Procedure for Transportable Compressed Gas Cylinders (Azerbaijan and Georgia)

AZSPU-HSSE-DOC-00014-2

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1 PURPOSE & SCOPE

1.1 PURPOSE

This procedure specifies the requirements necessary for the safe procurement, handling, use, storage, and transportation of gas cylinders for compressed gases and gases liquefied under pressure.

1.2 SCOPE

The contents of this procedure are applicable to all BP owned and managed sites / installations in Azerbaijan and Georgia. **Contractors working on BP owned or managed sites / installations are also responsible for alignment with this procedure.**

This document does not replace the procedures prepared and adopted by specialist contractors. Neither does it supersede any national and local regulatory requirements.

All guidelines contained shall be regarded as the minimum requirements for BP owned or managed sites / installations in Azerbaijan and Georgia.

The scope covers defined activities of BP and Contractors at all BP AzSPU sites and installations.

The contents of this procedure apply to gas cylinders that contain pressures greater than 10 psi (0.5bar) on all BP managed and owned sites in Azerbaijan and Georgia.

Where necessary, this procedure should be used in conjunction with procedure *AZSPU-HSSE-DOC-00064-2: Welding and Cutting,* which provides advice specifically for the storage and use of compressed gas cylinders for welding and cutting activities.

2 DEFINITIONS

Refer to document AzSPU-HSSE-DOC-00021-2 HSE Definitions for definitions common to this Procedure. Definitions specific to the Procedure are included below.

SM	Site Manager
SC	Site Controller
OIM	Offshore Installation Manager
AA	Area Authority
PA	Performing Authority
ALARP	As Low as Reasonably Practicable
CoW	Control of Work
L2RA	Level 2 Risk Assessment
PTW	Permit to Work
SSOW	Safe System of Work
TRA	Task Risk Assessment
TBT	Toolbox Talk
AzSPU	Azerbaijan Strategic Performance Unit
PSA	Production Sharing Agreement
MEWP	Mobile Elevated Work Platform
IRATA	Industrial Rope Access Trade Association

PSCM	Procurement Supply Chain Management

3 GENERAL REQUIREMENTS

3.1 LEGISLATION & STANDARDS

- Operating Management System OMS Essentials 3.2.1 and 4.5.1

This procedure complies with applicable national law. Applicable national law is national law as amended by project specific agreements, e.g. the ACG Production Sharing Agreement (PSA), and relevant International Conventions, if any, in force in Azerbaijan or Georgia, as applicable.

In the absence of national legislation, or where national legislation is inconsistent with the requirements of project specific agreements, BP Group Standards or applicable requirements from UK or US legislation will be complied with.

Where requirements conflict, legal advice has been obtained and a defendable compliance position adopted.

The standards and practices contained in this procedure are consistent with those internationally recognized within the petroleum industry.

3.2 COMPANY REQUIREMENTS

It is a company requirement that all tasks are subjected to an assessment of risk to demonstrate that risks have been reduced to as low a level as reasonably practicable (ALARP). This can be achieved by complying with the Company's existing standards. Where compliance with Company standards cannot reasonably be achieved, a formal level 2 Risk Assessment will be undertaken to identify any additional controls and demonstrate that risks remain as low as reasonably practicable, whether by compliance with Company Group Standards or through level 2 Risk Assessment.

3.3 STOPPING UNSAFE WORK

To stop the continuation of potentially unsafe work at the earliest possible stage the Control of Work (CoW) Policy and this Procedure for Transportable Compressed Gas Cylinders make it very clear that all personnel are obliged and have the authority to **"STOP"** the work that they consider to be unsafe.

3.4 DEVIATIONS

This procedure is written in sufficient detail that it should be able to be applied consistently at all sites / installations. There may still be the requirement for some local rules covering site / installation specific logistical / administrative arrangements and local variations in responsibilities to reflect differences in organisational arrangements. These local rules should not deviate from the core processes within this document. Any form of deviation from this procedure, including but not limited to local rules, shall be requested and authorised in accordance with SSOW Procedure for Deviations (Doc. No: AZSPU-HSSE-DOC-00011-2).

