

DEP SPECIFICATION

DRY GAS SEAL FOR ROTATING EQUIPMENT

DEP 31.29.00.34-Gen.

February 2017

ECCN EAR99

DESIGN AND ENGINEERING PRACTICE

DEM1



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1. INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for dry gas seals for rotating equipment.

Refer to DEP 31.29.60.32-Gen for dry gas seal support systems.

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 with the same number dated February 2015; 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 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 capitalised term **SHALL [PS]** indicates a process safety requirement.

The word **should** indicates a recommendation.

The word **may** indicates a permitted option.

1.3.2 Specific definitions

Term	Definition
Very toxic substances	Acute or chronic or environmental The definition of very toxic gas sub-categories is specified in DEP 01.00.01.30-Gen.

1.3.3 Abbreviations

Term	Definition
DGS	Dry Gas Seal

1.4 CROSS-REFERENCES

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

1.5 SUMMARY OF MAIN CHANGES

This DEP is a new, bridging document until the release of API 692 and creation of a tailored DEP. This information was taken from a non-DEM1 DEP (31.29.40.10-Gen.) and moved here.

This DEP is a revision of the DEP of the same number dated February 2015. The changes followed a requirements quality review and were not a full technical update. The following are the main, non-editorial changes.

Section/Clause	Change
All	Restructured and clarified requirements, enforced use of shall / should / may for normative statements.