DJS 31: 202X
ICS 23.020

Draft Jamaican

Standard

Specification

for

The Repair and Rebuilding of Low-pressure Welded Steel Transportable Gas Containers

BUREAU OF STANDARDS JAMAICA

Comment Period:
21 December 2021 to 21 February 2022

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Plant Certification Mark

Certification of Agricultural Produce (CAP) Mark

Jamaica-Made Mark

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This standard specification was circulated in draft form for comment under the reference DJS 31: 2014.

Jamaican Standards establish requirements in relation to commodities, processes and practices, but do not purport to include all the necessary provisions of a contract.

The attention of those using this standard specification is called to the necessity of complying with any relevant legislation.

Amendments

No.	Date of issue	Remarks	Entered by and date

Contents

Foreword

This standard is a revision of and supersedes JS 31: 2014. It specifies the requirements for the repair and rebuilding of low-pressure welded steel transportable gas containers for the containment of liquefied petroleum gases. The revision was made to update and incorporate new technological developments in this area.

This standard is intended to be compulsory.

Committee representation

The revision of this standard for the Standards Council, established under the Standards Act 1968, was carried out under the supervision of the Bureau's Transportable Gas Containers Technical Committee which at the time comprised the following members:

Acknowledgment

Acknowledgment is made to the following institutions for permission to reproduce material from the following documents:

American Welding Society	ANSI/AWS A5.1/A5.1M ANSI/AWS A5.5/A5.5M ANSI/AWS A5.9/A5.9M ANSI/AWS A5.17/A5.17M-97 ANSI/AWS A5.18/A5.18M ANSI/AWS A5.28/A5.28M ANSI/AWS A5.23:/A5.23M
The Compressed Gas Association, Inc.	CGA C-3
The United States Department of Transportation (DOT)	Code of Federal Regulation CFR Title 49: Transportation Sections 173.34 and 178.61.
National Fire Protection Agency	NFPA 58 Liquefied Petroleum Gas Code

Related documents

This standard makes reference to the following documents:

ANSI/AWS A5.1/A5.1M	Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding
ANSI/AWS A5.5/A5.5M	Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding
ANSI/AWS A5.9/A5.9M	Specification for Bare Stainless Steel Welding Electrodes and Rods
ANSI/AWS A5.17/A5.17M-97	Specification for Carbon Steel Electrodes and Fluxes for Submerged Arc Welding
ANSI/AWS A5.18/A5.18M	Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding
ANSI/AWS A5.28/A5.28M	Specification for Low-Alloy Steel Electrodes and Rods for Gas Shielded Arc Welding
ANSI/AWS A5.23:/A5.23M	Specification for Low-Alloy Steel Electrodes and Fluxes for Submerged Arc Welding
CFR 49	Code of Federal Regulation Title 49: Transportation
CFR 49 Section 173.34	Code of Federal Regulation Title 49: Qualification maintenance and use of cylinders
CFR 49 Section 178.61	Specification 4BW: The recommended procedures for visual inspection and requalification of DOT cylinders in LP gas service
CGA C-3	Standards for welding on thin-walled steel cylinders
JS 25	Jamaican Standard Specification for Transportable gas containers
JS 41	Jamaican Standard Specification for Inspection, retesting and use of transportable gas containers
NFPA 58	Liquefied Petroleum Gas Code

Draft Jamaican Standard Specification for
The Repair and Rebuilding of Low-pressure Welded Steel Transportable Gas

containers Section one: General requirements

0. Introduction

When a transportable gas container has been found, as a result of inspection or testing, to require repair or rebuilding, the container, after repair or rebuilding, shall conform to the requirements of JS 25, Jamaican Standard Specification for Transportable Gas Containers. Therefore, references are made to JS 25, Jamaican Standard Specification for Transportable gas containers, and to JS 41, Jamaican Standard Specification for Inspection, retesting and use of transportable gas containers.

