

GUIDELINES FOR PREPARATION OF OISD STANDARDS

1.0 INTRODUCTION

As various petroleum installations are designed on the basis of different technologies / technical collaborations with various foreign companies, there can be non-uniformity issues with regard to design & operating philosophies related to safety of these facilities. With a view to standardize designing and operating philosophies of various plants in the country technical safety standards are required to be made based on field level experience, incident analysis, expert committee recommendations and environment scanning & taking input of internal standards & experiences. Preparation of these standards involves pooling of knowledge and experience of the industry within the country coupled with latest advancements taking place world over. This document incorporates the guidelines for preparation of technical safety standards as well as procedure for updating the standards. The standard is approved by Safety Council after following the process described below.

2.0 PURPOSE

This document is meant for the guidance and use of all those involved in the preparation of OISD standards. The document is prepared keeping in mind the need for continuity of this activity in the Safety Directorate.

The objective, modalities and methodology adopted for preparation of standards are outlined in this document. The document provides necessary guidelines in setting up new committees for standardization, streamlining their working as well as aiding in course correction of some of the existing Committees.

3.0 SCHEDULE OF REVISION / AMENDMENTS OF OISD STANDARDS

All the activities related to standardization like framing of new OISD standards, revision / amendment of existing OISD standards are carried out as per the requirement of the Industry members. Such requirements are duly recorded in the Steering Committee Meetings which are held at least once in a year. Alternatively, OISD may also take up revision / amendment / reaffirmation with the approval of ED, OISD.

4.0 IDENTIFICATION OF TOPICS FOR STANDARDISATION

The topics for standardization are identified by

- a) Observations made by OISD members during external safety audits of various installations.
- b) Findings of incidents in Petroleum Industry.
- c) Topics decided in Steering Committee and safety council meetings.
- d) Technological developments.
- e) Request from various ministries for creating a safety standard for new target areas.

The topics so identified would be finalized at a Steering Committee meeting for preparation of new OISD standards.

Allotment of number for the new standard shall be done by EDS section. Upon identification of any new OISD Standard / Guidelines / RP, The concerned section undertaking the formulation of such new standard shall obtain the new number from EDS section before start of the standard formulation process.

Terminology

The documents would be classified as given below:

Standards are the documents which give the minimum requirements related to design engineering.

Recommended Practices are documents that communicate practices i.e. operating, maintenance etc. used in the industry.

Guidelines are the documents which give a direction for development of detailed procedures.

Safety Council – The apex body of OISD comprising of all chief executives of public/private/JV-sector oil companies, all Addl./Jt.Secy/Advisors in MoP&NG, statutory heads of bodies like CCE, DGMS, FASLI, CEA etc. It is headed by the Secretary MoP&NG.

Steering Committee: It consists of members from Industry nominated by Safety Council members.

Principal Panelist: The industry members of Steering Committee.

Functional Committee: It consists of members from Industry nominated by Principal Panelist for formulation of standards.

Functional Panel and Standard Amendment Committee: These would consist of all Directors from OISD and the experts from related field.

Chairmen Committee or Committee of Chairmen: These would consist of chief executives of Public Sector Oil Companies. These committees shall be formed by head of the Safety Council i.e. Secretary MoP&NG on as and when required basis for the resolution of divergent views (if any) on any of the OISD standard(s) during the course of their revision/amendment. (See clause 9.0)

Principal Author: The leader of Functional Committee.

5.0 METHODOLOGY

The first step in the preparation of the standards after identification of topics is to form a functional committee.

5.1 FUNCTIONAL COMMITTEE AND FUNCTIONAL PANEL

The approach for formation of the Committees is by the Steering Committee members (i.e. the Principal Panelist who will coordinate with OISD on behalf of each organization) nominating 1 or 2 experts from their organization in the disciplines identified to form the Functional Committee which would evolve the standards. These persons would be from different organizations so that a variety of experiences could be pooled. The Functional Panel would consist of all Directors from OISD and the experts from related field to review the draft II.

