



NOTE :

1) BLANKS ARE TO BE PUNCHED <sup>/MACHINED</sup> OUT FROM ROLLED STRIPS, MANUFACTURED FROM HIGH GRADE MILD KILLED STEEL OF GRADE 1110A TO SPECIFICATION GOST B 19032-73, DEOXIDIZED BY ALUMINIUM WITH FOLLOWING CHEMICAL COMPOSITION. (ESR QUALITY PREFERABLE)

C%	Mn%	Si%	P%	S%	Cr%	Ni%	Cu%	Al%
NOT MORE THAN								
0.09-0.13	0.30-0.50	0.13	0.025	0.025	0.20	0.15	0.20	0.03-0.09

NITROGEN CONTENT 50 PPM MAX.

2) BLANKS ARE TO BE HEAT TREATED ( HARDENED & TEMPERED ) FOLLOWED BY PICKLING. PIN HOLES, CAVITIES, LAMINATIONS, CRACKS, SCALES AND OTHER ROUGH DEFECTS ARE NOT ALLOWED ON THE SURFACE OF DISKS/STRIPS.

3) PROPERTIES OF BLANK :  
 TENSILE = 34 - 41 kgf/mm<sup>2</sup>  
 RELATIVE ELONGATION = 35 % min.  
 IMPACT STRENGTH (AFTER MECHANICAL AGEING)  
 ALONG ROLLING NOT LESS THAN 15.0 kgfm/cm<sup>2</sup>  
 ACROSS ROLLING NOT LESS THAN 9.0 kgfm/cm<sup>2</sup>

IMPACT STRENGTH AS PER GOST 9454-78, MECHANICAL AGEING AS PER GOST 7268-67 WITH DEFORMATIONS DUE TO COMPRESSION.

- 4) ULTRASONIC TESTING AS PER CQA(M) INSTRUCTION NO. MQA-2/UST/2/97.
- 5) INSPECTION OF THE MACRO STRUCTURE IS TO BE CARRIED OUT IN DISKS AND STRIPS, THE PRESENCE OF COARSE GRAINS IN THE SURFACE LAYER, BREAK IN THE CONTINUITY OF METAL IN THE FORM OF SEPARATION OF LAYERS, TRACES, SHRINKAGE POROSITY, BLOW HOLES AND OTHER ROUGH DEFECTS ARE NOT PERMITTED.
- 6) MICRO STRUCTURE OF STEEL SHOULD CONSIST OF EQUIAXIAL FERRITE GRAINS AND UNIFORMLY ARRANGED GRANULAR OR SORBITIC PEARLITE WITH COMPLETE ABSENCE OF WIDMANSTATTEN PATTERN OF FERRITE.

MAXIMUM GRAIN SIZE 0.07 mm

FOLLOWING HEAT TREATMENT SCHEDULE IS SUGGESTED TO ACHIEVE THE MICRO STRUCTURE AND OTHER PROPERTIES -

- a) AUSTENITIZE AT 900°C
- b) QUENCH IN WATER
- c) TEMPER AT 680 °C / 700 °C FOR AT LEAST 28 HOURS.

IT IS TO BE NOTED THAT THE ABOVE SCHEDULE IS ONLY FOR GUIDANCE OF MANUFACTURER/SUPPLIER AND IT DOES NOT ABSOLVE THE MANUFACTURER/SUPPLIER OF THE RESPONSIBILITY OF GIVING CORRECT MICRO-STRUCTURE AND OTHER PROPERTIES, AS PER THE SPECIFICATION.

- 7) EVERY BLANK SHOULD BE MARKED WITH CAST NUMBER AT 'A' ON SMALLER DIA.
- 8) TOP AND BOTTOM SURFACES OF BLANKS SHOULD BE CLEANED BY GRINDING / MACHINING SO AS TO OBTAIN EVEN AND SMOOTH SURFACE. SUITABLE PROTECTIVE COATING TO BE APPLIED TO AVOID RUSTING AND CORROSION DURING TRANSPORT AND STORAGE.
- 9) FOR ALL OTHER CONDITIONS GOST B 19032-73 IS PERTINENT.
- 10) BLANK SHOULD HAVE BLUE COLOUR PAINT MARK ON THE OPPOSITE SIDE OF CAST NO. FOR IDENTIFICATION.

SPECIAL NOTE :

1. THICKNESS LESS THAN SPECIFIED WILL NOT BE ACCEPTED.
2. THE ANGLE AND CHAMFERED SHOWN IN THE DRG. IS ACTUALLY THE CLEARANCE BETWEEN THE DIE AND PUNCH PROVIDED FOR FACILITATING BLANKING OPERATION ONLY. AS SUCH THE ANGLE AND CHAMFER ARE NOT SPECIFICALLY MENTIONED AND IS NOT IMPORTANT. STRAIGHT EDGES ARE ALLOWED

WEIGHT OF BLANK = 4.6 kg (Approx.)

REV	DATE	DESCRIPTION	SIGN.
19/2016	30/11/16	DIMN. 20.0 <sup>H</sup> WAS 19.5+0.5	JG.M/CCS

REV	DATE	DESCRIPTION	SIGN
15/05	17/01/99	IN CHEM. COMP. C% 0.09-0.13 & Ni% 0.15 WERE C% 0.10-0.13 & Ni% 0.20 RESPECTIVELY	JG.M/CCS
430/99	23-9-99	IN CHEM. COMP. C% 0.10-0.13 WAS 0.09-0.13 REF. CGA (AMN) L. NO. QAIA 854/XI DT. 30-8-99 IN NOTE NO 1 NITROGEN CONTENT ADDED REF LETTER NO INST/TECH/MQA-2, 12MAY99	JG.M/CCS

REV	DATE	DESCRIPTION	SIGN
248/99	14-6-99	IN NOTE 1) 'MADE' REPLACED BY 'PUNCHED/MACHINED'	JG.M/CCS
88/99	19-3-99	DIMNS 19.5 WAS 19.3, IN NOTE NO. 1 PUNCHED REPLACED BY MADE, & BRACKET NOTE ADDED, NOTE NO 10 & SPECIAL NOTE ADDED.	WM/CCS

DIMENSIONS ARE IN mm		
THIRD ANGLE PROJECTION		
SCALE : 1 : 2		
1998	NAME	DATE
DRAWN	PV	
RE-DRAWN		
CHECKED	Primal	21-10-98
HOS/DO	V.M.	21/10
JG.M/CCS	Primal	21/10/98

MATERIAL : STEEL 1110A GOST B19032-73	
NOMENCLATURE :	
<b>BLANK FOR 76.2 CART CASE</b>	
M/C :	
STORE :	76.2 NA.

<b>ORDNANCE FACTORY AMBAJHARI</b>	
DRG. NO :	CC-417E
SHEET NO :	1
NO. OF SHEETS :	1
SCHEDULE NO :	
COMPT. :	ARDE-2286