

3 GROOVES EQUI-SPACED AT 120°

TECHNICAL REQUIREMENTS -

- ✓ 1) CASTING RADI WHEREVER NOT MENTIONED SHOULD BE SUITABLY TAKEN.
- ✓ 2) CASTING SHOULD BE FREE FROM ITS NORMAL CASTING DEFECTS LIKE SLAG INCLUSIONS, BLOW HOLES, CRACKS AND CAVITIES ETC.
- ✓ 3) CASTING SHOULD BE STRESS RELIEVED.
- ✓ 4) CASTING SHOULD BE TESTED ULTRASONICALLY AS PER SPECIFICATION.
- ✓ 5) FREE TOLERANCES SHOULD BE TAKEN AS PER IS:2102-1980 MEDIUM CLASS.
- ✓ 6) NON PERPENDICULARITY OF SURFACE 'M' W.R.T.AXIS OF $\phi 3000^{\pm 0.2}$ SHOULD NOT EXCEED 1 MM.
- ✓ 7) NON-PARALLELITY OF SURFACE R-400 W.R.T.SURFACE 'M' SHOULD NOT EXCEED 1MM.
- ✓ 8) SHARP EDGES SHOULD BE ROUNDED OFF.

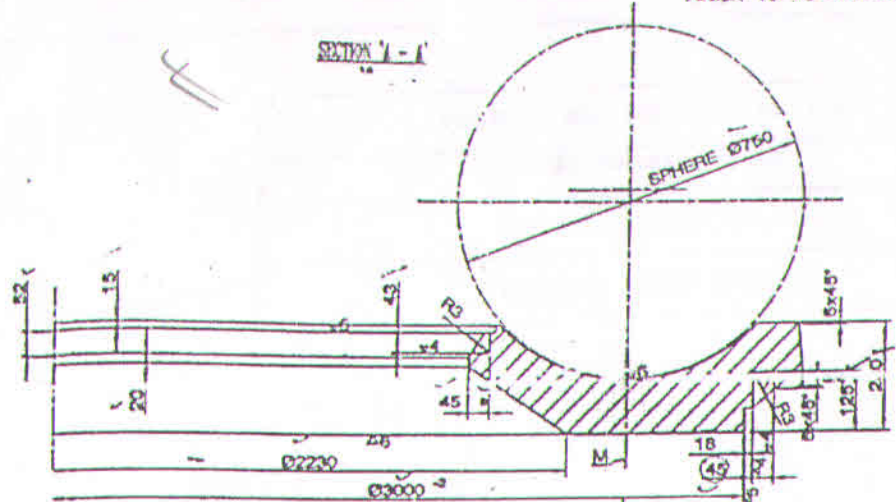
MATERIAL SPECIFICATION :- (Ni HARD IV) HARDNESS BHN 550 MIN.

- ✓ C 2.60 to 3.60 %
- ✓ Si 1.5 to 2.2 %
- ✓ Mn 0.4 to 1.0 %
- ✓ S 0.05 % Max.
- ✓ Cr 7.0 to 11.0 %
- ✓ Ni 5.0 to 6.5 %
- ✓ Mo 0.5 % Max.
- ✓ P 0.05 % Max.