5.1.1 SCOPE FOR STANDARDISATION

The standardization would cover Safety, Health and Environment aspects related to Process Design and Operating philosophies, Plant layout and Fire Fighting facilities and Design, Inspection and Maintenance Procedures for all equipment in Refineries, Crude Stabilization Units, Gas-LPG Plants, Marketing Installations and Cross country Pipelines covering the exploration and production, Refining, Transportation and Marketing of all Petroleum Products in order to minimize incidents of fires and accidents in the industry.

These documents are prepared for standardization of facilities and procedures to the extent possible and provide the specific information which are not available readily, and thus help practicing engineers in carrying out the jobs safely. In other words these standards will only supplement but do not do away with the statutory requirement.

OISD standards are published to facilitate the broad availability of proven, sound engineering and operating practices. These standards are not intended to obviate the need for applying sound engineering judgment regarding when and where these standards are to be utilized. The formulation and publication of OISD standards is not intended in any way to inhibit anyone from using any other practices.

All OISD publications in no way supersede the statutory regulations of Chief Controller of Explosives (CCE), Factory Inspectorate or any other statutory body which must be followed as applicable.

5.2 WORKING OF COMMITTEE:

The first meeting of the Functional Committee would finalize its leader and concentrate on finalizing a checklist of items to be covered in the standard in consultation with the OISD representative who would be member-coordinator. The detailed schedule for preparation of standard is enclosed as Annexure-I. The functional committee should finalize their activity schedules in line with detailed schedule for preparation of standard. The leader would then distribute various items to individual members based on individual's expertise, for standardization so that each member would be author of a draft. The drafts are prepared by the members after exhaustive screening of available literature, latest codes and standards, and industry experience. The drafts prepared by the individual members would then be reviewed by the Committee, discussed and finalized at subsequent committee meetings.

Subsequently, the comments received from Functional Panelists will be reviewed by the Functional Committee and the revised draft would be passed on to Principal Panelists for review.

5.3 STRUCTURING OF DOCUMENT:

- a) All documents being prepared shall be provided with a number.
- b) The cover page design shall be as shown in Annexure II. The rear of the cover page shall be blank.
- c) The first page after cover page will be the preamble. Copyright message will be part of NOTE.
- d) The second page will carry the foreword. The rear of the second page will carry the list of Functional Committee members with name of their organization.
- e) The third page will carry the table of contents.
- f) The layout of the standard shall be as follows:
 - 1.0 Introduction
 - 2.0 Scope
 - 3.0 Definitions
 - 4.0 Onwards the main body of the standard.

The final section should be reference.

- g) The numbering should not go beyond the third decimal (i.e. 1.1.1 or 2.1.3 etc). Beyond the third decimal either Roman numbering or lettering shall be used. The title of the document will have font size of 14 (bold), the main headings i.e. 1.0, 2.0 etc. will have font size of 12 (bold, capital letters), the subheadings i.e. 1.1, 2.1, 2.1.1 etc. shall have font size of 10 (bold capital letters) and rest of the document will have font size as 10. The font type to be "Arial". The first page and the

pages giving NOTE, FORWARD, COMMITTEE MEMBERS and CONTENT shall bear page number in roman small letters. The main document shall have another set of page numbers.

- h) The language used in the standards shall be uniform and unambiguous. Clear differentiation shall be made between the words “Shall” and “Should”. Wherever the word “Shall” has been used it indicates that it is a mandatory requirement. Wherever the word 'Should' is used it indicates that the provision requirement is recommendatory as sound engineering practice. Use of subjective words like “adequate”, “desirable” etc. should be avoided. Use of word ‘may’ for the provisions of the standards is not desirable.
- i) Committee shall ensure that coverage of topics is from safety, health and environment point of view only and that presentation is in the form of international standards like API, NFPA etc.
- j) All committees shall ensure that references to codes/standards pertain to only latest revisions.

