

DEP SPECIFICATION

EMERGENCY DEPRESSURING AND SECTIONALIZING

DEP 80.45.10.12-Gen.

February 2011

DEP Circular 77/12 has been incorporated

ECCN EAR99

DESIGN AND ENGINEERING PRACTICE

DEM1



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1. INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for emergency depressuring, and also covers the use of sectionalizing to make depressuring more effective. For the instrumentation and configuration of depressuring systems reference shall be made to DEP 32.45.10.10-Gen.

This DEP contains mandatory requirements to mitigate process safety risks in accordance with Design Engineering Manual DEM 1 – Application of Technical Standards.

This is a revision of the DEP of the same number dated January 2010; see (1.5) regarding the changes.

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 authorization 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 should 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 may 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 regard 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 its design and construction. The Principal will generally specify the technical requirements. The Principal may also include an agent or consultant authorised to act for, and on behalf of, the Principal.

The lower-case word **shall** indicates a requirement.

The capitalised term **SHALL [PS]** indicates a process safety requirement.

The word **should** indicates a recommendation.

1.3.2 Specific definitions

Term	Definition
ALARP	As Low As Reasonably Practicable
BLEVE	Boiling Liquid Expanding Vapour Explosion

Term	Definition
Blowdown	Liquid de-inventory and depressurization of a plant or part of a plant, and equipment usually via liquid dump valves NOTE: Some documents and standards have used the term "blowdown" to mean vapour depressuring.
Depressuring	Depressurization of a plant or part of a plant, and equipment usually via vapour depressuring valves. NOTE: Some documents and standards have used the term "blowdown" to mean vapour depressuring.
Pressure, temperature and toxicity terms	See DEP 01.00.01.30-Gen.
Project's Design Philosophy	Project documents such as Fire and Explosion Strategy, Emergency Response Strategy, HSE Philosophy, etc. that would define the high level HSE related design requirements. This philosophy could affect emergency depressuring and sectionalization system applications and design.
Sectionalizing	Isolating sections of a unit to limit the volume that is exposed to leaks, thereby making depressuring more effective.

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 in this DEP are listed in (3).

1.5 SUMMARY OF CHANGES

This is a revision of the DEP of the same number dated January 2010.

Content of the previous version that was background information, explanation and guidance and therefore not required to be communicated to the Contractor, has been moved into a companion document called a "DEP Informative" accessible from the Shell Standards web page.

The only non-editorial changes made in this revision

Section	Change
2.5	Reference of the availability requirements is now to DEP 32.80.10.10-Gen. rather than 32.45.10.10-Gen.
2.6.6	Additional requirement to assess hydrate formation potential downstream of depressuring valves.
2.7.2 and 2.7.3	Sections removed as information redundant, repeating information already stated.

1.6 COMMENTS ON THIS DEP

Comments on this DEP may be sent to the Administrator at standards@shell.com, using the DEP Feedback Form. The DEP Feedback Form can be found on the main page of "DEPs on the Web", available through the Global Technical Standards web portal <http://swwww.shell.com/standards> and on the main page of the DEPs DVD-ROM.

1.7 DUAL UNITS

In this DEP, the International System of units (SI) shall be understood to prevail over US Customary (USC) units. USC units are provided in brackets following the SI units for information.