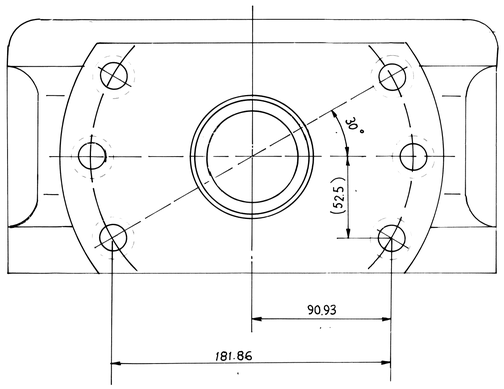
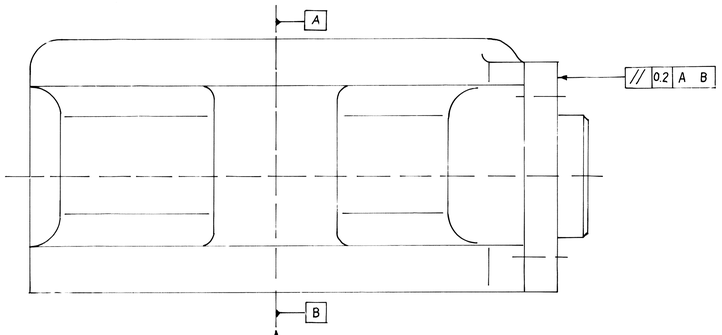
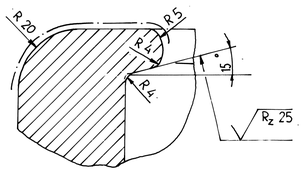
ALT. No.	AUTHY.	DESCRIPTION	DATED INITIAL
④	DY. CEE/ CON/ D-II	DRG. MODIFIED AS PER RDSO'S LETTER No. EL/3.1.35/3, Dt. 5-4-05. DIMENSIONS SEC. C-C 24,100,136 WERE 20,80,100 RESPECTIVELY.	
⑤	DY. CEE/ CON/ D-II	NOTE Nos. 9,10,11,12 ARE ADDED AS PER NOTE No. CEE(PLN)/I.N. Dt. 24-7-07, NOTE No. 6 DELETED & RADIOGRAPHIC QUALITY LEVELS FOR CASTINGS ADDED AS PER DY. CEE M'S NOTE NO. M/6/187 (ABB) 632 A Dt. 26-7-07.	4.8.17
⑥	DY. CEE/ CON/ D-II	SPECN. NO. ASTM-E-446 ADDED. WORD ANGLE WAS AXLE. "U" DELETED.	5.10.17
⑦	DY. CEE D-II	DRG. MODIFIED AS PER RDSO'S SMI No. 259	25.4.18