4 KEY RESPONSIBILITIES

4.1 SITE MANAGER (SM) / SITE CONTROLLER (SC) / OFFSHORE INSTALLATION MANAGER (OIM)

Site Managers, Site Controllers and Offshore Installation Managers have overall responsibility for the receipt, safe storage and use of gas cylinders on their site / Installation and shall ensure that:

- Procedures for procurement, receipt, safe use and storage of gas cylinders are established and observed on site
- Gas cylinders are procured and stored in accordance with these guidelines
- Receipt, storage and use of gas cylinders are carried out by suitably competent and qualified personnel
- That no compressed gases, gas hoses or associated equipment is allowed or used on site unless it has been designed and tested for use and, where necessary, is accompanied by all relevant certification and in date test certificates
- That, where necessary, adequate records are maintained for all compressed gases, gas hoses or associated equipment including, certification, examination and test reports.
- That Competent Person's are appointed to control the issue and inspection of compressed gases, gas hoses or associated equipment
- That Competent Person's are appointed to control the use and storage of all compressed gases, gas hoses and associated equipment

4.2 AREA AUTHORITY (AA)

The Area Authority shall be responsible for ensuring that the requirements of this procedure are adhered to within his area of responsibility. He shall be responsible for ensuring:

- That the use of gas cylinders have been risk assessed and planned
- That all persons involved in the use of gas cylinders are instructed on the risks or hazards associated with their work activity
- That regular inspection is performed on all works associated with gas cylinder activities to confirm that conditions are suitable and sufficient and, that all personnel are in compliance with this procedure
- That the Performing Authority performs Risk Assessments, and conducts Toolbox Talks associated with the use of gas cylinders

4.3 PERFORMING AUTHORITY (PA)

Personnel involved in the use of compressed gas cylinders, gas hoses and associated equipment shall ensure:

- That all equipment is inspected prior to use
- That all equipment is used according to manufacturers and suppliers instructions, best recognised practice, and with regard to safe working practices, procedures and risk assessments
- That all equipment in use is placed in safe positions and that all gas hoses are run to avoid slip and tripping hazards
- That all equipment is inspected after use and returned to appropriate storage locations.
- That all equipment is isolated, disconnected and stored safely and correctly at the end of each shift

4.4 PERSONS RESPONSIBLE FOR INSPECTION AND MAINTENANCE

Personnel responsible for the inspection and maintenance of gas hoses and associated equipment shall ensure:

- That a record is kept of all equipment on site detailing issue, use, repair, inspection and maintenance
- That all equipment on site is colour coded for ease of identification and, that details of the colour code in present use is displayed around the facility and at the point of issue
- That all equipment on site is inspected and maintained to manufactures and suppliers instructions and recommendations, best practice and, company policy
- That any equipment on site taken out of service is placed in secure quarantine to prevent use

5 COMPRESSED GAS CYLINDERS

5.1 GAS CYLINDER PROCUREMENT

5.1.1 Design, Manufacture and Testing

Gas cylinders shall be designed, manufactured and tested according to recognised standards.

Generally accepted standards for refillable cylinders are:

- Seamless steel gas cylinders: ISO 9809, EN 1964
- Welded cylinders for LPG: ISO 22991, EN 1442
- Welded cylinders: ISO 4706, EN 13322

Or to a equivalent standard.

The cylinders shall be subject to initial certification as required by chapter 6.2.1.4 of Annex A to "The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)" or alternatively according to ADR chapter 6.2.5.6. Cylinders conforming to EC directive 1999/36/EC and bearing the CE mark of conformity are also acceptable.

Cylinders shall be colour labelled and stamped in accordance with Tables 1a, 1b.

5.1.2 Filling of Cylinders

Gas cylinders shall only be filled by BP approved suppliers according to Procurement Supply Chain Management (PSCM) practice requirements. Cylinders must only be filled with the type of gas for which they are intended. In no case shall cylinders be filled in excess of the limit permitted by ADR chapter 4.1, Packing instructions P200.

