

TUV Control No.:			TUV SAP No: 8117891439	BAD	Report No: LTHE-RUF-32682- IR-144				
OWNER:			M/s. Hindustan Petroleum Corporation Limited (HPCL)	Inspection Number(s)	Notification	HPCLRUF/NOI/6224 -R0			
Client	t : Contracto	r	M/s. L & T Hydrocarbon Engineering(LTHE), Vadodara	Project:		VISAKH REFINERY MODERNIZATION PROJECT (VRMP)			
PMC	Name (if any	)	M/s. Engineers India Limited.	Package:		Residue Up-gradation Facility, (RUF) (EPCC-03 PACKAGE)			
Vend	or Name:		M/s. Larsen & Turbo MMH SBG	Client's PO vendor):	No.(on	REFINERY/74000-32682/NDS			
	<b>/endor Nam</b> olicable) :	e:	M/s. Srujana Engineering Works	Vendor's P Vendor:	O No. on sub	EK716WOD1000010 Date: 08.04.2021			
Place/Address of Inspection:			Parawada - Visakhapatnam	Inspection Date: 23.08.2021					
	of inspection	n:		1		1			
☐ Kick-off/ Pre-inspection meeting					✓ Material Identification ✓ Interim sta			age	
☐ Do	Document review					□Re-inspect	ection		
Sr. No.	P. O. Item No.	BBU SI No	Item Description		PO Quantity (MT)	Quantity Offered (MT)	Quantity Accepted (MT)	Remarks	
1	2	C.2.1	Fabricated structure steel including and handrail (BLACK INSPECTION AND NDT OF W Annexure-1 Dated 18.08.2021 for	ELDS	4314	25.017	Nil		
П	2	C.2.1	Raw material Identification			93.148	Nil		

					(IVI I )	(IVII)	
I	2	C.2.1	Fabricated structure steel including chq plate and handrail (BLACK INSPECTION AND NDT OF WELDS Annexure-1 Dated 18.08.2021 for details)	4314	25.017	Nil	
Ш	2	C.2.1	Raw material Identification		93.148	Nil	
Α			Plate 8 X 1500 X 6300mm IS 2062 E 350 BR		28.520		
В			Plate 6 X 1500 X 6300mm IS 2062 E 350 BR		3.60		
С			Plate 56 X 2000 X 2500mm IS 2062 E 350 BR		2.160		
D			Plate 16 X 2500 X 1200mm IS 2062 E 350 BR		3.907		
E			Plate 10 X 2500 X 12000mm IS 2062 E 350 BR		9.688		
F			Plate 12 X 2500 X 2500mm IS 2062 E 350 BR		8.542		
G			Plate 32 X 3500 X 2500mm IS 2062 E 350 BR		2.198		
Н			Plate 50 X 2500 X 2500mm IS 2062 E 350 BR		2.453		
ı			ISMC150 X 75mm IS 2062 E 350 BR		5.000		
J			ISMC200 X 75mm IS 2062 E 350 BR		3.479		
K			ISA 150 X 150 X 12mm IS 2062 E 350 BR		4.914		
L			ISA 100 X 100 X 10mm IS 2062 E 350 BR		5.137		
М			ISA 75 X 75 X 8mm IS 2062 E 350 BR		2.80		
N			Beam 254 X 146 X 37mm IS 2062 E 350 BR		5.250		
0			WPB 700 X 300 X 149.9mm IS 2062 E 350 BR		5.500		

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Form No. : F / INSP/VR / 11 - R6 Revision Date: 23/11/2017 Page **1** of **6** 



REFERENCE DOCUMENTS:								
Sr. No.	LTHE Document Title	LTHE Document No.	Approver	Approval Status	Date			
1	1 Drawings	DO16 DUE LT FOA MD CA LMMU/1\ 12777 Dov 01	LTHE	Code-1	16-07-2021			
		B016-RUF-LT-504-MP-GA-LMMH(1) - 13777 Rev.01	EIL	Code-2	09.08.2021			
		DOAC DUE LT FOA MAD CA LAMANIAA A 2270 Dec. 04	LTHE	Code-1	16-07-2021			
		B016-RUF-LT-504-MP-GA-LMMH(1) - 13778 Rev.01	EIL	Code-2	09.08.2021			
2	QAP/ITP	B016-RUF-LT-504-QC-QDLMMH(1)-13074 Rev 0	LTHE	Code-1	18-03-2021			
3	Specification							

#### **Inspection Activities carried out / Remarks:**

Black verification as per Clause 4.1 of ITP/QAP:

