



PHARMA DEVILS

ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Vessel Entry Permit

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	1 of 6	

1.0 OBJECTIVE:

To lay down a procedure for Vessel Entry Permit.

2.0 SCOPE:

This SOP is applicable for the requirement of Vessel Entry Permit for entering into all process reactors, mixing vessels, TVD's, Storage Tanks, Ventilation and Exhaust ducts & Sewers openings in

3.0 RESPONSIBILITY:

Officer / Executive - EHS

4.0 ACCOUNTABILITY:

Head – EHS

5.0 PROCEDURE:

5.1 Separate Vessel Entry Permit shall be required for each vessel entry. Vessel Entry Permit shall have a definite Starting and Ending Time.

5.2 A fresh Vessel Entry Permit shall be required each day if a job has to be carried over to next day.

5.3 Vessel Entry Permit as shown in **Annexure-I** shall be prepared in duplicate:

Ist copy : To be available at job site

IInd copy : To be retained in the book by Operating Department

5.4 Officer / Executive of Concerned Area shall initiate the Vessel Entry Permit and make necessary preparations and forward the filled permit to EHS Department.

5.5 The Job Site shall be inspected and checked for necessary preparations by the EHS Manager.

5.6 It is the responsibility of the Engineering Officer / Executive to satisfy himself with the preparations made. In case the job involves hot work inside a vessel, then separate Fire Permit shall be required duly authorized by Head Operations as per the procedure.

5.7 Only after all preparations have been made and permit signed by all concerned personnel, it shall be authorized for start of work by the authorized person.

5.8 At the expiry of the Vessel Entry Permit or completion of job within the validity period, the Engineering Officer / Executive shall indicate the date and time of completion / suspension of work and return it to Operating Department.

5.9 In the event of an emergency alarm / leakage of any chemical, the concerned person shall immediately inform the person working inside the come out. The work shall remain suspended till specific clearance



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TITLE: Vessel Entry Permit

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	2 of 6	

to restart the work is given. Re-entry shall be permitted only after approval by a person authorized for issuing permit.

- 5.10 Outside observer shall not go inside the confined space in case of emergency, but only trained staff should be allowed to do so for rescue, if required and that too only with the aid of SCBA and / or the correct PPE required by the situation.
- 5.11 Inspection of confined space should be carried out before handover of the equipment to the operative staff. He should check the quality of work, reconnect all disconnected lines in proper way, remove all tools, accessories and other removed parts etc. from the confined space / vessel.
- 5.12 It must be confirmed that no inadvertent changes are made in the confined space.
- 5.13 Preparation of vessel / confined space for entry shall be carried out as per the guidelines given along with. Guidelines for entry inside confined space should be followed.

5.14 PREPARATION FOR VESSEL ENTRY – GUIDELINE:

- 5.14.1 Before entry, the vessel or confined space shall be made free from inflammable and toxic materials.
- 5.14.2 The confined Space / Vessel shall be cleaned thoroughly according to the nature of product and residue, the best and most practical method known v.z. hot or cold water wash / flush, steam wash etc. It shall be drained / cleaned air purged and if steam had been used, to be allowed to cool with fresh air.
- 5.14.3 The vessel must be isolated as per tag system for equipment under maintenance. **(Physical disconnection of inlet and outlet pipelines or slip binding of flanged joints must be carried out)**
- 5.14.4 For Vessels fitted with internal power driven equipments like agitators, additional precautions on electrical isolation must be taken. Physical disconnection must be carried out by removing electrical circuit breaker from the switchgear or by removing wire splices in junction box and by removing mechanical drive components such as V-belt, chain, drive, couplings etc.
- 5.14.5 The vessel shall be thoroughly checked to ensure that there is no prominent odour of any chemical / solvents in the vessel and the person working inside can breathe easily.
- 5.14.6 The following gas test shall be carried out by EHS Manager:
 - Explosimeter test: It should indicate not more than 5% of LEL.
 - Oxygen Content: It should essentially be in between 19.5% and 22.0%.



