

Plant MRPL Mangalore	Client MRPL	Contract Code WSS for PFCC Flue Gas	Document ID 6723-IEX-G00-EC-0001-A206	Contract No. 66-6723	
	Indicative Inspection and Test Plan(IITP) for Gaskets			 ONGC एक आरपी एल MRPL	
				Rev	00

The tests indicated are general minimum requirements of tkIS India. All Tests, as applicable, have to be performed as specified in the Order, Order Attachments, Codes, tkIS India Specifications, Licensor's Specifications and Standards. In case of discrepancies between the Indicative Inspection Test Plan and the workshop documents Approved / Reviewed by LSTK Contractor, the latter shall apply. The Manufacturer shall be responsible for the required Tests to be performed and for the Inspector to be invited in due time to witness the Tests. The Manufacturer shall try to perform as many individual Tests as possible on same day, provided that the fabrication process permits such a procedure

Sr. No.	Inspection / Test Stage	Checks	Type of Inspection	Frequency of Check	Reference Document	Acceptance Norm	Format of Record	Inspection By			
								Vendor	LSTK Contractor	TPIA	PMC / Owner

A	QAP							Endorse	P	A	A
B	Receiving Inspection										
1	Material inspection RTJ Gaskets, metallic gaskets	Chemical Properties, Mechanical Properties, hardness and Heat treatment, IGC E with micro test.	Review of Chemical properties	One sample per Heat /heat treatment lot	As per Applicable Material & Order Specifications	Conformance to Codes & Order Specifications	Manufacturer Test Certificate	P	R	R	--
2	Material inspection-Non Metallic gaskets	Chemical Properties	Review of Mechanical , Chemical Properties as applicable	One sample per Heat	As per Applicable Material & Order Specifications	Conformance to Codes & Order Specifications	Manufacturer Test Certificate	P	R	R	--
C	In-Process Inspection / Testing										
1	Manufacturing of gaskets	Visual, Dimensions	As per Code / Order Specification	If specified, as per Code / Order Specification	As per Applicable Material & Order Specifications	Conformance to Codes & Order Specifications	Inspection report	P	-	-	--
D	Final inspection	1. Visual Inspection	Visual	100% by Vendor	As per Applicable Material & Order Specifications	Conformance to Codes & Order Specifications	Inspection report	P	100% H	100% H	--
		2. Marking as per Tag, colour coding, pickling and passivation	Visual	100% by Vendor				P	10% H	10% H	--
		3. Dimension inspection & Heat Treatment	Measurement & check	100% by Vendor				P	H Note 5	H Note 5	--

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		4. Recovery, Compressibility,/ Seal ability test	Visual & Verification of records	As per applicable code -100% by Vendor				P	H 1 No. per qualification size range	H 1 No. per qualification size range	--
		5. Spark test for Steel inserted gaskets , Thickness check and hardness test	Continuity test, thickness and hardness check	100%H-for spark 10%-for Hardness				P	100%H-for spark 10% H for Hardness	100%H-for spark 10% H for Hardness	--
		6. PMI for gaskets	Alloy verification	100% by Mfr				P	100% H	100% H	--
		7. Hardness Test for RTJ and NACE/H2 service metallic gaskets	Portable Hardness Tester	10% by Mfr				P	10%H	10%H	--
E	Inspection documentation, Stamping/ Stencilling of Inspector stamp & Issue of Inspection Release Note	Material Test Certificate	Review of Documents	100% by Mfr	As per Applicable Material & Order Specifications	Conformance to Codes & Order Specifications	IRN, MTC With back up reports	P	H	H	R

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F	Final documentation & Issue of Despatch Clearance	Manufacturer Test certificate & Release Note	Review of Documents	100% by Mfr	As per Order & Order Specifications	Conformance to Order & Order Specifications	Manufacture re Test certificate & Despatch Clearance	P	H	-	H
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Notes -

- LSTK contractor to prepare final QAP based on this IITP, Applicable specifications, standards and codes and submit to PMC for final approval
- In addition to the requirements of IITP, all requirements of Purchase order, material specification, Order specification and Order Technical requirements (Document ID: EDB-0006) for raw material and final product shall be fulfilled. In addition, Material in Hydrogen Service shall comply with the requirements of Annexure F of document EDB-0006. Material in Sour service shall comply with the requirements of NACE MR0103 & MR0175 & EDB-0006
- Calibrated instruments shall be used for measurement and testing..
- Where ever % of inspection is mentioned it is per Tag, Per Size, per visit.
- 40% for size < 8" and 100% for size 8" and above
- Statutory requirement and inspection by Statutory Authority, if applicable, the same shall be met. IBR requirements for EDB-0006 shall be met
- LSTK Contractor may increase percentage of inspection upto 100% if any rejection or nonconformity is observed during sampling inspection or based on past experience with vendor.
- Minimum and maximum hardness requirements for all forgings shall be met. For RTJ gaskets, the hardness difference of 20 BHN (min) less than the corresponding flanges shall be met.

Legends: P - Perform, W - Witness, R - Review, H – Hold, do not proceed unless cleared in writing. A - Approval

Devesh Sharma	Abhi Thomas / T.V. Sundar	Syam N.S.
Prepared by: LE	Checked by: SSP / DQAR	Approved by: HDP

PIN-IEX-LEP-201-A206

