

DEP SPECIFICATION

HUMAN FACTORS ENGINEERING - DESIGN AND PROCUREMENT OF SKID-PACKAGED UNITS

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DESIGN AND ENGINEERING PRACTICE



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1. INTRODUCTION

1.1 SCOPE

This DEP specifies requirements and gives recommendations for the Human Factors Engineering (HFE) aspects to be applied to the design and procurement of skid-packaged units to comply with the Human Factors Engineering requirements contained in the Shell Group HSSE & SP Health Standard and the HSSE & SP Control Framework Health Manual Section, 'Human Factors Engineering'.

This DEP applies to new facilities and modifications to existing facilities; it is not intended to apply to existing facilities that are not being modified.

This is a revision of the DEP of the same number dated January 2010; see (1.5) regarding the main 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 word **should** indicates a recommendation.

1.3.2 Specific definitions

Term	Definition
HFE Technical Authority	The individual assigned as Technical Authority for HFE on the project in compliance with Business Unit and Group standards.
HSSE CF	Shell Group HSSE Control Framework
Human Factors Engineering (HFE)	A multidisciplinary science that focuses on the interaction between the human and the work system in order to design human-machine interactions that optimize human and system performance. See ISO 6385.
HSSE Critical Activity	As defined in HSSE CF Glossary – an activity necessary for the development, implementation or maintenance of a Barrier established for managing Hazards with RAM red Risks (and yellow 5A and 5B Risks for Asset Integrity – Process Safety). HSSE Critical Activities comprise (in the context of Competence Management) Front Line Operational HSSE Critical Activities and Planning/Supervisory HSSE Critical Activities.
Skid-packaged Unit	Equipment designed and supplied as a largely self-contained physical unit, and mounted on a portable skid. Skid-packaged units are designed, built and tested at the Manufacturer/Supplier's premises and delivered for integration into the overall plant or facility.

1.3.3 Abbreviations

Term	Definition
EPC	Engineering, Procurement and Construction
FAT	Factory Acceptance Test
MSD	Musculoskeletal Disorders
SAT	Site Acceptance Test
TA	Technical Authority
TRA	Task Requirements Analysis

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 (6).

1.5 SUMMARY OF MAIN CHANGES

This DEP is a revision of the DEP of the same number dated January 2010. Background and explanation content in the previous DEP has been moved to a companion Informative document. Some minor editorial changes have been made. The following are the main, non-editorial changes.

Old section	New section	Change
Appendix A	-	Simplified process and moved to Informative
Appendix B	-	Removed
Appendix C	3.1.1, 3.1.2	Requirements moved into main body of DEP Specification
Appendix D	4.0	Moved Appendix D – HFE Design Requirements to main body