



Indian Oil Corporation Limited

**Panipat Hydrogen Generation Unit
Praxair India Private Limited**

Linde Plant-Project ID 2910A70M	Client Project ID NA	
Linde Plant-Project Code Panipat_HGU	Client Project Code NA	
Linde Document No. 0022MC5770-(RQSC-0001)-W-PC 0803 (EN)	Client Document No. NA	Client Rev. NA

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PROCEDURE FOR MATERIAL IDENTIFICATION, TRACEABILITY & CONTROL

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Vendor Name VISHAL ENTERPRISE	Vendor Project Number VE/2023-24/09
Vendor Document Number VE/LINDE/HGU/QSI-003	Vendor Document Revision REV.1

IFR	02	05.03.2024	SHIVANG DIWAKAR	HARDIK PRAJAPATI	HARDIK PRAJAPATI	
IFR	01	03.02.2024	SHIVANG DIWAKAR	HARDIK PRAJAPATI	HARDIK PRAJAPATI	
Status	Issue	Date	Prepared	Reviewed	Approved	Remark

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1 SCOPE

This procedure defines color coding, material request & issue, Material Identification / traceability & Identification of returned and surplus materials for the **Panipat_HGU structural steel fabrication project** at workshop.

2 PURPOSE

The purpose of this procedure is to define the System for Receiving, Identification and Issuing of all kind of project materials. This procedure defines the control mechanism for:

- Control of Project material procured by VE.
- Material Receiving Inspection.
- Material Handling, Storage, Preservation and Transportation.
- Material identification and Traceability of Components.
- Material Issue, Return of Material and Reconciliation.
- Material Traceability and Color Coding.

3 DISTRIBUTION & INTENDED AUDIENCE

LEI: Linde Engineering India Pvt. Ltd
VE: Vishal Enterprise

4 ABBREVIATIONS

ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials.
ITP	Inspection & Test Plan
IMIR	Inward Material Inspection Report
IR	Inspection Report

IRN	Inspection Release Note
MTC	Material Test Certificate
MDR	Material Discrepancy Report
MRN	Material Return Note
GRN	Goods Receipt Note
NCR	Non-Conformance Report

5 REFERENCE DOCUMENTS

SR. NO	DOCUMENT NAME	DOCUMENT NUMBER	LATEST REVISION
1	Inspection and Test Plan For Structural Steel Fabrication & Painting	0022MC5770 (RQSC-0001) W-TB 9219.001	01
2	Inspection and Test Plan - Fasteners	0022MC5770 (RQSC-0001) W-TB 9219.002	01
3	Inspection and Test Plan Grating	0022MC5770 (RQSC-0001) W-TB 9219.003	01
4	Non-Ferrous Material Specification	ASME SEC II PART-B	2021
5	Hot Rolled Medium & High Tensile Structure Steel - Specification	IS 2062	2011
6	Fabrication Specification – Structural Steel	&AG-(2910A70M)-W-SC 1901.001 (EN)	01

6 RESPONSIBILITY

Site In charge – shall be responsible for

- Provision of necessary resources like Manpower, Equipment, Storage area. etc.

Store Keeper / Store Supervisor – shall be responsible for

- Performing visual inspection,

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- Reporting of any deterioration or damage of materials such as Bend, Dent, Scratches, and any other defects.
- Verifying Quantity, Documentation of Received Materials.
- Reporting of Excess materials, shortage or damaged material through Material Discrepancy Report (MDR).
- Updating the inventory status of all Stored Materials and Equipment.
- Maintaining records such as Goods Receipt Note (GRN), Material Receiving Issuing Records (MR), Preservation Log book, etc.,
- Performing IMIR marking / Stamping on Materials.
- Restoration of Color-Coding on materials in case of Fading.

Material / Inward QC Engineer – shall be responsible for

- Performing Visual & Dimensional inspection.
- Reviewing of IR / IRN & Material Test Certificates (MTC).
- Preparation of Inward Material Inspection Report (IMIR).
- Performing inspection activities as per approved ITP.
- Liaison with LINDE & TPIA.

Material Controller / Planning Engineer – shall be responsible for

- Generate and update list of project materials in system.
- Ensuring inventory status in system is accurate and complete.
- Update Material control charts and liaison with procurement team for material arrival forecast dates.
- Material Reconciliation activities and validation by physical verification.

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7 PROCEDURE

7.1 COLOR CODING

- All Project material shall be white color coded.
- Inspection clearance status shall be identified by color ribbon. Rejected / Quarantined materials shall be also identified by red color coding & red color ribbon.

7.2 MATERIAL REQUEST & ISSUE

- Based on the planning schedule and requirement the material is issued to production through Material Requisition Form (MR).
- Daily / Weekly Work Plan will be generated by planning department for each task to be completed by production and same will be forwarded to Material Coordinator / Planning Engineer or Production Engineer to issue the necessary material to production from Stores.
- Store Keeper / Store supervisor shall issue the Project related materials (including free issued Materials by Client) after receipt of Material Requisition details either in MR form or consolidated excel form registered in System.
- Store Keeper / Store supervisor shall update the Quantity details in system immediately after issue of materials.
- Store supervisor shall maintain all relevant records.

7.3 PART MATERIAL IDENTIFICATION / TRACEABILITY DURING FABRICATION STAGE

- The Engineer Production or his designee shall be responsible for ensuring that all materials received from Stores contain the necessary material markings i.e., IMIR No., Material grade, Heat No, (As per Drawing) against the Inward material inspection report.
- Engineer Production or his designee shall transfer following details on each Item of structural & Pipe material prior to cutting or in case, Plates are planned to cut through CNC machine, marking detail shall be transferred w.r.t cutting plan issued by Planning department on each item immediately after cutting.

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- QC engineer shall examine the physical state of the material and check the correctness and completeness of identification marking such as mill markings, IMIR No, ID No, Heat No, Drawing No (If applicable) etc. on the original item.
- Prior to cutting of the Member or Section, Engineer Production shall strictly transfer identification marks on balance portion of Plate, Pipe, and Sections etc.
- During Installation of structural components, the Engineer Production or Production Foreman and QC Engineer shall check identification of the components by drawing number, part number or serial number prior to installation. In case any item / component is found without proper identifications / traceability, QC Engineer shall raise Observation and those materials shall be quarantined until the clearance.

7.4 IDENTIFICATION OF RETURNED AND SURPLUS MATERIALS

- Engineer production shall return the all balance / excess materials through Material Return Note.
- Engineer Production shall transfer all marking details on balance portion of material prior to returning to Stores.
- Store Supervisor shall identify the returned materials by Material Return note (MRN) in addition to inward material Identification number (IMIR) by stencilling with paint or permanent marker.
- Returned materials shall be stored at dedicated locations.
- Material Controller shall do reconciliation of material at the end of project. He shall provide a list of surplus materials in consultation with Site In charge to Store Supervisor. The Store Supervisor shall update and maintain the log of Surplus material.
- The materials lying in stores and not issued, declared as surplus shall be segregated at dedicated location and away from the project materials.