5.4 DRAFTS AND REVIEWS

The drafts produced by the Committees shall be reviewed at various stages and revised as detailed below:

i) Draft 0:

This would be the draft prepared by the Principal Author in the functional Committee.

ii) Draft-I:

This would be the draft after initial review by the functional Committee.

iii) Draft-II:

After the final approval of the functional committee, the revised draft to be passed on to the Functional Panelists for review. The OISD coordinator on behalf of the functional committee would be responsible for circulating Draft-II to the Functional Panelists and obtaining their comments directly to him. The OISD coordinator on behalf of the committee would be responsible for conducting the meeting of the above panel after circulating the Draft-II of the document to all the members of the panel i.e. all OISD functional Directors. During the meeting, member coordinator shall make a detailed presentation on the draft document as finalized by the functional committee.

OISD coordinator shall compile all the comments received from OISD Directors and incorporate all the changes in the document as decided in the Director's review meeting and prepare final Draft-II of the document. Member coordinator shall circulate the finalized Draft-II of the document to the functional committee for necessary information and review of the committee.

Draft-II as finalized after the Director's review meeting and after formal ratification of the functional committee (either by conducting the meeting of committee or by circulation) shall be hosted on official website of OISD i.e. www.oisd.gov.in for a period of one month for comments from public/professional bodies. Information of web hosting of the document shall be duly advertised in leading newspapers prior to hosting the document on the OISD website.

iv) Draft-III:

The comments received on the web draft from the public/professional bodies would be reviewed by the committee and if found relevant, the same shall be incorporated and the draft revised as Draft-III. The member coordinator would be responsible for sending Draft-III to the Principal Panelists for their comments. He would also receive the comments and place them before the Functional Committee for

review. After incorporation of Principal Panelists comments the draft would be called as **Draft-III** and placed before the Steering Committee for adoption.

v) Draft-IV:

After approval of Steering Committee, the **Draft-IV** would be circulated to Safety Council members for their comments. The comments, if any, received would be reviewed by OISD along with Functional Committee leader and coordinator. The final Draft-V would be prepared after incorporation of the comments. The comments which are not accepted would form an Annexure along with the draft V.

vi) Draft-V:

The Draft-V would be placed in Safety Council for approval. After approval, the document would be released printing.

At all stages of review the action taken on the comments received from the Functional Panelists and Principal Panelists shall be intimated to them in writing by the member coordinator on behalf of Functional Committee. Comments from Safety Council members would be replied by OISD, in consultation with Committee leaders and member coordinator.

6.0 OISD'S ROLE IN COMMITTEE WORKING:

Apart from any technical contribution that the OISD member would make to the drafts, he will attend all Functional Committee meetings and ensure that the scope and the contents of the document are as per the guidelines. OISD will arrange for printing and distribution of standards.

7.0 COORDINATION AND FOLLOW-UP:

OISD representative shall carry out the following coordination and follow-up activity:

- a) Obtain from Functional Committee leader status and schedules for completion of various stages of draft standards.
- b) Monitor slippages and coordinate with leader to maintain schedules.
- c) Discuss with colleagues at OISD and also other Committee members periodically, ways and means of improving Committees working with respect to technical inputs and progress.
- d) Arbitrate in points of disagreement between Functional Committees, Functional Panelists and Principal Panelist. Obtain third party advice if necessary.
- e) Counter check that there are no contradictions with other standards of OISD.

8.0 SYSTEM FOR INCORPORATING AMENDMENTS IN OISD DOCUMENTS:

The procedures for incorporating the amendments in OISD documents are as below:

- a) Principal Panelists (PPs) should send the following details in respect of each of the proposed amendment:
 - i) Existing clause of the OISD Standard.
 - ii) Amendments proposed in the clause.
 - iii) Justifications for proposed amendment.

For effecting revision / amendment in the existing OISD standard, concerned section responsible for such revision / amendment shall obtain base document (in word format) of the same standard

from EDS section. Mode of transmission of such base document from EDS section to the concerned section would be thru E-mail only.

