

DEP SPECIFICATION

INSTALLATION OF ROTATING EQUIPMENT (AMENDMENTS/SUPPLEMENTS TO API RP 686)

DEP 31.29.00.10-Gen.

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DESIGN AND ENGINEERING PRACTICE



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PART I INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for the mechanical installation of rotating equipment.

This DEP is based on API RP 686, 2nd Edition, December 2009; Part III of this DEP amends, supplements and deletes various clauses of API RP 686. All clauses of API RP 686 not modified by this DEP remain valid as written.

This DEP is a revision of an earlier DEP of the same number dated November 2003; a summary of the main changes is given in (Part I, 1.5).

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 oil refineries, chemical plants, gas plants and, where applicable, exploration and production facilities and supply/marketing installations.

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 as regards 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 with the object of obtaining agreement to follow this DEP as closely as possible.

1.3 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 some of the duties of the Contractor.

The **Manufacturer/Supplier/Vendor** 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 word **shall** indicates a requirement.

The word **should** indicates a recommendation.

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 (PART IV).

Where cross-references to API RP 686 are made, the referenced section number is shown in square brackets.

1.5 CHANGES FROM PREVIOUS EDITION

This DEP is a revision of the DEP of the same number dated November 2003. The following are the main, non-editorial changes.

The DEP has been re-structured so that it focuses on the installation of machinery, and all items related to the installation design of machinery have been moved to a companion Informative.

Old Para	New Para	Change	Reason
Chapter 1 - Introduction			
	1.3.1-1.3.5	Relocated from Chapter 3	More appropriate location.
Chapter 2 – Rigging and Lifting			
	2.7	Added	Added from DODEP specification.
	3.5	Added	Added from DODEP specification.
	3.6	Added	Added from DODEP specification.
	3.7	Added	Added from DODEP specification.
Chapter 3 – Jobsite Receiving and Protection			
1.3.4-1.3.8		Relocated to Chapter 1	More appropriate location.
	2.18.10 – 2.18.14	Added	Added from DODEP specification.
Chapter 5 – Mounting Plate Grouting			
2.6.5		Deleted	Changed to 'levelling screw' throughout document.
2.6.6		Deleted	Adequately covered in API 686.
3.8.6		Deleted	Adequately covered in API 686.
3.10.4		Deleted the sentences that implied the soleplates were set level then the reciprocating compressor placed on them and levelled using shims.	Shimming under reciprocating compressors is inadvisable.
3.15.9	3.15.9	Deleted reference to	Generalized to 'heavy-duty

Old Para	New Para	Change	Reason
		DEP 31.29.02.30-Gen.	centrifugal pumps'.
Chapter 6 – Piping			
4.1.6	4.1.6	Deleted reference to DEP 31.38.01.11-Gen.	Specific reference not necessary.
4.5.2		Deleted reference to DEP 31.38.01.29-Gen.	Specific reference not necessary.
	4.7.5	Added.	Added from DODEP specification.
Chapter 7 – Shaft Alignment			
5.4.6.1	5.4.6.1	Deleted	Adequately covered in API 686.
5.4.11	5.4.11	Tolerances per API 686	API 686 tolerances are adequate.
5.4.12	5.4.12	Tolerances per API 686	API 686 tolerances are adequate.
Chapter 8 – Lubrication Systems			
3.6.2	4.6.2	Added additional requirements.	From 11 GS-14.
3.6.7	4.6.7	Changed '120 mesh SWG 42' to '100 mesh'.	Too specific, hard to source.
Chapter 9 - Commissioning			
4.9	4.9	Deleted	
	4.10.9	Added	Added from DODEP.
	6	Added	Added from DODEP.
References			
		DEP 31.29.02.30-Gen. deleted.	Requirement generalized.
		DEP 31.38.01.29-Gen. deleted.	Piping Support installation is the responsibility of the piping installation contractor, in accordance with instructions from the piping group.
		S 10.045 deleted	Covered in Civil DEP
		S 28.020 deleted	Covered in Civil DEP
		S 38.004 deleted	
		S 38.005 deleted	

Old Para	New Para	Change	Reason
		S 38.041 deleted	
		Appendix 2 deleted	API 686 has an adequate detail
		Appendix 3 deleted	API 686 has an adequate detail

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://www.shell.com/standards> and on the main page of the DEPs DVD-ROM.

1.7 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.

PART II GENERAL

Part III of this DEP is written as amendments and supplements to API RP 686, 2nd Edition, December 2009. Wherever reference is made to API RP 686, it shall be understood to mean API RP 686, 2nd Edition, December 2009 as amended/supplemented by this DEP.

For ease of reference, the clause numbering of API RP 686 has been used throughout Part III of this DEP.

Clauses in API RP 686, which are not mentioned in this DEP, shall remain valid as written.