- 1. Weld visual check on offered material No injurious surface defects were observed in GL 6, GL 11, GL 12, GL 13 & GL 14
- 2. Dimensional Inspection carried out for GL 6, GL 11, GL 12, GL 13 & GL 14 material and found meet the drawing requirements. Shape, size, Ø22 Hole pitch, straightness & section thickness verified and found as per drawing requirements.
- 3. Witnessed PT 10% at randomly on weld joints from offered material and found no recordable indications.
- 4. Visual check for surface finish on offer material no injurious defects were observed.
- 5. Verified Material Identification Correlation with manufacturer material test certificates found satisfactory
- 6. Dimension Inspection carried 10% on offered material in assembled condition and found satisfactory with the drawing.
- 7. IS 2062 Gr E 350 Size 16 X 2500 X 12000mm Plate Identified and Correlated with Manufacturer (Sail) Material Test Certificate with Heat Numbers 2110672.
- 8. IS 2062 Gr E 350 Size 10 X 2500 X 12000mm Plate Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers A10981/28DO, A10981/29AO, A10981/29BO & A10981/29DO
- 9. IS 2062 Gr E 350 Size 12 X 2500 X 12000mm Plate Identified and Correlated with Manufacturer (Sail) Material Test Certificate with Heat Numbers 2108686 & 2110554. 1 Sample identified for check testing.
- IS 2062 Gr E 350 Size 254 X 146 X 37mm Beam Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 3116618.
   1 Sample identified for check testing.
- 11. IS 2062 Gr E 350 Size 700 X 300 X 149.9mm WPB Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 2116300 & 3116390.

  1 Sample identified for check testing.
- 12. IS 2062 Gr E 350 Size 150 X 75mm ISMC Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 4117005.
  - 1 Sample identified for check testing.
- 13. IS 2062 Gr E 350 Size 200 X 75mm ISMC Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 4115246.
  - 1 Sample identified for check testing.
- 14. IS 2062 Gr E 350 Size 150 X 150 X12 Angle Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 3116735
  - 1 Sample identified for check testing.

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Form No.: F / INSP/VR / 11 – R6 Revision Date: 23/11/2017 Page 2 of 6



- 15. IS 2062 Gr E 350 Size 100 X 100 X 10 Angle Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 4117054
  - 1 Sample identified for check testing.
- 16. IS 2062 Gr E 350 Size 75 X 75 X 8 Angle Identified and Correlated with Manufacturer (Jindal) Material Test Certificate with Heat Numbers 4115580
- 17. 1 Sample identified for check testing.
- **18.** 6mm, 8mm, 32mm, 50mm & 56mm Plates manufacturer identifications not available on plates. Each section one sample identified for check testing.

#### **Documents Reviewed / Remarks:**

- 1. Manufacturer material test certificates Found meet the specification requirements.
- 2. Reviewed internal inspection reports and found in order.

### **Details of Instrument / Equipment used in Inspection:**

SR NO.	INSTRUMENT / EQUIPMENT DETAIL	RANGE	INSTRUMENT ID	VALIDITY UPTO	CERTIFICATE No. WITH DATE	NABL / OTHER CERTIFYIN G BODIES Please Tick wi See Note: 1	NON-NABL  nichever is applicable  See Note: 2
1.	Measuring tape	0-5000mm	SEW/MT-02	22.11.21	YEA(C)- 201121A/S2161/003 Date: 23.11.2020	✓	566 11616.12
2	Measuring tape	0-15000mm	SEW/MT-01	22.11.21	YEA(C)- 201121A/S2161/001 Date: 23.11.2020	✓	
3	Vernier caliper	0-300mm	SEW/VC-01	02.05.22	YEA(C)- 210503A/S2161/001 Date: 03.05.2021	<b>√</b>	
4	Weld Gauge		SEW/WG-01	03.12.21	YEA(C)- 201203A/S2161/003 Date: 04.12.2020	<b>√</b>	

#### \*Notes :

- 1) Other Certifying bodies are: NPL-India, CIPM (International Committee for Weights & Measures), ILAC & APLAC MRA Signatories.
- 2) In case of Non-NABL, please write the acceptance clause, as per TUV Work Instructions: WI-INSP-63, R0 (Work Instructions Policy on Measurement Traceability as per NABCB)

Conclusion (Accepted/ Accepted with comments /Rejected/ Other comments (please specify): Material GL 6, GL 11, GL 12, GL 13 & GL 14 acceptable subjected to Code 1 approval.

Samples identified for check testing.

### **Identification of inspected item/ Equipment: NILL**

#### **Areas of Concern:**

- 1. GA drawing approved by EIL- code 2.
- 2. Rust observed in all structural material.
- 3. Project specification and technical specifications not available with vendor, at the time of inspection.
- 4. Check test reports not available for review.
- **5.** 6mm, 8mm, 32mm, 50mm & 56mm Plates manufacturer identifications not available on plates. Each section one sample identified for check testing.