During filling, the filling centre shall carry out inspections in accordance with the requirements of Regulation of "Structure (working principles) and Safe Operation of Pressure Vessels" – Moscow 1976 or/and one of the following standards:

- Liquefied gases: EN 1919
- Compressed gases: EN 1920
- LPG EN 1439

5.1.3 Periodic Inspection

The cylinders shall be subject to periodic inspection at regular intervals not exceeding the intervals required by ADR chapter 4.1, Packing instructions P200. The inspection shall be carried out in accordance with one of the following standards:

- Seamless steel cylinders EN 1968
- Welded LPG Cylinders EN 1440

Or a equivalent standard.

The tests shall be carried out by a Testing and Certification body approved by BP.

5.2 RECEIPT OF CYLINDERS ON SITE

5.2.1 Design, Fabrication and Testing of Multiple Cylinder Transport

Gas cylinders shipped to any BP site shall be thoroughly inspected by qualified and competent personnel before being accepted.

Containers / Frames:

- The owner shall ensure that the transport containers are properly designed and tested
- The design should ensure the security of the bottles as they should not move and stress the manifold piping during transport
- The structure of the container frame should be properly designed and fabricated to an approved drawing. The drawings should detail the materials of construction, welding of the members and coating required
- The lifting lugs shall be designed by a qualified competent person and should include the details of welding and calculation of the strength of the lugs. There should be approved drawings and calculations showing this detail
- The fabrication should be carried out to the drawings by a properly qualified and approved contractor
- The container shall be marked with its unique number, the name of the owner and have the appropriate Test Plate fitted
- Testing of the container shall be carried out by a properly certified test authority and their plate shall be fitted to the tested unit
- Regular inspections are to be carried out at period not exceeding 6 months and the inspection stamp applied to the Test Plate
- Inspected for corrosion, dents, general distortion, scorch marks, defacing, illicit repairs, modification, or any defect

Manifolds, piping and Valves:

- The manifolds and piping shall be designed, fabricated and tested to an appropriate international code. The owner should indicate the code used for the fabrication
- Design, fabrication and testing shall be properly documented and these documents held by the owner
- Normally the design drawings should be appropriately approved by a competent authority and these must be signed off and issued in a controlled manner
- Valves used in the construction shall be of an approved type and all relevant documents

such as, data sheets, material certification, test certification shall be held by the owner. The threads and connections used should be shown on the drawings and should be to internationally known standards
- The management of these small bore systems shall be controlled by a regular maintenance and inspection regime. There is good guidance in documents such as UKOOA "Guidelines for the management of Small bore Tubing Systems
- Inspected for, dents, general distortion, scorch marks, defacing, illicit repairs, modification, or any defect

There is guidance to good design in documents such as BCGA Code of Practice CP4 "Industrial Gas Cylinder Manifolds and Gas Distribution Pipework". It also indicates the codes and standards used for all aspects of the design.

The requirements of ASME B16.3 "Chemical Plant and Refinery Piping" should be used as guidance for test pressures and durations, it also gives guidance on design and stress calculations.

Note: Defective cylinders shall be returned to the supplier / manufacturer.

Cylinders with faulty outlet valve connections, e.g., damaged threads, seized valve spindles, etc., must be returned immediately to stores with a note stating the cylinder number, the nature of the fault and whether the cylinder is charged.

Note: Under no circumstances may the user of the cylinder attempt any repair.

5.2.2 Cylinder Identification

Compressed gas cylinders **shall** be colour coded in accordance with the **GOST 949-73** to properly identify their contents. The required colour coding for Azerbaijan is based on GOST **949-73**; for Georgia – **EN 1089-3:2004** as listed in Tables 1a and 1b.
Sites within AzSPU shall apply only one Gas Cylinder identification/marking standard in accordance with their requirements and needs.

Sangachal Terminal **- GOST 949-73**
Offshore - **GOST 949-73**
Export **- GOST 949-73**
Georgia **- BS EN 1089-3:2004**

Note 1: If cylinders cannot be identified in accordance with this colour coding standard, they shall not be accepted or used on site, but shall be returned to the supplier.

Note 2: This colour coding system does not apply to Diving Gases which are covered under separate standards and practices applicable to diving and sub-sea operations.

