

NTPC Ltd.
Rihand Super Thermal Power Project
REFERENCE QUALITY PLAN FOR GRINDING ROLL (Annex-II)

SI No	Components & Operation	Characterstics	Class	Type Of Check	Quantum Of Check	Reference Documents	Accetance Norms	Format of record	Agency			Remarks
									P	W	V	
1.0	Raw material											
1.1	Moulding sand	Physical	Minor	Size distribution	Each batch	Vendor std.	Vendor std.	Lab record	1	-	2	
1.2	Ferrous alloys	Chemical	Major	Melting recovery	Each batch	Vendor std.	Vendor std.	Lab record	1	-	2	
1.3	Scrap	Chemical	Minor	Melting recovery	Each batch	Vendor std.	Vendor std.	Lab record	1	-	2	
2.0	IN PROCESS INSPECTION-INSERTS FOR SINTERCAST GRINDING ROLLS											
2.1	Melting	Temp.control	Critical	Measurement	Each melt	Vendor std.	Vendor std.	Log sheet	1	-	2	
		Chemical test	Critical	Chemical analysis	Each melt	Vendor std.	Vendor std.	Test report	1	-	2	
		Pouring	Critical	Observation	Each melt	Vendor std.	Vendor std.	Log sheet	1	-	2	
2.2	Insert casting	Visual	Critical	Observation	Each Insert	Vendor std.	Vendor std.	Test report	1	-	2	
3	IN PROCESS INSPECTION- SINTERCAST INSERTED ROLL CASTINGS											
3.1	Melting	Temp.control	Critical	Measurement	Each melt	Vendor std.	Vendor std.	Log sheet	1	-	2	
		Chemical test	Critical	Chemical analysis	Each melt	Vendor std.	Vendor std.	Test report	1	-	2	
		Pouring	Critical	Observation	Each melt	Vendor std.	Vendor std.	Log sheet	1	-	2	
3.2	Roll casting	Heat treatment	Critical	Measurement	Each batch	Vendor std.	Vendor std.(*)	H/T charts	1	-	2	
		Visual	Critical	Observation	Each roll	Vendor std.	Vendor std.	Test report	1	-	2	
		Microstructure	Critical	Microstructure	Vendor std.	Vendor std.	Vendor std.	Test report	1	-	2	
		Hardness	Major	Hardness	Each H/T batch	Vendor std.	Vendor std.	Test report	1	-	2	
4.0	FINAL INSPECTION-FINISHED SINTERCAST INSERTED ROLL											
4.1	Finished rolls	Visual	Critical	Visual inspection	Each roll	Vendor std.	Vendor std.	Inspection report	1	2	2	
		Dimensions	Critical	Measurement	Each roll	As per Drg.	As per Drg.	Inspection report	1	2	2	10% random by 2
		Hardness test	Critical	Hardness	01 sample from 3 rolls in set	Vendor std.	Min.600 BHN	Inspection report	1	2	2	20% random by 2
		Bore surface contact	Critical	Blue match	Each roll	Vendor std.	Min.85% area	Inspection report	1	2	2	10% random by 2
		Indentification & painting	Critical	Visual	Each roll	Vendor std.	Vendor std. (**)	Inspection report	1	2	2	

1- Agency 2 - NTPC P - Perform by W - witness by V - Verified by

* Heat treatment: Rolls are air quenched after holding 980 to 1060° C for 9 to 12 hours

** Roll serial number to be punched on non wearing surface on roll

Note: This is reference quality plan, vendor has to submit own manufacturing quality plan for NTPC approval before start of manufacture as vendor has to unequivocally guarantee of item as per NTPC specification

Vendor

Indentor

FQA