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Form No.: F / INSP/VR / 11 – R6 Revision Date: 23/11/2017 Page 3 of 6



- 6. 10mm Plate MTC not visible (Chemical and Mechanical)
- **7.** 6mm, 8mm, 56mm material test certificates tractability missing. All MTC's address to Narmada Iron and associates private limited and VK Industrial corporation limited.

Non Conformities Raised (if any) (mention NCR nos.): NIL

Attachments (Vendor records, NCR's, Deviation requests etc.): NIL

Name of Inspector : A C Ramana Date: 23.08.2021

Signature & TUV stamp: Vendor signature & stamp (where applicable):

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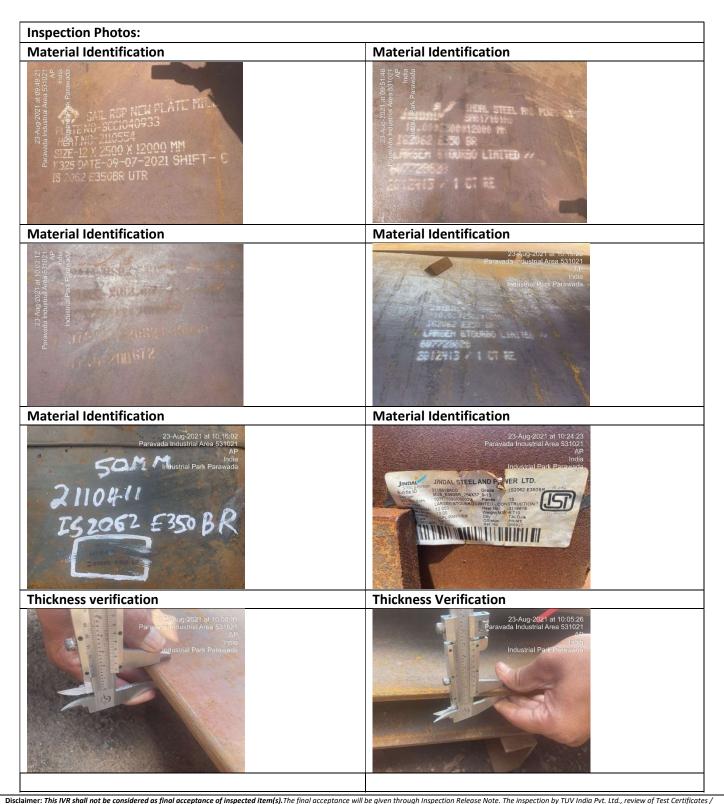
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Form No. : F / INSP/VR / 11 – R6 Revision Date: 23/11/2017 Page **4** of **6** 





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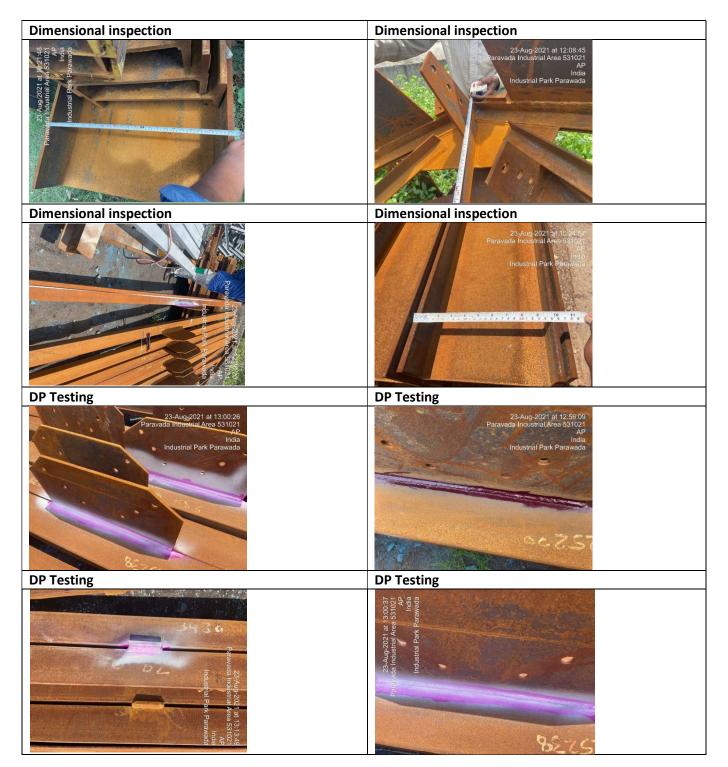
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Form No. : F / INSP/VR / 11 – R6 Revision Date: 23/11/2017Page **5** of **6** 





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Form No. : F / INSP/VR / 11 - R6 Revision Date: 23/11/2017 Page 6 of 6