Table 1a: Compressed Gas Cylinder Identification

ADR Classification			Marking according to GOST-949-73				EN1089-3 [1, 2]
UN Number	**Classification code**	**Gas name**	**Bottle Colour**	**Label Text**	**Label Colour**	**Stripe Colour**	**Colour on shoulder**
1002	1A	**Air**	Black	COMPRESSED AIR (technical)	White	-	Bright green
1046	1A	**Helium**	Brown	HELIUM	White	-	Brown
1049	1F	**Hydrogen**	Dark green	HYDROGEN	Red	-	Red
1072	1O	**Medical Oxygen**	Blue	MEDICAL OXYGEN	Black	-	
1066	1A	**Nitrogen**	Black	NITROGEN	Yellow	Brown	Black
1072	1O	**Oxygen**	Blue	OXYGEN	Black	-	White
1006	1A	**Technical Argon**	Black	TECHNICAL ARGON	Dark blue	Dark blue	Dark green

Notes: 1. Note that according to EN 1089-3 2004 colour coding applies to cylinder shoulders. Manufacturers may select the colour for the main cylinder body.
2. Cylinders coded in accordance with EN 1089-3 2004 requirements will be marked with “N” twice on the cylinder shoulders.

Table 1b: Liquefied and Dissolved Gas Cylinder Identification

ADR Classification			Marking according GOST-949-73				EN1089-3 [1, 2]
UN Number	**Classification code**	**Gas name**	**Bottle Colour**	**Label Text**	**Label Colour**	**Stripe Colour**	**Colour on shoulder**
1001	4F	**Acetylene**	White	ACETYLENE	Red	-	Maroon
1005	2TC	**Ammonia**	Yellow	AMMONIA	Black	-	Yellow
1011	2F	**Butane**	Red	BUTANE	White	-	Red
1013	2A	**Carbon dioxide**	Black	CARBON DIOXIDE	Yellow	-	Grey
1017	2TC	**Chlorine**	Khaki	CHLORINE	-	Green	Yellow
1965	2F	**Hydrocarbon gas mixture, liquefied, n.o.s.**					N.A.
1053	2TF	**Hydrogen Sulfide**	White	HYDROGEN SULPHIDE	Red	Red	Yellow
1978	2F	**Propane**	Red	PROPANE	White	-	Red
1079	2TC	**Sulphur Dioxide**	Black	SULPHUR DIOXIDE	White	Yellow	Yellow

Notes: 1. Note that according to EN 1089-3 2004 colour coding applies to cylinder shoulders. Manufacturers may select the colour for the main cylinder body.
2. Cylinders coded in accordance with EN 1089-3 2004 requirements shall be marked with “N” twice on the cylinder shoulders.

5.2.3 Cylinder Markings

All cylinders shall be permanently and legibly labelled or stamped in accordance with the applied standard. The marking shall include, at minimum, the following elements:

- Trade symbol of manufacturer
- Serial number
- Calculated quantity (tare) of empty mass
- Manufacturing date (month, year)
- Marking of inspection body, date of next inspection/test date, adjacent to the previous inspection date (month, year)
- Service pressure (psi/bar)
- Test pressure (psi/bar)
- Capacity (cubic feet/litres)

All markings shall be stamped on the shoulder of cylinders near valves.

Note: **Do not** remove or change any numbers or marks stamped on cylinders. Any cylinders that do not comply with this system or show tampered cylinder markings shall not be accepted or used on site but shall be returned to the manufacturer/supplier.

5.3 CYLINDER STORAGE

5.3.1 All Cylinders

All cylinders shall be stored in a cool, well ventilated area, preferably in the open air but sheltered from direct sunlight and at least 3 metres (10 feet) from combustible materials.

Note: Medical services have to look after their compressed gas portable equipment to ensure the medical gas cylinders as well as other cylinders should not be subjected to extremes of temperature and/or weather e.g. direct sunlight, rain.

Cylinders shall be chained or otherwise secured, in an upright position with valves shut and valve caps in place when cylinders are not in use.

Cylinders shall not be stored in enclosed spaces such as workshops, accommodation or enclosed modules except for where required that breathing air cylinders and medical gases that are used for immediate response by emergency response teams be stored in the temporary refuge and clinic these should be limited and subject to regular inspection.