1. Scope

1.1 This standard specifies the requirements for the repair and rebuilding of low-pressure transportable gas containers made in accordance with JS 25 Jamaican Standard Specification for Transportable gas containers, and the subsequent testing of these transportable gas containers before re-use.

1.2 This standard does not apply to containers designed and manufactured to contain dissolved acetylene.

1.3 Repairs to valves and fittings, which are not permanent attachments to the transportable gas container, shall not be covered by this standard.

2. Definitions

For the purpose of this standard, the following definitions apply.

2.1 repair. Removal and/or replacement of parts, e.g. footrings and neckrings or non-pressure attachments of the cylinder authorized by JS 25.

2.2 rebuilding. Replacement of pressure parts of transportable gas containers such as wall, heads or bottoms.

2.3 rejected container. A container found not to be fit for service in its present condition.

2.4 regulatory authority. The institution appointed by the Government of Jamaica to have legal authority over the manufacture, use, repair and rebuilding of transportable gas containers.

2.5 accreditation authority. The institution appointed by the Government of Jamaica to have authority for the approval of inspection agencies. This may be the regulatory authority or a different entity.

2.6 inspection agency. Any company/person authorized by the Independent Inspecting Authority to carry out inspection and retesting of cylinders on its behalf.**inspector.** A person authorized by the accreditation authority to conduct inspections and tests on its behalf.

2.7 repair facility. A person or organization engaged in the repair of welded steel transportable gas containers.

2.8 rebuilding facility. A repair facility authorized by the regulatory authority to rebuild transportable gas containers.

2.9 low pressure cylinders. Cylinders with marked service pressure of up to 6,200 kPa (899 psi).

2.10 competent person. Person who by a combination of training, experience and supervision is able to make objective judgments on a subject.

2.11 tare weight. The mass of the container, valve and dip tube where applicable (excluding the valve loose cap or cover).

2.12 independent inspecting authority. The Bureau of Standards Jamaica.

3 Administration

3.1 Functions of the Independent Inspecting Authority

3.1.1 To maintain a registry of repair facilities and rebuilding facilities.

3.1.2 To authorize and monitor the repair facilities and rebuilding facilities and to ensure that they comply with the requirements of this standard.

3.1.3 To have and maintain requirements for personnel, equipment and materials to be approved for utilization in the repair or rebuilding of transportable gas containers in accordance with this standard, JS 25 and JS 41.

3.1.4 To authorize and monitor the inspection agencies authorized to conduct inspections on its behalf.

3.2 Obligations of the repair facilities and rebuilding facilities

3.2.1 To have and maintain adequate personnel and equipment.

3.2.2 To maintain documentation of the adequacy of its personnel, equipment and material, and to have this documentation available to the regulatory authority or to inspection agencies acting on its behalf.

3.2.3 To maintain a register of the transportable gas containers repaired or rebuilt at their facility, and to submit a copy of this register to the regulatory authority or to inspection agencies acting on its behalf. This register shall include:

(a) The condition of each transportable gas container submitted for repair or rebuilding. Where the transportable gas container has been rejected as a result of an inspection or test, copies of the inspection report and test certificate from the inspection agency shall be included.
(b) The personnel conducting the repair or rebuilding and the materials and equipment used.
(c) The inspection results for each repaired transportable gas container.
(d) The inspection results for each completed rebuilt transportable gas container and the test results for the samples of each batch of rebuilt transportable gas containers.
(e) The original markings of rebuilt transportable gas containers.

3.2.4 To have and maintain current design specifications of those transportable gas containers which the rebuilding facility has been authorized to rebuild by the regulatory body and the original manufacturer or distributor of the transportable gas containers.

3.2.5 To ensure that repairs and rebuilding works are carried out by competent person (s). Standards relating to the welding operator require that each operator be qualified by tests that adhere to an approved welding procedure to demonstrate that the operator possesses acceptable welding ability.

3.2.6 To ensure equipment calibration are current and traceable (e.g. pressure gauges, temperature gauges, scales etc.).

4 Purging of cylinders

4.1 General

Cylinders shall be fully purged of combustible material and any material which may affect the quality of a weld deposit shall be removed before any repair or rebuilding is attempted.