- b) A “Standards Amendment Committee” consisting of Sectional Heads of OISD viz. Director (Process & Engg), Director (Marketing Operations - LPG & POL), Director (Exploration and Production), Section Head of Pipelines and OISD Coordinator of the Standard would be constituted. The Committee will be chaired by concerned Director of OISD. This Committee will take assistance from members of relevant Functional Committees and other technical experts as felt necessary.
- c) The details from Principal Panelists will be reviewed by this Committee and draft amendment will be prepared. The draft will be discussed with the Originator for his views on the draft amendment.
- d) The “Draft Amendments” will be circulated to all PPs for their review/comments.
- e) The comments will be discussed in the “Standard Amendment Committee” for updation of the draft.
- f) The finalized draft will be put-up in the Steering Committee Meeting for adoption.
- g) The Amendment will thereafter be approved in the safety council.

9.0 RESOLUTION OF DIVERGENT VIEWS IN OISD DOCUMENTS

9.1 Adoption by Steering Committee (Draft-IV)

If there are divergent views on any document among the steering committee members than all these views shall be referred to an expert technical committee constituted by OISD. After thorough review by the expert technical committee within a stipulated time period of not exceeding three months, the draft document shall be put up in the next steering committee for adoption.

9.2 Approval by Safety Council (Draft-V)

In case of divergent views on any document among the Safety Council members, Chairman Safety Council shall constitute a ‘Committee of Chairmen’ to look into the same. The committee of Chairmen shall study all the divergent views and provide OISD with its decision. The decision of Committee of Chairmen shall than be put up before the next safety council for final approval of the standard.

Upon approval of revised / new / amended standards by Safety Council, word file of the approved document shall be submitted by respective section head to EDS section within a fortnight of the Safety Council Meeting.

Simultaneously pdf version of the same document shall be forwarded by the concerned section head to IS section for publishing / release for implementation.

Serial number in header of the document reflected in all pages of the respective document shall be as under:

OISD/DOC/YYYY (of document presently in vogue e.g. 1995)/YYYY (year of publication/e.g. 2018 or 2019 as the case may be)/01 i.e. the serial number of company to whom this standard / standards are sold to.

For example serial No 01 will be serial number for OISD and all the subsequent numbers i.e. number 02 onwards shall represent companies as per the sequence of document in any particular year. Yearly

record of OISD standards sold is currently being maintained by IS section and the same practice shall continue.

Each page of the OISD standard shall bear a watermark indicating the name of the company / email of the person to which such document belongs. IS section shall be responsible for providing such water mark/s before release of the same.

IS section shall be responsible for release of the final approved standards for implementation by the industry.

Base document (in word format) of all OISD standards shall be available with EDS section.

OISD's job in Committee's working (for OISD EMPLOYEES only)

Apart from any technical contribution that the OISD member would make to the drafts, he will attend all Functional Committee meetings to ensure that:

- a) Committee stays within the scope of job identified.
- b) The coverage of topics is from the safety point of view only.
- c) The presentation is in the formats of internal standards like API, NFPA etc. and that reprinting manual/text book type drafts are not produced.
- d) The language followed is uniform and unambiguous i.e.
 - no subjective words are used
 - that clear differentiation is made between "Shall", "Should" and "Recommended Practice".

Technical Review

- a) OISD shall carry out a technical review of the draft at Draft-II stage. This review shall include checks -----
 - for factual errors in the draft.
 - for depth and emphasis of each topic.
 - for conduciveness of presentation to facilitate easy review.
 - to ensure that references to codes and standards pertain only to the latest revisions.
 - for any contradictions with standards prepared by other committees.

