2(c), 7.6, 7.7(c) 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 3.57, 5.3.1, 6.12.1.5, 6.13.1, 7.3(b), 8.2.3, 8.2.4, 8.2.5, D.4.3.2(b), D.4.4.2(b), D.4.5.2(b), E.4.4, and table H.1 to the "relevant national legislation". In South Africa, this means the Pressure Equipment Regulations of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Reference is made in 5.6.1(c) and 5.6.2(c) to the "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).

Reference is made in 6.9.3.2 to the "relevant national legislation". In South Africa, this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), and the Mine Health and Safety Act, 1996 (Act No. 29 of 1996).

Foreword *(concluded)*

Reference is made in B.5(g) to the "relevant national legislation". In South Africa, this means the Mine Health and Safety Act, 1996 (Act No. 29 of 1996).

Reference is made in D.2 to the "relevant national legislation". In South Africa, this means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), and in particular, the Driven Machinery Regulations and Pressure Equipment Regulations of said Act.

Reference is made in D.4.3.1 to the "minimum relevant national requirement". In South Africa, this means the South African Qualification and Certification Committee (SAQCC) Gas Refrigeration Category A (operator) or Category A (trainee).

Reference is made in D.4.4.1 to the "minimum relevant national requirement". In South Africa, this means SAQCC Gas Refrigeration Category B subdivided into commercial refrigeration, ammonia refrigeration, automotive air conditioning, transport refrigeration or marine refrigeration.

Reference is made in D.4.5.1 to the "minimum relevant national requirement". In South Africa, this means SAQCC Gas Refrigeration Category C (inspector).

Reference is made in D.5.1 to the "relevant national body". In South Africa, this means SAQCC Gas.

Reference is made in D.5.2 to the "relevant national body". In South Africa, this means SAQCC Gas or SANAS.

Reference is made in E.2 to the "relevant national regulating body". In South Africa, this means the Department of Trade and Industry.

Reference is made in E.2 to the "relevant national approval authority". In South Africa, this means the Department of Environmental Affairs and Tourism.

Reference is made in H.1 to the "requirements specified in the relevant national legislation". In South Africa, this means the risk-based inspection requirement of the Pressure Equipment Regulations of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993).

Annexes A, B, D, E, H and I form an integral part of this document. Annexes C, F and G are for information only.

Introduction

This document was revised in order to align it with current practices and to comply with the requirements of the *Montreal Protocol on substances that deplete the ozone layer*.

It is intended to provide an authoritative source of basic safety principles for use by responsible and competent persons or organizations. It is not intended to be regarded as either an instruction manual for untrained persons or a specification for detailed refrigeration plant design. The requirements and the recommendations given in this document are intended to minimize the possible hazards in refrigeration plants and air-conditioning plants.

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