4.2 Environmental conditions

4.2.1 *Indoors.* Venting of cylinders indoors shall be done only in structures designed and constructed for cylinder filling in accordance with appendix D and with the following provisions:

(a) Piping shall be constructed to convey the vented product at least one metre (1 m) above the highest point of any building within 7.6 m.
(b) Only vapours shall be exhausted to the atmosphere.
(c) If a vent manifold is used to allow for the venting of more than one cylinder at a time, each connection to the vent manifold shall be equipped with a backflow check valve.

4.2.2 *Outdoors.* Venting of containers outdoors shall be performed under conditions that result in a safe and rapid dispersion of the product being released, except where the gas being purged is toxic. In case of the latter, the appropriate disposal procedures shall be followed.

4.2.3 *Burning of vented gas during purging.* If conditions are such that venting into the atmosphere cannot be accomplished safely, LP-Gas shall be burned at least 7.6 m from combustibles.

Section two: Requirements for transportable gas container repair

5 Repair facilities

Repairs to transportable gas containers shall only be done by repair facilities authorized by the regulatory body, and shall only be done by personnel approved by the regulatory body with materials and equipment approved by the regulatory body.

6 Allowable repairs

6.1 Transportable gas containers returned to a repair facility without neckring or information available to the repairer, shall be condemned, taken out of circulation and destroyed in accordance with clause 13 of JS 41. If the information is available for that cylinder, it can be reproduced on the repaired cylinder in accordance with clause 8.0 of this standard.

6.2 Transportable gas containers with defects in welded joints on the pressure vessel shall only be repaired by complete removal of the defect prior to re-welding.

6.3 Care shall be taken by removing any coating proximate to the weld, such as zinc coatings, which may evolve harmful vapours or dust or which may adversely affect the quality of the weld or the health of the welder or others.

6.4 Neckrings, footrings, or other non-pressure attachments authorized by Jamaican Standard JS 25 may be repaired or replaced, provided that:

(a) the welder shall have available to him information as to the procedure, equipment and electrode or filler metal used during manufacture and shall use a similar method, wherever possible, for repair
(b) the repair shall be made by a metal arc welding process
(c) except as provided in (d) below, welds shall not be greater than 75 mm in length nor less than 75 mm apart
(d) welds may be greater than 75 mm in length if they are subjected to a local stress relief, at a temperature of 625° C - 675° C for a period of at least 10 minutes.

6.5 Weld defects shall be removed by grinding or chipping before repair by a metal arc process.

6.6 Repairs of any weld defects containing cracking shall not be permitted.

6.7 Repairs to the pressure bearing welds shall not exceed 25 mm in length and shall not be closer than 75 mm to the next repair area, and filler material shall be similar to that used in the manufacture of the transportable gas container being repaired.

6.8 Transportable gas containers that have been rejected after inspection or testing according to JS 25 or JS 41 due to defects or leaks in the base metal of the heads or bottoms of the transportable gas containers shall not be repaired but shall be rebuilt in accordance with section three of this standard.

7. Inspection and testing of repaired transportable gas containers

7.1 Transportable gas containers repaired in accordance with clause 6 shall have the welds subjected to a visual inspection for weld quality by an inspector authorized by the Independent Inspecting Authority.

7.2 Transportable gas containers repaired in accordance with sub-clauses of clause 6 other than sub-clause 6.3 and in which no weld defects are found during the visual inspection shall be subjected to the Volumetric Expansion Test specified in clause **21.4** of **JS 25:2018**. Care shall be taken to completely drain the container.

7.3 The water capacity of each container shall be checked. This shall be done by weighing the empty container, and then by filling the container with a calibrated volume of liquid or by other means approved by the Independent Inspecting Authority in order to ensure compliance with the required minimum specified water capacity (see clause **5.1 of JS 25:2018**).