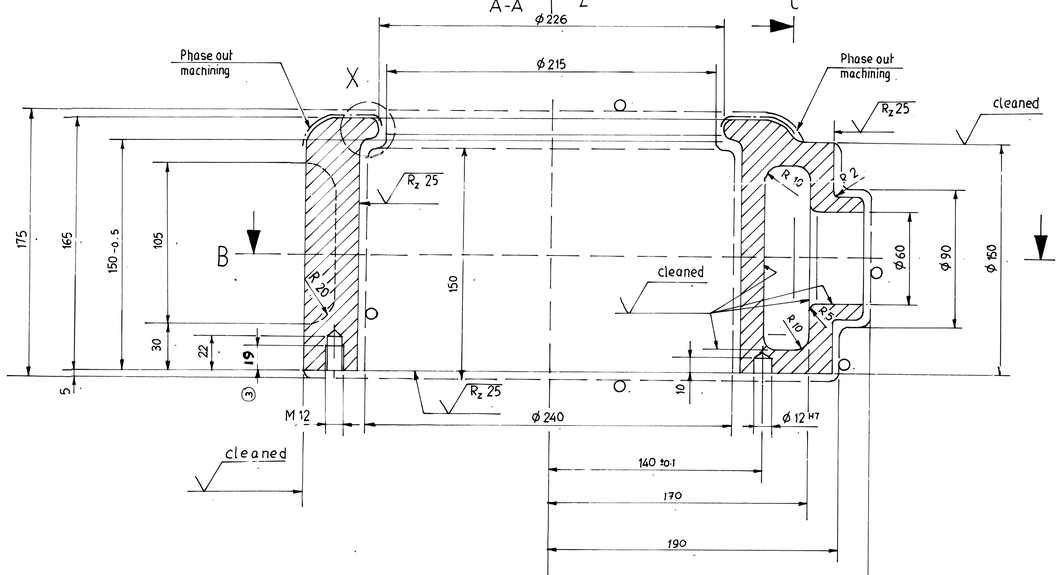


X
1:1

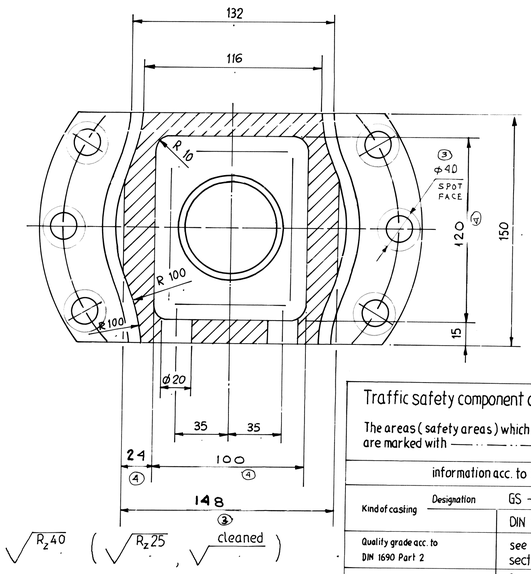


—— Apply last coating of paint to these surfaces before pressing-in

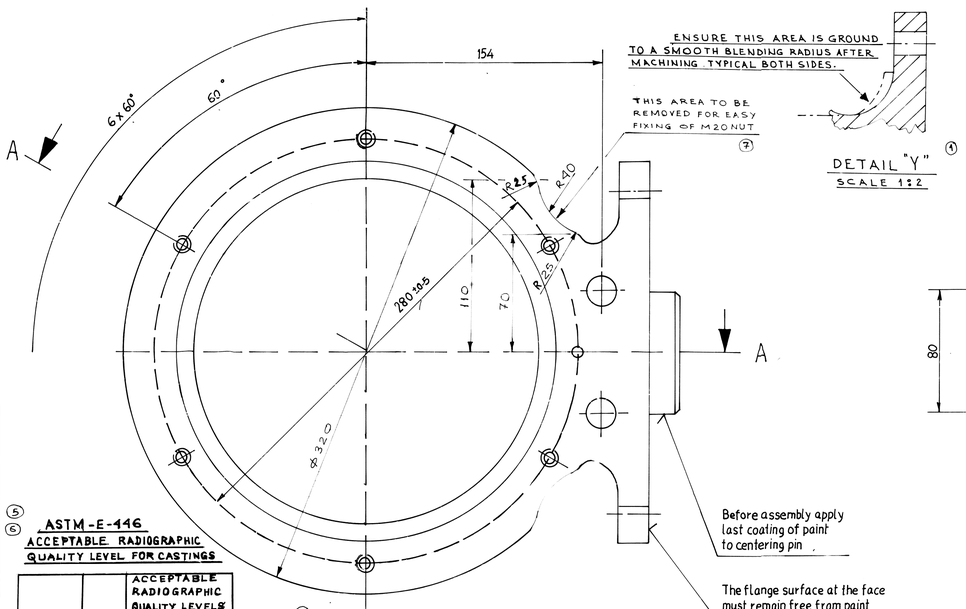
A-A Z C



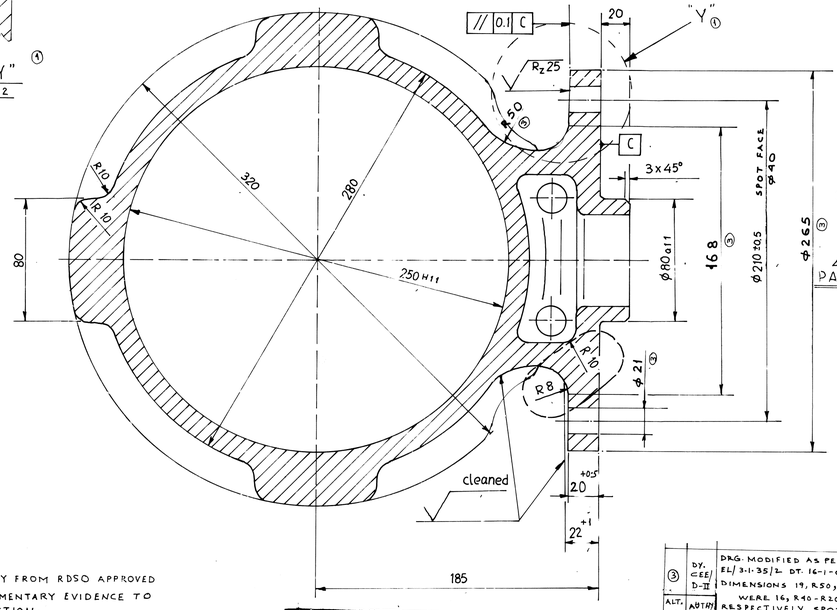
C - C



Z



B - B C



Note:

1. Model No. 663 - 155.30 - 04, cast raised - see marked location. Type height: extra medium-spaced lettering, 10 high DIN 1451.
2. *** Define test procedures/amount of inspection in such a way that quality requirements are guaranteed.
3. Work piece edges DIN 6784
   ○ Preturned surface, if required
4. PAINT ACC. TO PAINT SPEC ES 1213 PART 1