All cylinders shall be stored away from:

- The direct rays of the sun or from radiant heat, e.g., flares
- Locations where the temperature may exceed 45°C (113°F)
- Locations exposed to adverse weather

Note: Weather protection shall be provided if required

- Possible sources of ignition
- Flammable materials
- Corrosive liquids
- Any direct contact with soft or damp ground, or any other location where water can accumulate, thereby increasing exposure to the possible effects of corrosion
- Locations where cylinders are vulnerable to impact, e.g. fork lift trucks

Cylinders containing different gases must be stored separately and in accordance with established spacing requirements. Oxygen cylinders shall be separated from the cylinders containing flammable gas by at least 3 metres or by non-combustible barrier at least 2 metres high.

Empty cylinders shall be marked with “EMPTY” or “MT”, and stored separately from full cylinders.

Leaking cylinders or cylinders with leaking valves that cannot be shut off must be removed to a safe area away from any possible source of ignition and drainage, where they shall be allowed to vent off slowly until empty. Stores shall be advised of the fault.

Note: Propane and Butane are heavier than air and may therefore accumulate in dips and hollows.

Note: Regardless of whether or not cylinders have been marked / empty, all cylinders shall be handled and treated as if they were full.

5.3.2 Oxygen Cylinders

Warning: Oils and greases are spontaneously combustible in the presence of oxygen.

Oxygen cylinders and their fittings, including hoses, **must not** be stored or used where they can come into contact with oil or grease. This includes handling the equipment with oily hands, gloves or rags.

Oxygen cylinders must be stored apart from fuel gas cylinders by a minimum distance of 3 metres (10 feet). Separation by using cylinders of non-flammable gases is acceptable. This separation must be maintained.

The preferred practice is to store oxygen cylinders vertically, valve end up. However, it is acceptable to store oxygen cylinders horizontally provided that:

- The stacks shall not exceed a maximum height of three cylinders
- The largest cylinders must be at the bottom
- The row must be securely wedged.

5.3.3 Cylinders for Liquefied or Dissolved Gases

Warning: Cylinders **must not** be stored or used in a horizontal position. All Acetylene cylinders, full or empty, shall be stored and used in the vertical, valve end up position.

5.3.4 Damaged Cylinders

Cylinders that may have been damaged in any way shall be returned to the supplier.

Leaking cylinders shall immediately be moved to a freely ventilated area away from any source of ignition or places where leaking gas will become trapped.

5.4 CYLINDERS EXPOSED TO FIRE

In the event of gas cylinders being involved in a fire, they must be kept cool with water spray, e.g., a fog nozzle, and where possible, removed to a safe area. Such cylinders must be returned to the manufacturer for checking prior to re-use.

In the case of acetylene cylinders that have been so exposed, prolonged cooling is necessary for several hours after the incident to prevent exothermic decomposition.

5.5 CYLINDER HANDLING

5.5.1 Transport

The transport shall, at minimum, comply with the national regulations applicable for the relevant mode of transport. The following shall be observed:

- Gas cylinders shall only be transported in properly ventilated cylinder containers
- Suitable valve protection caps shall be fitted
- Ensure cylinders are securely stowed to prevent moving, e.g. by use of baskets
- Cylinders shall be stowed in the upright position unless instructions for transport specifically say otherwise
- Do not let gas cylinders project beyond the sides or end of a vehicle

5.5.2 Lifting

If cylinders are lifted by crane, a suitable cradle or similar device should be used.

Trolleys should not be used as lifting cradles unless they have been specifically designed for that purpose and are certified and checked on a six monthly basis.

Cylinders shall not be lifted using:

- The cylinder valves
- Chain or wire rope slings (these can allow the cylinder to slip during lifting)
- Lifting magnets

5.5.3 Movement of Cylinders on Site

Note: Cylinders shall not be dropped, dragged, rolled, used as supports or for any other purpose than the storage and transport of gas, and must be protected from damage at all times.

5.5.3.1 Cylinder Trolleys

Cylinders shall be transferred to, and moved within, the working area on trolleys specifically designed for that purpose, or in suitable containers providing stable and secure positioning of the cylinders.

All valves must be closed before a cylinder is moved and, if the correct trolley is not being used, regulators and hoses should be detached from the cylinders.