7.4 Transportable gas containers repaired in accordance with sub-clause 6.3 and in which no weld defects are found during the visual inspection shall be subjected to the Proof Pressure Test specified in clause **21.3 of JS 25:2018** and the Tightness Test specified in clause **24 of JS 25: 2018.**

7.5 After the tests prescribed in **7.1** and **7.2** have been performed, the transportable gas containers shall be

dried in accordance with clause **21.5 of JS 25:2018**

7.6 After inspection and retesting of repaired cylinders, the new tare weight must be determined and stamped on the repaired cylinder.

8. Marking of repaired transportable gas containers

Where a neckring or other non-pressure attachment that is replaced in accordance with 6.3 the markings shall be as follows:

8.1 Each required marking on a cylinder shall be maintained so that it is legible. Retest markings and original markings which are becoming illegible may be reproduced by stamping on a metal plate which shall be permanently secured to the collar of cylinders.

8.2 Except for the marked service pressure, markings required on the cylinders may not be altered or removed.

8.2.1 Additional information not affecting the markings prescribed in (clause 30 of JS 25) may be placed on the cylinder in locations stipulated in **8.1**.

8.2.2 No indentation may be made on the sidewall of the cylinder unless specifically permitted in the applicable specification.

8.3 Other serial numbers and identification symbols may be added by the owners.

8.3.1 Identification symbols and serial numbers shall be registered and approved by the Independent Inspecting Authority before marking.

8.3.2 A report, providing details that allow previous serial numbers and identification symbols to be easily determined for each cylinder, shall be made to the Independent Inspecting Authority and approval shall be granted by same Authority before markings are done.

8.4 When the space originally provided for dates of subsequent retest date becomes filled, the stamping of additional test dates may be carried out to a plate permanently secured to the cylinder.

8.5 The marked service pressure may be changed only upon application to the Independent Inspecting Authority and receipt of written instructions as to the procedure to be followed. A service pressure change is not authorized for a cylinder which fails the prescribed periodic hydrostatic retest, unless it is reheat- treated and requalified in accordance with JS 31.

9. Record of repaired transportable gas containers

Records shall be kept of inspection prior to repairs and all repairs to transportable gas containers including details of serial number, a description of the defect removed, materials used in the repair and the results of the inspection and testing done after completion of the repair process as required by this standard. The report shall be in the format given in appendices B and C.

Section three: Requirements for transportable gas container rebuilding

10. Rebuilding facilities

Transportable gas containers shall only be rebuilt by rebuilding facilities that have been authorized by the

Independent Inspecting Authority and by the original manufacturer or distributor of the transportable gas containers being rebuilt.

11. Rebuilding practices

11.1 The materials, manufacturing processes, and workmanship used to rebuild transportable gas containers shall be subject to the requirements of JS 25, and rebuilt transportable gas containers shall be inspected and tested upon completion according to the requirements of JS 25.

11.2 Transportable gas containers may be rebuilt when inspection or testing has revealed defects in the head or bottom of the transportable gas container. Rebuilding shall consist of having the defective part removed completely and replaced by an acceptable part using manufacturing processes prescribed by section four of JS 25:2018. Replacement of the bodies of three-piece transportable gas containers shall not be carried out.

11.3 Replacement heads and bottoms used for the rebuilding of transportable gas containers shall meet the design specifications of JS 25.

11.4 Rebuilt transportable gas containers shall have not more than two circumferential welds and one seam weld in the pressure vessel.

11.5 Transportable gas containers returned to a repair facility without neckring or information available to the repairer shall be condemned, taken out of circulation and destroyed in accordance with clause 13 of JS 41. Whereas the information is available for that cylinder it can be reproduced on the repaired cylinder in accordance with clause **8** of this standard

12. Marking of rebuilt transportable gas containers

A rebuilt transportable gas container shall be given a unique serial number and information regarding the previous serial number and identification symbols shall be filed with the Independent Inspecting Authority. The prefix R shall be added to the new serial number for each rebuild. The markings shall comply with section six of JS 25:2018.

