



IS: 2062-1981 MILD STEEL

MATERIALS	CHEMICAL COMPOSITION - PERCENT				MECHANICAL PROPERTIES			
	C max	Si	Cr	S,P max	NOMINAL THICKNESS/ DIA min	TENSILE STRENGTH N/mm2 (Kgf/mm2) min	YIELD STRESS N/mm2 (Kgf/mm2) min	ELONGATION percent min on 5.65/A
Structural Steel Standard Quality	0.25		0,20/0.35 (Where so required)	0.055 each				
Plates, Sections- angles, tees, beams, channels etc. and Flats.					Below 6	*Bend test only shall be required		
					6 upto and including 20	410-530 (42-54)	250 (26)	23
					Over 20 upto and including 40	410-530 (42 - 54)	240 (24)	23
					Over 40	410-530 (42-54)	230 (23)	23
Bars- round, square and hexagonal-					Below 10	† Bend test only shall be required		
					10 upto and including 20	410-530 (42-54)	250 (26)	23
					Over 20	410-530 (42 - 54)	240 (24)	23

*In case of plates, sections and flats below 6 mm. the yield stress shall be assumed to be at least the same as that for thickness between 6 mm & 20 mm.

† in case of bars below 10 mm dia. the yield stress shall be assumed to be at least the same as that for bars of dia. between 10 mm and 20 mm.

** As amended in January 75, C will be 0.23% max only for thickness/dia 20mm and below and for thickness/dia over 20 mm C will be 0.25%

IS: 432-1966 (PART-1): MILD STEEL & MEDIUM TENSILE STEEL BARS AND HARD DRAWN STEEL WIRES FOR CONCRETE RE - INFORCEMENT

MATERIALS	CHEMICAL COMPOSITION - PERCENT			MECHANICAL PROPERTIES			
	C max	S max	P max	NOMINAL THICKNESS/ DIA min	TENSILE STRENGTH N/mm2 (Kgf/mm2) min	YIELD STRESS N/mm2 (Kgf/mm2) min	ELONGATION percent min GL 5.65/A
Mild Steel Grade - 1	As per IS: 226/75 for bars upto 20 mm and as per IS: 2062/69 for bars over 20 mm nominal size.			All sizes	410(42)	-	-
				upto 20 mm	-	250(26)	23
				over 20 mm	-	240(24)	23
				below 10mm	-	-	20
				10mm & over	-	-	23
Mild Steel Grade - II	As per Fe 310-0(St.32.0) or Fe 410 - 0(St.42.0) of IS:1977/75.			All sizes	(38)	-	-
				upto 20 mm	-	(23.5)	-
				over 20 mm	-	(21.5)	-
				below 10mm	-	-	20
				10mm & Over	-	-	23
Medium Tensile Steel	As per IS:961/75Fe. 540WHT (St.55 HTw) as amended in January 1975.			All sizes	(58)	-	-
				upto 20 mm	-	350(36)	-
				over 20 mm to 40 mm	-	(34.5)	-
				over 40 mm	-	320(33)	-
				below 10 mm	-	-	17
10mm&-over	-	-	20				

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GRADE	MATERIALS	CHEMICAL COMPOSITION - PERCENT			MECHANICAL PROPERTIES			
		C max	S max	P max	NOMINAL THICKNESS/ DIA min	TENSILE STRENGTH N/mm2 (Kgf/mm2) min	YIELD STRESS N/mm2 (Kgf/mm2) min	ELONGATION percent min on 5.65 / A
Fe570HT (St.58HT)	Semi Killed or Killed	0.27	0.055	0.055	Below 6	*Bend test only shall be required		
					6 to 28	570(58)	350(36)	20
					Over 28 to 45	570(58)	340(35)	20
					Over 45 to 63	570(58)	320(33)	20
					Over 63	540(55)	290(30)	20
Fe 540WHT (St-55-HTw)	Killed	0.20	0.055	0.055	Below 6	*Bend test only shall be required		
					6 to 16	540(55)	350(36)	20
					Over 16 to 32	540(55)	340(35)	20
					Over 32 to 63	510(52)	330(34)	20
					Over 63	490(50)	280(29)	20

*In the case of thickness or diameter below 6mm the yield stress shall be assumed to be at least the same as that for thickness or diameter between 6mm and 16mm.

**As amended in January 1975.

NOTE: 1. In case of Fe 570-HT steel Phosphorus higher than that specified above is allowed if it is added deliberately as an alloying element.

2. When chromium is used as an alloying element in Fe 540 WHT steel, it is desirable that the combined percentages of manganese and chromium should not exceed 20 per cent.

3. Copper may be present between 0.20 and 0.35 per cent as mutually agreed upon between the supplier and the purchaser.

4. When the steel is silicon killed the product analysis shall show a minimum of 0.10% silicon. When the steel is aluminium killed or killed with a combination of aluminium and silicon the requirement regarding minimum silicon content does not apply.