5.5.3.2 Electric Cables

Cylinders and gas hoses shall not be allowed to come into contact with current carrying wires.

Therefore:

- Special attention should be paid to the places where electro-welding and gas burning of metals are carried out simultaneously
- The distance from oxygen or fuel gas cylinders to electro-welding cables shall be not less that 1 m

When in use, hoses should be protected from damage, and laid out in such a manner as to avoid being a tripping hazard.

5.6 CYLINDER USE

Many of the specific uses of gases will vary from gas to gas but there are several points that apply to all of them:

- Do not use a cylinder that appears to be damaged or defective in any way
- Keep the cylinders away from operations that create sparks, heat, fire and electrical circuits
- Do not use oil or grease on cylinders or handle them with oily hands or gloves. Do not let oxygen spray on an oily or greasy surface, or on your clothes
- Use cylinders in ventilated areas only
- Keep cylinders secured upright in cylinder racks
- Open valves by hand, not with a wrench or other tool. If they cannot be opened by hand, notify the supplier/manufacturer
- Do not tamper with safety devices
- Check that the regulator is rated for the correct pressure and service, is in date, stamped, and does not show signs of damage or temporary repair (e.g. jointing compound or tape)
- If a cylinder has a leaky valve or fitting which cannot be stopped by closing the valve, the cylinder must be taken outdoors away from sources of ignition. Tag the cylinder as in bad order and promptly notify the supplier. Do not try to fix a leaking cylinder or valve. Dented cylinders should never be used
- Ensure that all equipment, including hosing / tubing, for use in oxygen service is designed for this purpose and is completely degreased and dust free before each use
- Always open valves slowly. If a valve cannot be opened by hand with the key or hand wheel provided, the cylinder shall be returned to the supplier / manufacturer. Do not attempt to force the valve open using wrenches or other hand tools

- Do not empty gas cylinders completely. If appropriate, cylinders should be fitted with residual pressure valves (non-return valves) to prevent backflow of air or other contaminants

6. REFERENCES

This procedure shall, where appropriate, be used in conjunction with this suite of AzSPU Procedures referenced below.

Document Number	Title of Procedure
AZSPU-HSSE-DOC-00053-2	Procedure for Hot Work Naked Flame
AZSPU-HSSE-DOC-00061-2	Procedure for Personal Protective Equipment
AZSPU-HSSE-DOC-00060-2	Procedure for Permit To Work
AZSPU-HSSE-DOC-00064-2	Procedure for Welding & Cutting
AZSPU-HSSE-DOC-00063-2	Procedure Task Risk Assessment
AZSPU-HSSE-DOC- 00002-2	SSOW Procedure for Control of Work Standards

Further information available:

This document has been updated to include selected international standards referenced by "*The European Agreement Concerning the International Carriage of Dangerous Goods by Road"* (ADR). Azerbaijan became signatory to ADR in September 2000.

In addition to the referenced standards stated here, other requirements of ADR may be useful as additional detailed guidance on e.g. cylinder securing and transport aspects.

Standard No	Title
GOST-949-73	Steel gas cylinders of small and middle sized volume. www.centrogas.ru
EN 1089-3, edition 2, 2004	Transportable gas cylinders - Gas cylinder identification (excluding LPG) - Part 3: Colour coding
EN 1439, edition 1, 1997	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Procedure for checking before, during and after filling
EN 1440, edition 1, 1997	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) – Periodic re-qualification (Corrigendum AC:1999 incorporated
EN 1442, edition 1, 1999	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Design and construction (Corrigendum AC:1999 incorporated
EN 1919, edition 1, 2000	Transportable gas cylinders - Cylinders for liquefied gases (excluding acetylene and LPG) - Inspection at time of filling
EN 1920, edition 1, 2000	Transportable gas cylinders - Cylinders for compressed gases (excluding acetylene) - Inspection at time of filling
EN 1964-1, edition 1, 1999	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres - Part 1: Cylinders made of seamless steel with an Rm value of less than 1100 Mpa
EN 1964-2, edition 1, 2002	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders

