

DEP SPECIFICATION

BREATHING AIR AND SUPPLY SYSTEMS

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DESIGN AND ENGINEERING PRACTICE



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1. INTRODUCTION

1.1 SCOPE

This new DEP specifies requirements and gives recommendations for the specification of and for establishing inspection/maintenance programs for breathing air and breathing air delivery systems.

Out of scope of this DEP are requirements for medical breathing air, specialty analytical air, high altitude aircraft air and diver (SCUBA or air-line) breathing air.

This DEP does not cover the use of liquid air.

1.2 DISTRIBUTION, INTENDED USE AND REGULATORY CONSIDERATIONS

Unless otherwise authorised by Shell GSI, the distribution of this DEP is confined to Shell companies and, where necessary, to Contractors and Manufacturers/Suppliers nominated by them. Any authorised access to DEPs does not for that reason constitute an authorisation to any documents, data or information to which the DEPs may refer.

This DEP is intended for use in facilities related to oil and gas production, gas handling, oil refining, chemical processing, gasification, distribution and supply/marketing. This DEP may also be applied in other similar facilities.

When DEPs are applied, a Management of Change (MOC) process shall be implemented; this is of particular importance when existing facilities are to be modified.

If national and/or local regulations exist in which some of the requirements could be more stringent than in this DEP, the Contractor shall determine by careful scrutiny which of the requirements are the more stringent and which combination of requirements will be acceptable with regards to the safety, environmental, economic and legal aspects. In all cases, the Contractor shall inform the Principal of any deviation from the requirements of this DEP which is considered to be necessary in order to comply with national and/or local regulations. The Principal may then negotiate with the Authorities concerned, the objective being to obtain agreement to follow this DEP as closely as possible.

1.3 DEFINITIONS

1.3.1 General definitions

The **Contractor** is the party that carries out all or part of the design, engineering, procurement, construction, commissioning or management of a project or operation of a facility. The Principal may undertake all or part of the duties of the Contractor.

The **Manufacturer/Supplier** is the party that manufactures or supplies equipment and services to perform the duties specified by the Contractor.

The **Principal** is the party that initiates the project and ultimately pays for it. The Principal may also include an agent or consultant authorised to act for, and on behalf of, the Principal.

The word **shall** indicates a requirement.

The word **should** indicates a recommendation.

1.3.2 Specific definitions

Term	Definition
Air-line trolley	Group of high pressure cylinders filled with respirable air and connected to a control system.
Atmospheric dew point	Temperature at which moisture begins to condense from a gas measured in parts per million by volume (ppmv).
Breathing air	See Compressed Breathing air.

Term	Definition
Closed circuit SCBA	Supplied breathing air apparatus that re-uses exhausted air after being chemically treated.
Compressed breathing air	A respirable gas mixture derived from either normal atmospheric air or from manufactured synthetic air, stored in a compressed state in storage cylinders and respirator breathing air cylinders, and supplied to the user in a gaseous form.
Compressed breathing air system	Assembly of various components including piping and connections required to produce and/or deliver breathing air.
Contaminant	A harmful, irritating or nuisance airborne material. This includes materials for which there are local regulatory occupational exposure limits.
Oil-free Compressors	“Oil-free” compressors use lubrication for moving parts of the machine but do not have oil in the compression chamber.
Open-circuit self-contained breathing apparatus (SCBA)	Supplied breathing air device that exhausts to the atmosphere.
Supplied Air Respirators (SAR)	Respirator connected via a hose to a breathing air source not intended to be carried by the user. Otherwise referred to as ‘air-line respirator’.
Synthetic air	A manufactured breathing air that is produced by blending nitrogen and oxygen.

1.4 CROSS-REFERENCES

Where cross-references to other parts of this DEP are made, the referenced section number is shown in brackets (). Other documents referenced by this DEP are listed in (7).

1.5 COMMENTS ON THIS DEP

Comments on this DEP may be submitted to the Administrator using the DEP Feedback Form by:

- Entering comments directly in the DEP Feedback System on the Technical Standards Portal <http://swwww.shell.com/standards> (mandatory for users with access to Shell Wide Web);
- Clicking on the DEP Feedback Form button on the DEPs DVD-ROM main page (for users without access to Shell Wide Web);
- Requesting a copy of the DEP Feedback Form from the Administrator at standards@shell.com (for users without access to Shell Wide Web).

For the last two options, the completed DEP Feedback Form can be attached to an email and submitted to the Administrator at standards@shell.com. Only feedback that is entered into the Feedback Form will be considered.

1.6 DUAL UNITS

This DEP contains both the International System (SI) units, as well as the corresponding US Customary (USC) units, which are given following the SI units in brackets. When agreed by the Principal, the indicated USC values/units may be used.