



MODULE	M	1
NUMBER OF TEETH	Z	48
BASIC PROFILE ANGLE	α	20°
RACK ADDENDUM COEFFICIENT	ha^*	0.8
RADIAL CLEARANCE COEFFICIENT	c^*	0.3
ADDENDUM MODIFICATION COEFFICIENT	X	0
DEGREE OF ACCURACY AS PER GOST 1643-72		CM 7
BASE TANGENT LENGTH	W	67.635 ^{+0.12} _{-0.21}
TOLERANCE FOR BASE TANGENT LENGTH VARIATION	Vw	0.036
COMPOSITE ERROR DOUBLE	F ₁ ^m	0.10
FLANK	TOOTH TO TOOTH	F ₁ ^u 0.028
TOLERANCE FOR RADIAL RUN-OUT OF TOOTHED RIM	F ₂	0.058
BASE NOMINAL VALUE		11.808
PITCH LIMIT DEVIATIONS	ΔFp_6	± 0.011
TOTAL BEARING PATTERN IN HEIGHT	%	AT LEAST 5D
OF STANDARD GEAR TEETH IN FACE WIDTH	%	AT LEAST 7D
TOLERANCE FOR TOTAL ERROR OF DISTORTION	F ₃	0.013
TOLERANCE FOR TOOTH PROFILE ERROR	f _f	0.014
BASE CIRCLE DIAMETER	d ₀	180.42
RADIUS OF INVOLUTE CURVATURE AT THE BEGINNING OF CONTACT PROFILE	P ₀	21.770
RADIUS OF INVOLUTE CURVATURE AT THE END OF CONTACT PROFILE	P _c	41.264
INVOLUTE DEVELOPMENT ANGLE	μ	12° 27' 53"

- INSPECTION GROUP III ASPER TECHNICAL REQUIREMENTS TT-11. HRC 35 TO 45. IF NOT SPECIFIED OTHERWISE GEAR MAY BE CARBURIZED ALL OVER
- UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE AS FOLLOWS FOR HOLES - AS PER A7, SHAFTS - AS PER B7 OTHERS - AS PER CM7
- DEVIATIONS OF THE CENTRAL ANGLE BETWEEN THE AXES OF ANY TWO HOLES E SHOULD NOT EXCEED ± 11 (QUALIFIED TOLERANCE)
- MISALIGNMENT OF SURFACE T WITH RESPECT TO SURFACE 5 SHOULD NOT EXCEED 0.03 mm
- GRINDING OF THE TOOTH FLANK 0.2 mm SHORT OF THE TOOTH SPACE BOTTOM IS ALLOWED WHEN GRINDING THE TEETH. IN THIS CASE, SMOOTH MESHING OF GEAR TEETH IN ITS RUNNING IN WITH STANDARD GEAR WITHOUT CLEARANCE SHOULD NOT BE DISTURBED
- CHECK PROPER MESHING OF TEETH USING PRUSSIAN BLUE BY LETTING THIS GEAR RUN IN WITH THE STANDARD GEAR WITHOUT CLEARANCE AS PER INSTRUCTIONS IN B-42 BEARING PATTERN SHOULD COMPLY WITH VALUES SPECIFIED IN THE DRAWING TABLE IN FACE WIDTH AND HEIGHT OF THE TOOTH
- ACCEPT BLUNTING ALONG THE BUTT END OF THE TOOTH AS PER STANDARD
- CHECK THE PART USING A MAGNETIC FLAW DETECTOR AS PER INSTRUCTIONS IN B-20-17
- MASTER GEAR SHOULD BE AS PER GOST 6512-74
- AXIS OF SYMMETRY OF KEY WAY SHOULD COINCIDE WITH AXIS OF SYMMETRY OF ONE OF THE TEETH
- APPLY MARK ON TOOTHFACE, WHOSE AXIS OF SYMMETRY COINCIDES WITH AXIS OF SYMMETRY OF THE KEY WAY TO A DEPTH OF 0.2 mm WITH DIAMETER OF 1 TO 2 mm USING A CENTRE PUNCH
- APPLY THE FOLLOWING MARKING ON THE PARTS TO BE SUPPLIED AS SPARE PARTS:
1. PART DESIGNATION, USING TYPE II 0.5 GOST 2930-62
2. TRADE MARK

EXPLANATORY NOTE:-

MATERIAL QUOTED:
18X2H4MA (18X2H4BA) TY 14-1-381-72.
HOT ROLLED CHROMIUM - NICKEL MOLYBDENUM OR CHROMIUM-NICKEL TUNGSTEN STEEL CALIBRATED BARS OF HIGH QUALITY.
18X2H4MA (18X2H4BA) = GRADE OF STEEL

CHEMICAL COMPOSITION %:

GRADE OF STEEL	C	Si	Mn	Cr	Ni	Mo	T	MAXIMUM				
								P	S	Cu	Ni	Cr
18X2H4MA	0.14-0.20	0.17-0.37	0.25-0.55	1.35-1.65	4.00-4.40	0.30-0.40	-	0.025	0.025	0.30	0.30	0.30
18X2H4BA	0.14-0.20	0.17-0.37	0.25-0.55	1.35-1.65	4.40	-	0.90-1.20	0.025	0.025	0.30	0.30	0.30

MECHANICAL PROPERTIES: (AS PER GOST 4543-71)

GRADE OF STEEL	YIELD POINT kgf/mm ² MIN	ULTIMATE STRENGTH kgf/mm ² MIN	ELONGATION % MIN	REDUCTION IN AREA % MIN	IMPACT STRENGTH kgf.m/cm ² MIN
18X2H4MA	85	115	12	50	10
18X2H4BA	80	105	12	50	12

**
18X2H4MA (18X2H4BA)
TY 14-1-381-72

ORG. INDIANISED BASED ON ISSUE 4.2 EXPLANATORY NOTE ADDED ON 24.12.91

PILOT SAMPLE SHOULD BE APPROVED BY A H S P BEFORE BULK PRODUCTION.

EST. MASS	TO BE STAMPED OR MARKED WHERE INDICATED THUS #
2.64 kg.	(LETTERS)
ALL SHARP EDGES AND CORNERS TO BE REMOVED UNLESS OTHERWISE STATED MACHINED CORNERS TO HAVE R. OUTSIDE R. EQUIVALENT CHAMFERS ARE PERMISSIBLE.	

DRN	20-05-17-1	MATERIAL	SEE ABOVE **	USED ON	CB 20-05-00-6
CHD		CONTROLLERATE OF QUALITY ASSURANCE (HEAVY VEHICLES)		A V A DT	
TCD		TITLE		DRIVE GEAR	
APPD		SCALE - 1:1		D S CAT NUMBER	
DATE	20-7-87	DIMENSIONS IN mm.		DRAWING NUMBER	
SCALE	1:1	TOLERANCE ON DIMNS UNLESS OTHERWISE STATED IS 2102-69		20-05-17-1	
ISSUE	DATE	NATURE OF AMENDMENTS		CONFORM TO	
43A	25-8-90	AS PER ORIGINAL			
43	24-7-89	105-10-4-83			