13. Record of rebuilt transportable gas containers

The following records shall be kept for rebuilt transportable gas containers:

(a) The inspection report of the transportable gas containers prior to rebuilding (see appendix D of JS 41).
(b) The personnel, equipment and materials used to rebuild the transportable gas container.
(c) The new serial numbers of the transportable gas containers.
(d) All records required by JS 25 for new transportable gas containers.

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Appendix A

Filler materials approved by the Bureau of Standards Jamaica

A.1 Base materials for welding of qualification test specimens shall be of the same alloy group as the production materials. The grouping of materials for procedure qualification shown in Table 1 is made on the basis of hardenability characteristics. Base materials of different analysis within a group may be indiscriminately substituted for a material that was used in the qualification test.

Table 1. Composition limits for materials groupings

Group	Alloy Family	C	Mn	P	S	Si	Cr	Ni	Mo	Cb	Cu	Ti
I	Carbon Steels	0.25	1.00	0.045	0.05	0.50				0.04		
II	Carbon-Manganese Steels	0.25	1.00/ 1.65	0.04	0.05	0.50				0.04	0.40	
III	Alloy Steels	0.25/ 0.35	0.40/ 0.90	0.04	0.05	0.20/ 0.35	0.80/ 1.10		0.15/ 0.25			
IV	Austenitic Stainless Steels	0.08	2.00	0.045	0.03	1.00	16.0/ 20.0	8.0/1 4.0	2.0/ 3.0	10x% C min 1.0% max		5x% C min 0.6% max

NOTE 1. Chemical analysis limits are given in percent. Two values indicate a range, for example 16.0/20.0 indicates 16% to 20%. All single value entries are maximum.
NOTE 2. Addition of unspecified elements to obtain alloying effect is not permitted.

A.2 The filler materials approved by the Bureau of Standards for use in the repair and rebuilding of gas cylinders are given in table 2. The assignment of electrodes shown in table 2 is made on the basis of hardenability characteristics. Base materials of different analysis within a group may be indiscriminately substituted for a material within the same group used in the qualifying test.

Table 2. Electrodes and welding rods approved for use in the repair and rebuilding of transportable gas containers

Group	Alloy Family	Electrode (see NOTE 2)	Rod and/or filler (see NOTE 2)	Sub-Arc Electrode (see NOTE 2)
I	Carbon Steels	E 6027 (A5.1)	ER70S-X (A5.18)	F67-EL8 (A5.17)
II	Carbon-Manganese Steels	E 7028 (A5.1)	ER70S-X (A5.18)	F66-EM15K (A5.17)
III	Alloy Steels	E11016 (A5.5)	ER110S-X (A5.28)	F106-EB2H (A5.23)
IV	Austenitic Stainless Steels	(A5.9)	(A5.9)	(A5.9)

NOTE 1. Electrode groupings are typical for material compositions referenced in Table 1. The selection of any electrode outside of these groupings shall require requalification.
NOTE 2. The numbers in parenthesis indicate specific ANSI/AWS publications, given in the related documents section.

Appendix B

Record of repair of welded transportable gas containers

Repaired by: ……..

Located at:……..

For: …….

Welding personnel

Name: ……

Certification:…….…. Expiry date of certification: ……

Equipment used: ……....

Materials used: ……

No. of containers: ……..…… Size of containers (water capacity):……

Serial Nos.: ……

……..

(Serial Nos. may be given on a separate sheet attached to report).

Test pressure of transportable gas containers: …….

Result: …….

……..…….

……..……

……

This is to certify that the transportable gas containers quoted above have been repaired/rebuilt in accordance with the requirements of JS 31 and all the specified inspection, heat treatment, testing and remarking have been carried out. The materials used in the repair/rebuilding meet all the requirements of JS 25 and the transportable gas containers are considered satisfactory for use in the containment of gases. The processes used were supervised and found to comply with the requirements of JS 25.