	of water capacities from 0,5 litre up to and including 150 litres - Part 2: Cylinders made of seamless steel with an Rm value of 1100 MPa and above
EN 1964-3, edition 1, 2000	Transportable gas cylinders - Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0,5 litre up to and including 150 litres - Part 3: Cylinders made of seamless stainless steel with an Rm value of less than 1100 MPa
EN 1968, edition 1, 2002	Transportable gas cylinders - Periodic inspection and testing of seamless steel gas cylinders
EN 13322-1, edition 1, 2003	Transportable gas cylinders - Refillable welded steel gas cylinders - Design and construction - Part 1: Carbon steel
EN 13322-2, edition 1, 2003	Transportable gas cylinders - Refillable welded steel gas cylinders - Design and construction - Part 2: Stainless steel
ISO 4706:1989, edition 1, 1989	Refillable welded steel gas cylinders
ISO 9809-1:1999, edition 1, 1999	Gas cylinders -- Refillable seamless steel gas cylinders -- Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa
ISO 9809-2:2000, edition 1, 2000	Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1 100 MPa
ISO 9809-3:2000, edition 1, 2000	Part 3: Normalized steel cylinders
ISO 22991:2004, edition 1, 2004	Gas cylinders -- Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) -- Design and construction

REVISION/REVIEW LOG

Revision Date	Authority	Custodian	Revision Details
08 February 2005	Alan McNulty (CHSSE Manager)	Esmira Akhundova	Initial Issue as controlled document
25 January 2008	Alan McNulty (AzSPU CH&S Manager)	Abbas Islamov (Central Safety TL)	**General:** Throughout the procedure the document numbering for referred procedures has been changed from UNIF to AzSPU. **Section 1. Introduction:** 1.2 Scope; Wording changes. The following are inclusion to Section 1. They are: 1.3 Legislation & Standards, 1.4 Company Requirements, 1.5 Stopping Unsafe Work, 1.6 Deviations, 1.7 Document Review, 1.8 SSOW Specific Cross References (new doc control numbers), 1.9 Language Facilitation, 1.10 Procedure Summary **Section 2. Definitions:** New section **Section 3. Roles & Responsibilities:** 3.1 Site Manager; Site Controller and Offshore Installation Manager added. 4 additional bullet points added. 3.2 Area Authority; 4 bullet points

			added. 3.3 Performing Authority; This is an addition to the procedure. 3.4 Persons Responsible for Inspection and Maintenance; This is also an addition to the procedure. **Section 4. Gas Cylinder Procurement:** 4.2 Filling of Cylinders; Procurement Supply Chain Management (PSCM) added to first paragraph **Section 5. Receipt of Cylinders on Site:** 4.1 Cylinder Inspection has been change to Design, Fabrication and Testing of Multiple Cylinder Transport **Appendices.** 2 new appendices included to the document as follows: **Appendix A:** Procedure Summary **Appendix B:** Feedback & Improvement Suggestions
05 December 2008	Yuliy Zaytsev Safety & Compliance Systems Manager	Adalet Mamedov Central Safety TL	Authority position/name and custodian name have changed to reflect org changes in HSE&TD as of December 1st 2008
5 February 2009	Yuliy Zaytsev Safety&Compliance Systems Manager	Adalet Mamedov Central Safety TL	The next review/revision date is extended to 01.05.2009 due to rescheduling
24 July 2009	Yuliy Zaytsev Safety&Compliance Systems Manager	Niyaz Mamedov HSE Systems / CoW Adviser	Additional wording in regard to cylinders storage and breathing air cylinders in the temporary refuge is given to the Paragraph 6.1
25 May 2010	Yuliy Zaytsev AzSPU Health & Safety Manager Offshore	Kamran Aliyev AzSPU Safety Systems / CoW Specialist	The document has been reformatted to consider the requirements of Standardized Document Control Template.

			Paragraph 1.2 Reference to old group requirements has been removed **Section 3 General Requirements** updated with OMS essentials requirements, Removed reference with Golden rules **Section 5. Compressed Gas Cylinders** has been modified in order to comply with relevant local and group standards requirements for color coding and inspection regimes **Sub-paragraph 5.3.1** Note section has stressed storage requirements for medical service purposes used compressed gas cylinders