

DEP SPECIFICATION

INSTRUMENT ASSET MANAGEMENT

DEP 32.30.20.14-Gen.

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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 Instrument Asset Management Systems (IAMS) and all smart instruments/devices connected to Distributed Control Systems (DCS), Safety Instrumented Systems (SIS), and Fire and Gas Systems (FGS). Basically all smart devices connected to any Process Automation System (PAS) in a production unit/plant.

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 authorized 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 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** indicate a requirement.

The word **should** indicate a recommendation.

1.3.2 Specific definitions

Term	Definition
Alarm (alert/event/warning) setpoint	Pre-set value of a parameter at which an alarm is activated to warn of a condition that requires immediate evaluation or corrective action.
Availability	Measure of probability that a machine will, when used under specific conditions, operate satisfactorily and effectively when required doing so.
Condition based maintenance	Maintenance governed by condition monitoring programmes, and plant availability.

Term	Definition
DACA (Data Acquisition and Control Architecture)	IT requirements for separation of data flow between the office domain and the process control domain, refer DEP 32.01.20.10-Gen.
Failure	Termination of the ability of an item to perform its required function.
FAR (Field Auxiliary Room)	Room located next to or in the subject plant/unit.
FF-H1	Interface between the Foundation™ fieldbus Host system and the devices. The field network is basically called the H1.
Integrated Host	Basically the DCS/FGS/IPS and the IAMS all together
Main Automation Contractor (MAC)	The selected Supplier for the process automation systems (Full Automation infrastructure) including, but not limited to, networks, databases, servers and controllers.
Monitor system	System comprising signal processing, alarm/shutdown/integrity logic processing, power supply, display/indication, inputs/outputs, and protective relays.
Off-line system	System that allows data capture on a periodic but not automatic basis. It is normally accomplished by manual data collection with time intervals that are typically daily, weekly, or monthly.
On-line system	System that automatically scans information at specific time intervals. The system performs signal processing, alarming, data storage, reporting, etc. This may be continuous or periodic.
OPC (Open Process Control)	Open standard for connectivity and interoperability of industrial automation and enterprise systems.
PAS supplier Toolkit	A set of typical solutions, based on project standards, for implementation of the selected DCS/SIS/FGS, and IAMS.

1.3.3 Abbreviations

Term	Definition
AMS	Asset Management System
BPCS	Basic Process Control System
CFF	Common File Format
DACA	Data Acquisition and Control Architecture
DB	Data Base
DCS	Distributed Control System
DD	Device Description
DTM	Device Type Manager
EDDL	Electronic Device Description Language
EFA	Enterprise Frame Agreements
ERP	Enterprise Resource Planning
FAT	Factory Acceptance Test
FDI	Field device Integration
FDT	Field Device Tool