Signed: .....Inspector

Date: ……

Approved Inspector's Mark: ……

Appendix C

Sample Inspection and test report for repaired and rebuilt cylinders and Isolation and rejection log sheet

C.1 Inspection and test report for repaired and rebuilt cylinders (sample)

INSPECTION & TEST REPORT FOR REPAIRED AND REBUILT CYLINDERS

Rebuilding Facility: _____ **Date:** _____

Owner of Cylinders: _____

CYLINDER IDENTIFICATION								**REASON(S) FOR REPAIR/REBUILDING**					**TEST RESULTS**		**Dis-position**	**Inspec-tor's Initial**	**Com-ments**
Serial No. (old)	Serial No. (new) (if applicable)	Spec. JS 25; ICC; DOT	Manu-facturer	Date of Manu-facture	Current Test Date	Tare Weight (old)	Tare Weight (new) (if applicable)	Defective footring	Defective neckring	Defective bottom/ head	Weld defect	Other (please specify)	Proof Test	Tightness Test			

Disposition Code: RH-Reheat Ret-Retest RW-Return to welding area Rej-Reject S-Scrap (Condemn)

_____ _____ _____ Company's Stamp

Inspector's Signature **Supervisor's Signature** **Date**

C.2 Isolation and rejection log sheet (sample)

ISOLATION AND REJECTION LOG SHEET

Repair / Rebuilding Facility: _____ **Date:** _____

Owner of Cylinders: _____

CYLINDER IDENTIFICATION						**PROTECTIVE COATING**		**REASON FOR REJECTION/ISOLATION**								**Disposition (Cylinder Status)**	**Comments**	**Inspector's Initial**
Serial No.	Identifying Symbol	Spec. JS 25; ICC; DOT	Manufacturer	Date of Manufacture	Current Test Date	Type	Condition	Corrosion & Pitting	Dents	Cuts, Digs & Gouges	Fire Damages	Bulges	Neck Defects	Attachments	Leaks			

Disposition Code: RH-Reheat Ret-Retest RW-Return to welding area Rej-Reject S-Scrap

_____ _____ _____ Company's Stamp

Inspector's Signature **Supervisor's Signature** **Date**

Appendix D

Guideline for buildings or structures housing LP Gas cylinder purging facilities

D.1 Scope

D.1.1 This chapter shall apply to the construction, ventilation, and heating of structures, parts of structures, and rooms housing LP-Gas systems where specified by other parts of the code.

This chapter does not apply to buildings constructed or converted before December 31, 1972.

D.2 Separate structures or buildings

D.2.1 Construction of structures or buildings

D.2.1.1 Separate buildings or structures shall be one story in height and shall have walls, floors, ceilings, and roofs constructed of non-combustible materials. Either of the following shall apply to the construction of exterior walls, ceilings, and roofs:

(a) Exterior walls and ceilings shall be of lightweight material designed for explosion venting.

(b) Walls or roofs of heavy construction, such as solid brick masonry, concrete block, or reinforced concrete construction, shall be provided with explosion venting windows that have an explosion venting area of at least 0.1 m^2 for each 1.4 m^3 of the enclosed volume.

D.2.1.2 The floor of separate Structures shall not be below ground level. Any space beneath the floor shall be of solid fill, or the perimeter of the space shall be left entirely unenclosed.

D.2.2 *Structure of building ventilation*. The structure shall be ventilated using air inlets and outlets, the bottom of which shall be not more than 150 mm above the floor, and ventilation shall be provided in accordance with the following:

D.2.2.1 Where mechanical ventilation is used, the rate of air circulation shall be at least 0.3 m^3 /min.m^2 of floor area. Outlets shall discharge at least 1.5 m from any opening into the structure or any other structure.

D.2.2.2 Where natural ventilation is used, each exterior wall shall be provided with one opening for each 6.1 m of length. Each opening shall have a minimum size of 32,250 mm^2, and the total of all openings shall be at least 6900 mm^2/m^2 of floor area.

D.3 Attached structures or rooms within structures.

D.3.1 *Construction of attached structures***.** Attached structures shall be spaces where 50 percent or less of the perimeter of the enclosed space is comprised of common walls.