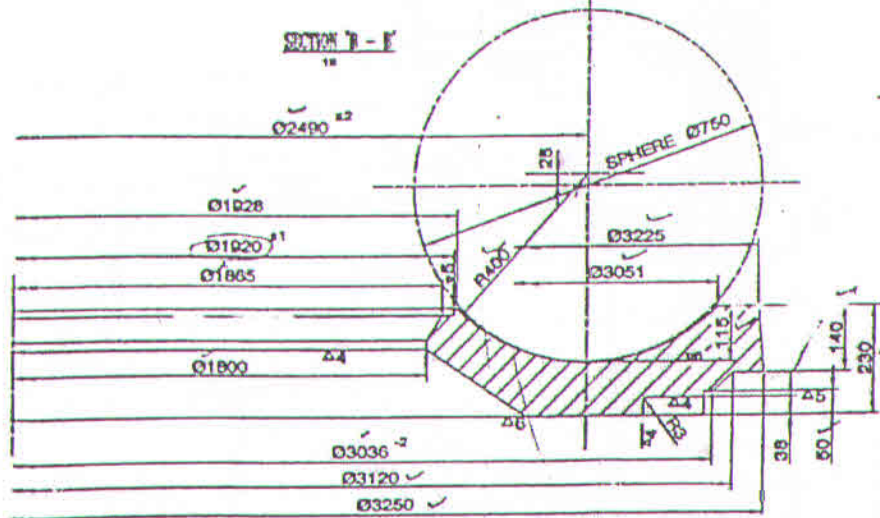
R.V.
26/04/2013

FINISH V3 FOR THE BEST

SECTION I - I



SECTION II - II

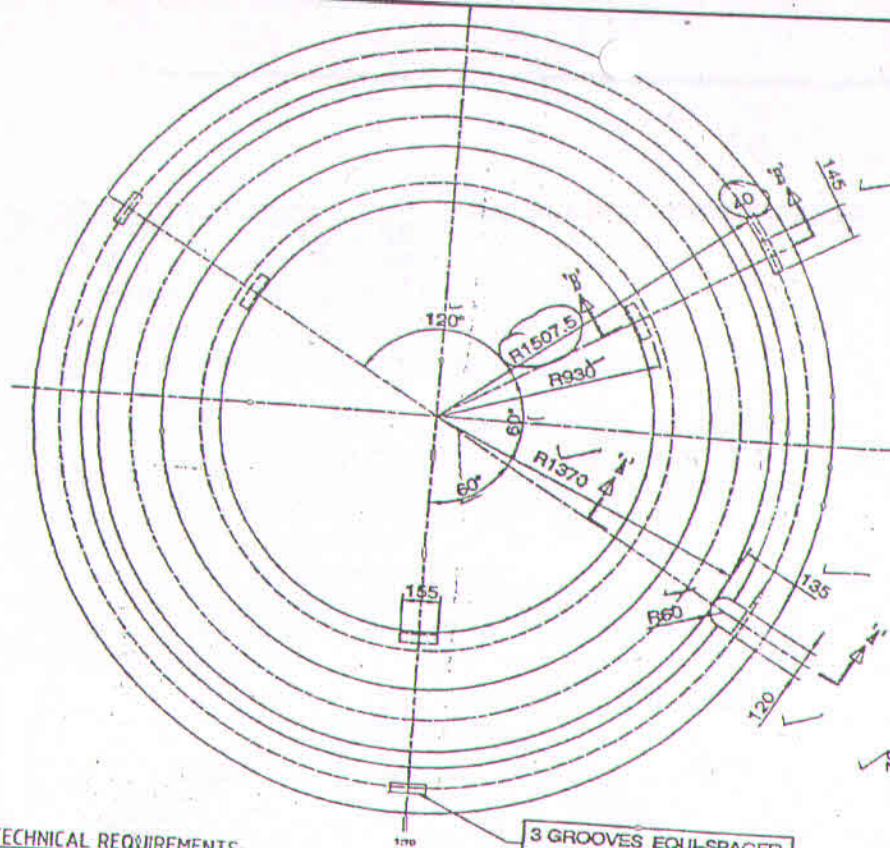


BOKARO STEEL PLANT

CAPTIVE POWER PLANT

LOWER GRINDING RING

DRAWING NO. 167.001.00.004 A Rev 00



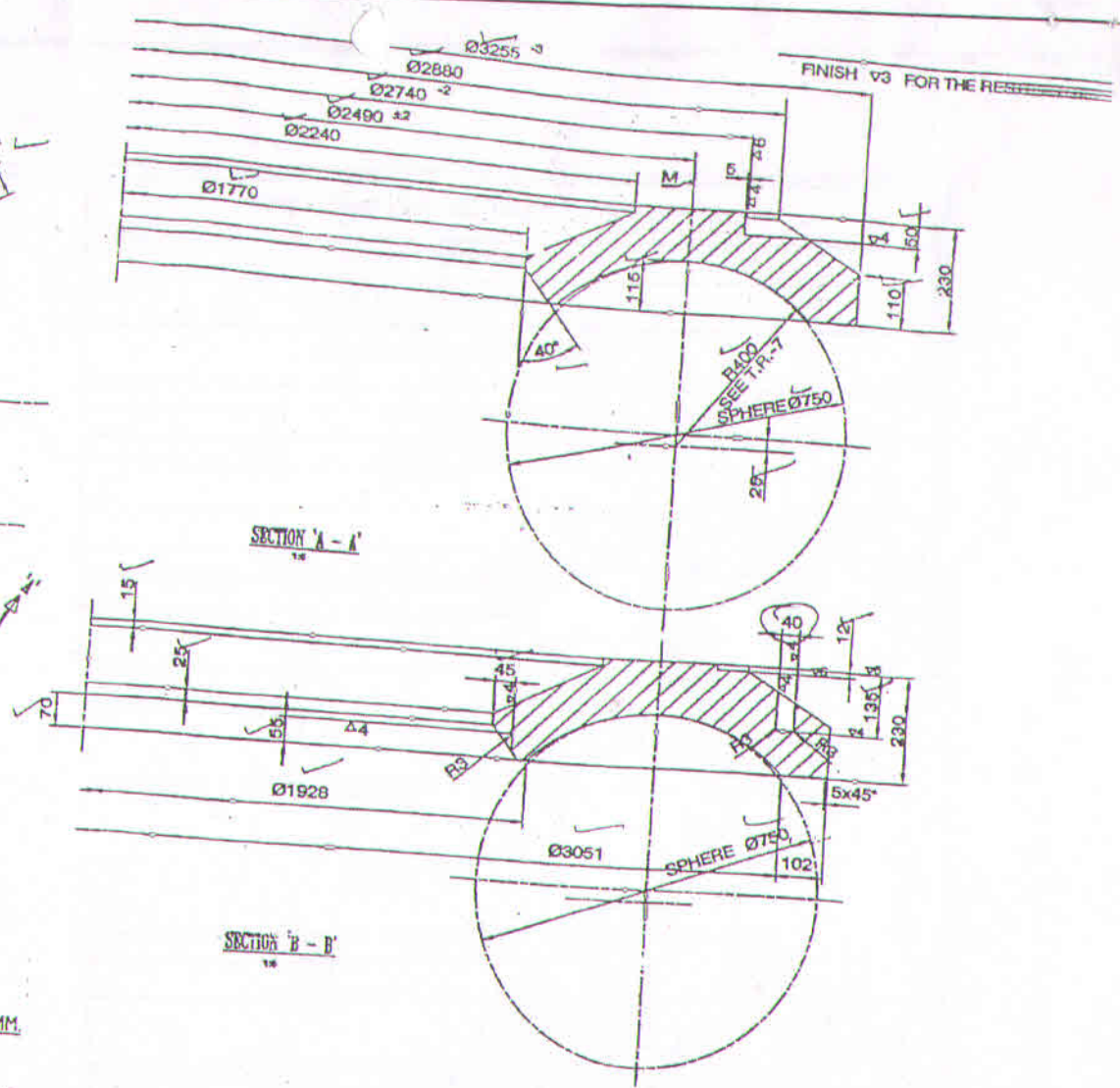
TECHNICAL REQUIREMENTS:-

- ✓ 1) CASTING RADI: WHEREVER NOT MENTIONED SHOULD BE SUITABLY TAKEN
- ✓ 2) CASTING SHOULD BE FREE FROM ITS NORMAL CASTING DEFECTS LIKE SLAG INCLUSIONS, BLOW HOLES, CRACKS AND CAVITIES ETC.
- ✓ 3) CASTING SHOULD BE STRESS RELIEVED
- ✓ 4) CASTING SHOULD BE TESTED ULTRASONICALLY AS PER SPECIFICATION
- ✓ 5) FREE TOLERANCES SHOULD BE TAKEN AS PER IS:2102-1980 MEDIUM CLASS
- ✓ 6) NON PERPENDICULARITY OF SURFACE 'M' W.R.T. AXIS OF $\phi 2750^{\pm 0.2}$ SHOULD NOT EXCEED 1MM.
- ✓ 7) NON-PARALLELITY OF SURFACE R-400 W.R.T. SURFACE 'M' SHOULD NOT EXCEED 1MM.
- ✓ 8) SHARP EDGES SHOULD BE ROUNDED OFF.

