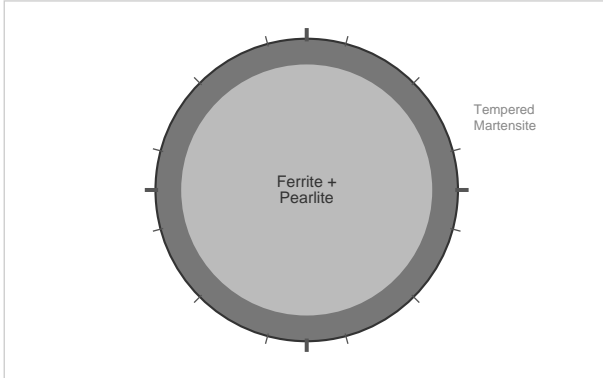


# TMT Rebar — Fe 415

Thermo-Mechanically Treated Reinforcement Bar -- IS 1786 : 2008

## CROSS SECTION



## MECHANICAL PROPERTIES

Min. Yield Strength	<b>415 MPa</b>
Min. Tensile Strength	<b>485 MPa</b>
Min. UTS/YS Ratio	<b>1.1</b>
Min. Elongation	<b>14.5%</b>
Ductility Class	<b>Standard</b>

## CHEMICAL COMPOSITION (% by mass, max)

Element	Maximum %
Carbon (C)	<b>0.3%</b>
Sulphur (S)	<b>0.06%</b>
Phosphorus (P)	<b>0.06%</b>
S + P	<b>0.11%</b>
Carbon Equivalent (CE)	<b>0.42%</b>

## BEND TEST REQUIREMENTS

Bend test (d ≤ 20mm)	<b>Mandrel dia = 3d</b>
Bend test (d > 20mm)	<b>Mandrel dia = 4d</b>
Rebend test (d ≤ 20mm)	<b>Mandrel dia = 6d</b>
Rebend test (d > 20mm)	<b>Mandrel dia = 8d</b>

## STANDARD SIZES AND WEIGHTS

Dia (mm)	Area (mm <sup>2</sup> )	Weight (kg/m)	Weight (kg/12m)
6	28.3	0.222	2.66
8	50.3	0.395	4.74
10	78.5	0.617	7.40
12	113.1	0.888	10.66
16	201.1	1.578	18.94
20	314.2	2.466	29.59
25	490.9	3.853	46.24
28	615.8	4.834	58.01
32	804.2	6.313	75.76
36	1017.9	7.990	95.88
40	1256.6	9.865	118.38