D.3.1.1 Attached structures shall comply with **D.2.1.**

D.3.1.2 Common walls of structures shall have the following features:

(a) A fire resistance rating of at least 1 hour.

(b) Where openings are required in common walls for rooms used only for storage of LP-Gas, 1½hour (Class B) fire doors.
(c) A design that withstands a static pressure of at least 4.8 kPa (0.70 psi).

D.3.1.3 Where the building to which the Structure is attached is occupied by operations or processes having a similar hazard, the provisions of **D.3.1.2** shall not apply.

D.3.1.4 Ventilation and heating shall comply with **D.2.2** and **D.2.3**.

D.3.2 Construction of rooms within structures. Rooms within structures shall be spaces where more than 50 percent of the perimeter of the space enclosed is comprised of common walls.

D.3.2.1 Rooms within structures shall be located in the first story and shall have at least one exterior wall with unobstructed free vents for freely relieving explosion pressures.

D.3.2.2 Walls, floors, ceilings, or roofs of the rooms shall be constructed of non-combustible materials.

D.3.2.3 Exterior walls and ceilings shall be of lightweight material designed for explosion venting.

D.3.2.4 Walls and roofs of heavy construction (such as solid brick masonry, concrete block, or reinforced concrete construction) shall be provided with explosion venting windows or panels that have an explosion venting area of at least 0.1 m^2 for each (1.4 m^3) of the enclosed volume.

D.3.2.5* Walls and ceilings common to the room and to the building within which it is located shall have the following features:

(a) A fire resistance rating of at least 1 hour.
(b) Where openings are required in common walls for rooms used only for storage of LP-Gas, 1½ hour (Class B) fire doors.
(c) A design that withstands a static pressure of at least 4.8 kPa (0.70 psi).

D.3.2.6 Where the building to which the structure is attached is occupied by operations or processes having a similar hazard, the provisions of **D.3.1.2** shall not apply.

D.3.2.7 Ventilation and heating shall comply with **D.2.2** and **D.2.3**.

Standards Council

The Standards Council is the controlling body of the Bureau of Standards and is responsible for the policy and general administration of the Bureau.

The Council is appointed by the Minister in the manner provided for in the Standards Act, 1968. Using its powers in the Standards Act, the Council appoints committees for specified purposes.

The Standard Act, 1968 sets out the duties of the Council and the steps to be followed for the formulation of a standard.

Preparation of standards documents

The following is an outline of the procedure which must be followed in the preparation of documents:

a. The preparation of standards documents is undertaken upon the Standards Council's authorization. This may arise out of representations from national organizations or existing Bureau of Standards' Committees or Bureau's staff. If the project is approved it is referred to the appropriate sectional committee or if none exists a new committee is formed or the project is assigned to a Bureau staff.

b. If necessary, when the final draft of a standard is ready, the Council authorizes an approach to the Minister in order to obtain the formal concurrence of any other Minister who may be responsible for any area which the standard may affect.

c. With the approval of the Standards Council, the draft document is made available for general public comments. All interested parties, by means of a notice in the Press, are invited to comment. In addition, copies are forwarded to those known, interested in the subject.

d. The committee considers all the comments received and recommends a final document to the Standards Council.

e. The Standards Council recommends the document to the Minister for publication.

f. The Minister approves the recommendation of the Standards Council.

g. The declaration of the standard is gazetted and copies placed on sale.

h. On the recommendation of the Standards Council the Minister may declare a standard to be compulsory.

i. Amendments to and revisions of standards normally require the same procedure as is applied to the preparation of the original standard.

Overseas standards documents

The Bureau of Standards maintains a reference library which includes the standards of many overseas standard organizations. These standards can be inspected upon request.

The Bureau can supply on demand copies of standards produced by some national standards and is the agency for the sale of standards produced by International Organization for Standardization (ISO) members.

Application to use the reference library and to purchase Jamaican and other standard documents should be addressed to:
Bureau of Standards
6 Winchester Road,
P.O. Box 113,
Kingston 10,
Jamaica, W.I.