INTERNATIONAL STANDARD

ISO 19008

Standard cost coding system for oil and gas production and processing facilities

Système de codage du coût standard pour la production de gaz et d'huile, et des installations de traitement

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 67, *Materials, equipment and offshore structures for petroleum, petrochemical and natural gas industries.*

Introduction

This International Standard provides the specifications for a standard cost coding system (SCCS) to be used for classification of costs associated with the development and operation of oil and gas production and processing facilities.

The purpose of the SCCS is to enable the costs of exploration, development projects and operations to be organized, collected and reported allowing analysis and comparison across (parts of) projects and assets.

This International Standard is designed to provide a uniform coding basis for both estimate preparation and collecting/collating related historical data in order to facilitate benchmarking and analysis. It is also intended to provide the basis for exchange of cost and quantity data between parties, e.g. between companies or contractors or across projects.

This International Standard establishes a coding system that enables any in-house or commercial data system to meet these data exchange requirements.

The SCCS may also be utilized to capture consistent data for physical quantities, e.g. weight, length, areas, volumes, flow rate, work hours and durations. This will facilitate the development and measure of unit costs and cost metrics.

The scope of work that is being classified has three key aspects (also known as facets) namely, physical asset [coded by the physical breakdown structure (PBS)], activity [coded by the standard activity breakdown structure (SAB)] and resource [coded by the code of resource (COR)].

Hence the SCCS is composed of three complementary and disjoint sub-classifications, each one dealing with one of the aspects. This is technically known as a poly-hierarchical or faceted classification system.

The main body of this International Standard contains the principles and usage of the SCCS. It also includes implementation requirements for the expansion of the coding system by individual organisations.

The annexes include:

— the SCCS codes their names and description;

— examples of use of the codes.

Application of ISO 19008 can also be useful when performing production assurance, reliability management and Life Cycle Cost (LCC) analysis; see ISO 20815, ISO 14224 and ISO 15663.

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Standard cost coding system for oil and gas production and processing facilities

1 Scope

This International Standard describes the standard cost coding system (SCCS) that classifies costs and quantities related to exploration, development, operation and removal of oil and gas production and processing facilities and to the petroleum, petrochemical and natural gas industry. Upstream, midstream, downstream and petrochemical business categories are included.

The SCCS for coding of costs is applicable to:

— cost estimating;

— actual cost monitoring and reporting;

— collection of final quantities and cost data;

— standardized exchange of cost data among organizations;

— implementation in cost systems.

This International Standard is intended for users such as the following:

a) owner/operator/company (individual or grouped entity that is entitled or contributes to operations in the exploitation of oil and gas fields);

b) industry/trade associations;

c) manufacturers/contractors;

d) cost engineering service contractors, cost system providers, benchmarking providers, etc.;

e) authorities/regulatory bodies.

This International standard does not apply to the following:

1) cost classification relevant to cost accounting rules, specific contractual agreements, local requirements for cost reporting to national bodies, government rules and tax regulations, authorization for expenditure (AFE), billing purposes etc.;

2) specific project breakdown structures (e.g. work breakdown structures, contract breakdown structures, organizational breakdown structure) or asset breakdowns (e.g. TAG/system codes, area/module breakdown structure) which are and will remain unique.

However, this International Standard can provide a basis for the establishment of such specific classification systems.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1
code of resource
COR
hierarchical structure of SCCS that classifies all project resources according to the type of contract/resource that is involved in the activity and has an associated set of rates

2.2
cost item
particular part/level that is coded/classified using the SCCS

EXAMPLE   "Procurement of piping" would be a cost item in the "development of facility X".

2.3
cost time resource
CTR
document that describes each major element in the work breakdown structure, including a statement of work describing the work content, resources required, the time frame of the work element and a cost estimate

2.4
faceted classification system
collection of facet classifications that allows the classification of an object

EXAMPLE   This International Standard specifies a faceted classification system for objects used in cost estimating for oil and gas production and processing facilities.

2.5
scope of work
SOW
division of work to be performed under a formal agreement (project assignment), contract or subcontract in the completion of a project

2.6
physical breakdown structure
PBS
hierarchical structure of SCCS that defines the types of physical asset components of field installations being delivered by the activity

2.7
standard cost coding system
SCCS
standard system for classification and coding cost estimates, monitoring and final quantities and cost data

Note 1 to entry: The SCCS code comprises three individual hierarchical coding structures named PBS, SAB, COR, each based upon a different aspect/facet of the scope of work.

2.8
standard activity breakdown structure
SAB
hierarchical structure of SCCS that defines the type of activity that is being performed

3   Abbreviated items

COR   code of resource

CTR   cost time resource

EPC   engineering procurement and construction

PBS   physical breakdown structure

SAB   standard activity breakdown

SCCS   standard cost coding system

WBS   work breakdown structure

4   Application

4.1   Users of this International Standard

This International Standard is intended for users such as the following.

— Company: organization that owns the scope of work.

— Contractor: organization that has been engaged to deliver (a part of) the scope of work.

— Operator: legal entity that is performing the role of operator under a host government contract or a petroleum exploration, development or production licence.

— Organization: unit that is performing a particular scope of work, which can be wholly part of one legal entity or composed of an integrated team of personnel from multiple legal entities.

EXAMPLE 1   The operations and maintenance organization performing production operations on a field installation. This can be a team of operator and contractor personnel working under an operations and maintenance contract.

EXAMPLE 2   The engineering organization of a development project working under the supervision of the operator and composed of personnel from the engineering contractors and operator personnel.

4.2   Principles

4.2.1   Coding basis

The SCCS, included in this International Standard, consists of three individual hierarchical classification structures (facets), each based upon a different aspect of the scope of work.

— PBS – physical breakdown structure. This hierarchical structure defines the physical/functional components of field installations. The PBS provides a classification structure, which enables an oil and gas production and processing facility configuration scheme to be classified. System/facilities descriptions in PBS are only intended to provide guidelines for cost coding, as the systems/facilities normally are designed and laid out differently and uniquely for each development project according to technical and functional requirements, construction philosophy and project realization strategies. As a system/facility can cross individual PBS boundaries as defined in Annex A, there is no exact correlation between a system/facility and PBS. The detailed list of PBS codes is given in Annex A.

— SAB – standard activity breakdown. This hierarchical structure classifies the activity component of the scope of work. The alphabetical prefix introduces a code for use of SCCS throughout all phases of a project, from exploration to removal of facilities. The detailed list of SAB codes is given in Annex B.

— COR – code of resource. This hierarchical structure classifies all project resources according to the type of contract/resource that is involved in the activity and has an associated set of rates. This hierarchical structure classifies the complete scale of resources involved in developing offshore and onshore facilities. The resource type used also depends on the compensation schedules used in project specific contracts (e.g. unit rates, or all-inclusive rates, lump sums). The detailed list of COR codes is given in Annex C.

4.2.2   Relationship between the codes

There are a number of relationships between the three SCCS hierarchies based on the interdependence between the three aspects (physical assets, activities and resources), i.e. only certain kinds of resources are associated with particular types of activities. For example the construction overheads can only relate to construction activities.

In order to facilitate assessment of implementation of the SCCS in a particular data set, a list of typical relationships between the hierarchies is provided along with the list of codes in Annex D.