DETAILED SCHEDULE FOR PREPARATION OF STANDARD

OISD Standard Development Process: Draft Standard Monitoring Sheet

DRAFT ID	CHECKLIST REF NO.	TARGET DATE DD/MM/YY	ACTUAL DATE DD/MM/YY
DRAFT - 0	Item 1.3		
DRAFT - I	Item 2.1		
DRAFT - II	Item 2.3		
DRAFT - III	Item 2.5		
DRAFT - IV	Item 3.1		
DRAFT - V	Item 3.2		

Details of schedule of completion as per attached sheets:

Remarks:

(SIGNATURE)

DATE:

(NAME OF THE MEMBER CO-ORDINATOR)

Remarks:

(SIGNATURE)
Verified By

DATE:

NAME OF THE VERIFYING AUTHORITY WITH DESIGNATION

OISD STANDARD DEVELOPMENT PROCESS – STANDARD MONITORING SHEET.

Phase	Activities	Estimated Req. time (Weeks)	Cumulative Time (Weeks)	Actual Time Taken (Weeks)	Actual Time Elapsed (Weeks)	Reasons For Deviation, if any
Phase-I	Approval from ED OISD on initiation of activities	ZERO Date	ZERO			
1.0	PRE - ACTIVITIES					
1.1	Finalization of Functional Committee (FC) and first meeting of FC to select the Leader of FC	(6)	(6)			
1.2	FC Meeting to freeze the scope, topics to be covered, and assign FC member/s to sub-topics.	(4)	(10)			
1.3	Framing Draft – ZERO	(28)	(38)			
2.0	DRAFT DEVELOPMENT ACTIVITIES					
2.1	Acceptance of Draft – ZERO by FC as Draft I	(8)	(46)			
2.2	Circulate Draft – I to Functional panelists (FPs) i.e. OISD Directors for inputs and collect inputs.	(6)	(52)			
2.3	Collate inputs and obtain vetting by FPs to create Draft – II	(4)	(56)			
2.4	Hosting of Draft – II on OISD website for a period of one month with press notice to invite comments from public / Professional bodies.	(6)	(62)			
2.5	Collation of all the comments received comments from Public / Professional bodies shall be reviewed by FPs and Functional Committee leader to freeze Draft – III.	(8)	(70)			
2.6	Circulate Draft – III to the PPs for their comments, Compile the inputs received from PPs and frame presentation for the steering committee meeting.	(6)	(76)			
Phase-II	Steering Committee Meeting	Reinitialized ZERO Date				

3.0	DRAFT APPROVAL ACTIVITIES					
3.1	Firming up Draft – IV after Steering Committee Meeting, circulates adopted Draft-IV to the Chief Executives for comments / Safety Council members under ED OISD’s signature for review.	(6)	(82)			
3.2	Collation of inputs from Chief Executives / Safety Council members by FC leader for incorporation in Draft-IV to firm up Draft –V	(4)	(86)			
3.3	Freeze Draft–V for circulation to the Safety Council members at least 15 days before the next Safety Council meeting wherein Draft–V shall be placed for approval.	(4)	(90)			
Phase-III	Safety Council Meeting	Reinitialized ZERO Date				
4.1	Proof reading of Draft–V duly approved by the Safety Council	(2)	(92)			
4.2	Final clearance from ED, OISD for releasing thru OISD Website	(4)	(96)			

SYNOPSIS OF SCHEDULE

Phase I	76 Weeks
Phase II	14 Weeks
Phase III	06 Weeks
Total	96 Weeks

Remarks:

(SIGNATURE)

DATE:

NAME OF THE MEMBER CO-ORDINATOR

Remarks:

(SIGNATURE)

DATE:

Verified By

NAME OF THE VERIFYING AUTHORITY WITH DESIGNATION



OIL INDUSTRY SAFETY DIRECTORATE

बॉयलरों का निरीक्षण

ओ आई एस डी-मानक-131

INSPECTION OF BOILERS

OISD-STANDARD-131

Prepared by

COMMITTEE ON

INSPECTION OF STATIC EQUIPMENT

Inception	April 1990
1 st Amendment	May 1997
1 st Revision	July 2003
2 nd Amendment	March 2018

FOR RESTRICTED CIRCULATION ONLY

OIL INDUSTRY SAFETY DIRECTORATE

Government of India

Ministry of Petroleum & Natural Gas

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