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TITLE: Vessel Entry Permit

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	3 of 6	

- 5.14.7 In case hot work, is to be done inside a vessel, the person entering the vessel should produce a spark inside, before actually entering the vessel for work.
- 5.14.8 The person entering the vessel shall make use of safety belt and lifelines, supplied air mask and other personal protective equipments as may be prescribed.
- 5.14.9 Regular high voltage lights are not allowed for work inside a vessel. Low voltage (24V) only may be used.
- 5.14.10 The vessel shall be provided with adequate ventilation. This may be achieved by an air blower or air purge.
- 5.14.11 A vessel attendant shall be assigned to the vessel opening. The person shall not let the vessel remain unattended under any circumstances when a person is working inside.
- 5.14.12 When the job is in progress, a warning sign “**CAUTION - VESSEL ENTRY**” shall be displayed prominently outside the vessel.

5.15 PROCEDURE FOR ENTRY INTO CONFINED SPACE:

- 5.15.1 All persons must wear protective clothing with a lifeline attached. The lifeline shall be equipped with a double lock snap. Tension or lifeline should be maintained when a person is entering or leaving the confined space.
- 5.15.2 Emergency exit system should be discussed and provided before persons enter inside confined area / vessel. When person is coming out of tank whether he is climbing on his own or being hoisted tension must be maintained at all times on the lifeline.
- 5.15.3 The vessel attendant should keep watch in such a manner so as to be able to see the person inside at all times. This person must attend the free end of the lifeline at all times.
- 5.15.4 Minimum number of manpower should be allowed inside a confined space for work at one time.

6.0 REFERENCES:

Not Applicable

7.0 ANNEXURES:

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure-I	Vessel Entry Permit	

ENCLOSURES: SOP Training Record



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TITLE: Vessel Entry Permit

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	4 of 6	

8.0 DISTRIBUTION:

- Controlled Copy No. 1 Head EHS
- Controlled Copy No. 2 Head Engineering
- Master Copy Quality Assurance Department

9.0 ABBREVIATIONS:

SOP	Standard Operating Procedure
No.	Number
QA	Quality Assurance
Ltd.	Limited
TVD	True Vertical Depth
LEL	Lower Exposure Limit
EHS	Environmental Health & Safety

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Details of Changes	Reason for Change	Effective Date	Updated By
00	New SOP	Introduction of New SOP		



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SOP No.:		Department:	EHS
		Effective Date:	
Revision No.:		Revision Date:	
Supersede Revision No.:		Page No.:	5 of 6

ANNEXURE – I



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

VESSEL ENTRY PERMIT

Vessel Entry Permit No.: _____

First Copy : At the job site

Second Copy : Operating Department (to be retained in the book)

Department :

Date:

Valid From (in Hrs.):

Valid upto (in Hrs.):

Location / Description of Equipment:

Type of Work:

S.No.	CHECK LIST	YES / NO	REQUIRED/NOT REQUIRED
1.	Equipment isolated by Physical disconnection / slip binding.		
2.	Equipment drained, cleaned and purged.		
3.	Electrical isolation of power driver internal equipments.		
4.	Check Area for any hazardous materials present nearby.		
5.	No obnoxious odour and safe to breathe / work inside.		
6.	Personal protective equipment i) Safety Belt ii) Supplied air mask iii) Others (Specify)		
7.	Informed adjacent area.		
8.	Fire fighting, equipments (specify)		
9.	Has warning sign been put?		
10.	Ventilation for the vessel.		
11.	Lighting arrangement provided?		
12.	Person entering the vessel, Name.		
13.	Vessel Attendant	N	
14.	Explosimeter Test (if required)		
15.	Oxygen Test		



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Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	6 of 6	

S.No.	CHECK LIST	YES / NO	REQUIRED/NOT REQUIRED
	Checked By Sign & Date (Engineering Manager)		
	Verified By Sign & Date (EHS Manager)		

Special Instructions (If any): _____

Authorised By:
Sign & Date
Head Operations

Extension required upto : _____

Authorised By : _____

Job completed / stopped at : _____ Hrs.

Date : _____