⑤ ⑥ ASTM-E-446
ACCEPTABLE RADIOGRAPHIC QUALITY LEVEL FOR CASTINGS

CATEGORY	TYPE	ACCEPTABLE RADIOGRAPHIC QUALITY LEVELS FOR CRITICAL AREAS	FOR NON-CRITICAL AREAS
SHRINKAGE	CA	1	2
	CB	1	2
	CC	1	2
	CD	1	2
INCLUSION	B	1	2
GAS POROSITY	A	1	2
CRACK	D	NIL	NIL
HOT TEARS	E	NIL	NIL
CHAPLETS	F	NIL	Allowed

⑤ NOTE:-
9. 100% CHECKING BY RADIOGRAPHY (GAMA RAY). ⑥
10. AT LEAST 2/3 PHOTOGRAPHS AT AN ANGLE TO BE TAKEN PER PIECE TO COVER ENTIRE NECK PORTION OF THE HOUSING (PHOTOGRAPHY ALONG THE AXIS IS NOT RECOMMENDED).
11. RADIOGRAPHY CAN BE DONE FROM LOCAL NABL LABS IN PRESENCE OF REPRESENTATIVE FROM C&M LAB/CLW.
12. FIRM TO BEAR COST OF PHOTOGRAPHY.

③ NOTE
5. CASTING TO BE TAKEN ONLY FROM RDSO APPROVED CLASS "A" FOUNDRY AND DOCUMENTARY EVIDENCE TO BE SUPPLIED DURING INSPECTION.
6. ~~UT/RT TESTING TO BE DONE FOR AT LEAST ONE SAMPLE PER LOT OR 10% OF THE TOTAL QUANTITY OFFERED WHICHEVER IS HIGHER.~~ ⑤
7. CASTING SHOULD NOT BE SUBJECTED TO ANY WELD RECLAMATION.
8. HARDNESS TEST SHOULD BE DONE DURING INSPECTION.

③	DY. CEE/ D-II	DRG. MODIFIED AS PER RDSO's ADVICE LETTER No. EL/3.1.35/3- Dt. 16-1-08. DIMENSIONS 19, R50, Ø21, 168, Ø265, 148, 80, 100, 135 WERE 16, R40-R20, Ø13-5, Ø250, 140, 100, 120 RESPECTIVELY. SPOT FACE Ø40 ADDED. NOTE 5,6,8 ADDED. TENTATIVE WITHDRAWN.	
②	DY. CME/ DMD	USED FOR WAP/5 LOCOS ADDED.	
①	DY. CME/ DMD	DETAIL "Y" ADDED.	
ALT. No.	AUTHY.	DESCRIPTION	DATED INITIAL

B212/001	T212/001
लागत एवं विश्लेषण संख्या C&D No.	लागत शर्त विश्लेषण संख्या C&D NO.
FOR WAP-5	FOR WAG-9

REF. NO.	PART DRG. NO.	DESCRIPTION
		— HOUSING

NO./ LOCO	MATL	SPECN	WT. EACH IN KG.
4	STEEL CASTING	DIN 17182	31.00

REF. ASSLY DRG. NO.
ABB DRG. NO. 1A011-00380 REV. 5
1209-01.113-001, REF. NO. 1

CHITTARANJAN LOCOMOTIVE WORKS

CAD No.

1ST ANGLE PROJECTION

USED FOR LOCOS WAG/9 & WAP/5

DRAWING NO. 1209-01.113-002 ALT. ⑦

HOUSING

Traffic safety component acc. to WN 193 01

The areas (safety areas) which are especially used are marked with —·—·—·— lines.

information acc. to SEB 120801

Kind of casting	Designation	GS - 20 Mn 5
		DIN 17 182
Quality grade acc. to DIN 1690 Part 2		see WN 193 01 section 7.2
treatable steel casting		Rm = 500 - 650 N/mm² Rp0.2 = 300 N/mm² Elongation at rupture σ min = 22 %
Heat treatment		N
Degree of accuracy		GTB 17/5, DIN 1683
State of delivery		pre-fabricated; or refer ordering references
Model quality grade acc. to DIN 1511		H 1
Machining allowance		BZ 5 to DIN 1683
Draught		+ according to DIN 1680
Cast radii without dimensions		R = 3 - 5 mm
Inspection	Type	M / X/R
	Amount	100 % / ***
Proof of mechanical properties		DIN 17 182 / DIN 1690 T 1 per melting charge
Certificates		DIN 50 049 - 3.1 B with confirmation that required quality grades have been observed

UNSPECIFIED TOLERANCE TO IS: 2102	SURFACE ROUGHNESS VALUE TO IS: 3073	Ra µm	0.025	0.1	0.2	0.4	0.8	1.6	3.2	6.3	12.5	25	50
		SYMBOL	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽▽▽	▽	▽	▽	▽

GRADE NUMBER	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11	N12