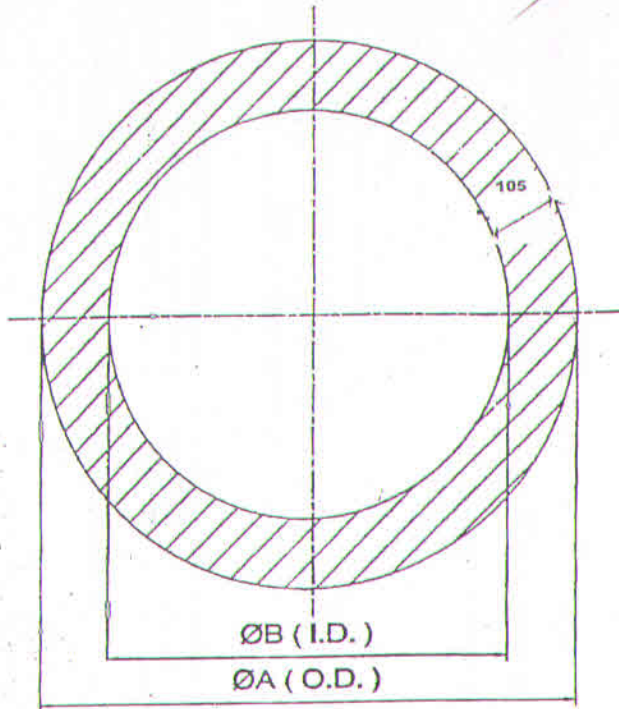
MATERIAL SPECIFICATION :- (N6 HARD IV) HARDNESS BHN 550 MIN.

- ✓ C 2.60 to 3.60 %
- ✓ Si 1.5 to 2.2 %
- ✓ Mn 0.4 to 1.0 %
- ✓ S 0.05 % Max.
- ✓ Cr 7.0 to 11.0 %
- ✓ Ni 5.0 to 6.5 %
- ✓ Mo 0.5 % Max.
- ✓ P 0.05 % Max.

RMP
26/09/2012



BOKARO STEEL PLANT
CAPTIVE POWER PLANT
UPPER GRINDING RING
DRAWING NO. 167.001.00.005 C Rev 00



NOTES:-

- 1) O.D. OF THE BALLS SHOULD BE MEASURED IN THREE PERPENDICULAR AXES.
- 2) THE RATED WEIGHT TOLERANCE OF ONE SET OF BALLS (10 NOS) SHOULD NOT BE GREATER $\pm 2\%$.
- 3) BALLS TO BE ULTRASONICALLY TESTED AS PER ASTM-699 LEVEL-3 FOR MEASURING THICKNESS.
- 4) 2 NOS CORE HOLES OF SIZE 2" WILL BE PROVIDED IN EACH BALL FOR CORE SUPPORT.

SPECIAL NOTES:-

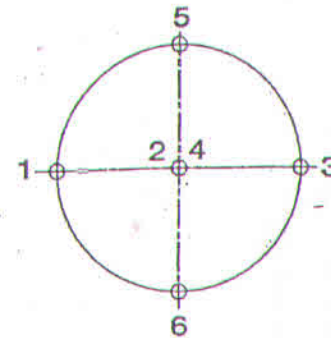
- 1) TOLERANCE OF THICKNESS WILL BE 3mm.
- 2) CORE DIAMETER WILL BE CONCENTRIC WITHIN $\pm 3mm$.
- 3) OTHER TOLERANCE AS PER IS:5519-1979 CLASS-II
- 4) DPT ON CASTINGS FOR CHECKING SURFACE CRACKS TO BE DONE.

MATERIAL SPECIFICATION :- CrNiMo Steel
HARDNESS BHN 380-400

- C : 0.82 to 0.85 %
- Si : 0.45 to 0.55 %
- Mn : 0.8 to 1.00 %
- Cr : 3.25 to 3.50 %
- Mo : 1.2 to 1.3 %
- Ni : 0.05 to 0.55 %
- P : 0.04 % max
- S : 0.036 % max

WEIGHT 1085 KG

HARDNESS TEST POINTS



SPHERICAL BALL		
BALL TYPE	ØA	ØB
STANDARD BALL	Ø750 ± 3	Ø540 ± 3
Thickness	105 mm	

ALL DIMENSIONS ARE IN MM, OTHERWISE SPECIFIED.

BOKARO STEEL PLANT
CAPTIVE POWER PLANT
GRINDING BALL
DRAWING NO. 167.001(N)BM-025A Rev 00

R.W.
 26/09/2023