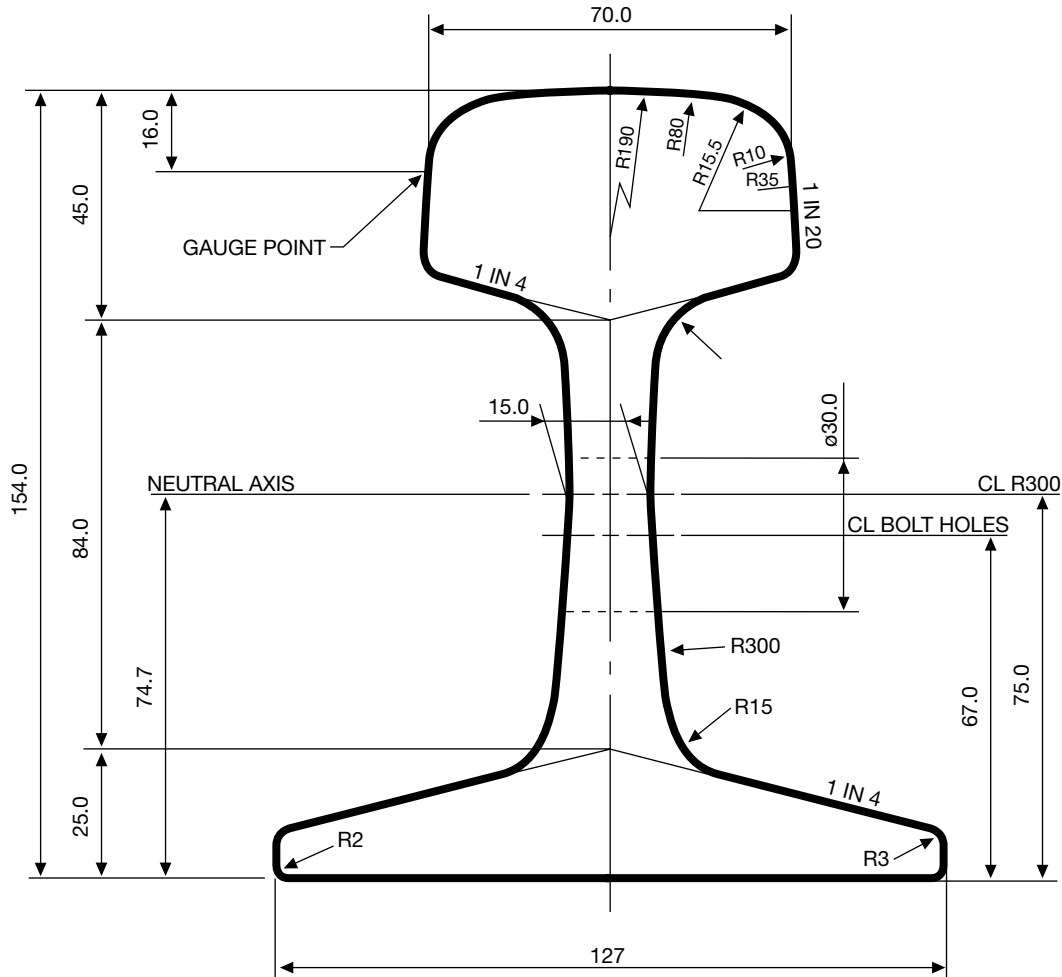


# 50 KG HEAD HARDENED RAIL

RT 23 HH



## MECHANICAL PROPERTIES

Area of Head	2710 mm <sup>2</sup>	<b>Horizontal Axis</b>	
Area of Web	1578 mm <sup>2</sup>	Second Moment of Area	20.1 x 10 <sup>6</sup> mm <sup>4</sup>
Area of Foot	2163 mm <sup>2</sup>	Section Modulus Head	253.5 x 10 <sup>3</sup> mm <sup>3</sup>
Total Area	6451 mm <sup>2</sup>	Section Modulus Foot	269.1 x 10 <sup>3</sup> mm <sup>3</sup>
<b>Standard Lengths</b>	<b>12.19 m &amp; 13.72 m</b>	<b>Vertical Axis</b>	
<b>Calculated Mass</b>	<b>50.6 kg/m</b>	Second Moment of Area	3.26 x 10 <sup>6</sup> mm <sup>4</sup>

## TYPICAL MECHANICAL PROPERTIES (Minimum)

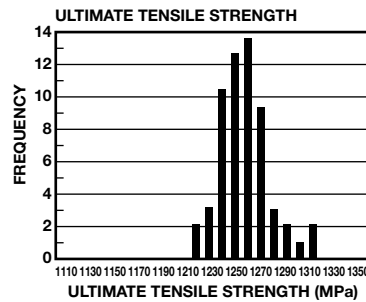
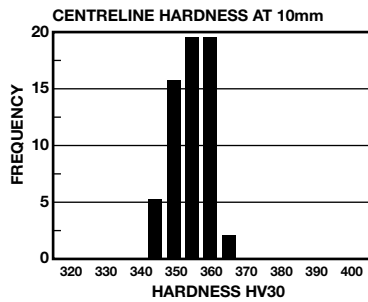
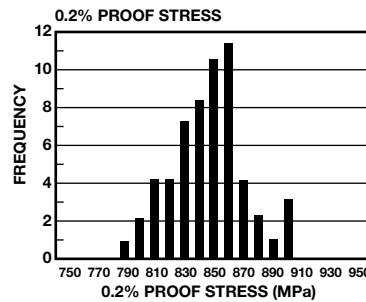
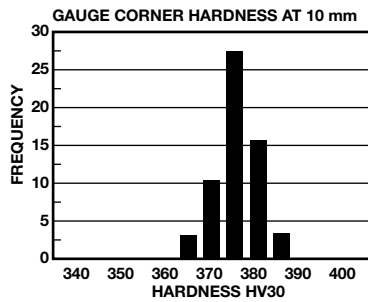
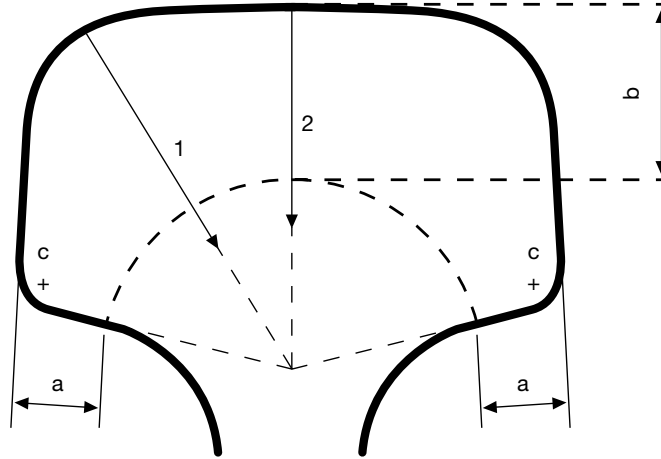
<b>0.2% Proof Stress</b>	<b>Tensile Strength</b>	<b>% Elongation Gauge</b>
<b>MPa</b>	<b>MPa</b>	<b>length = 5.65 √S<sub>0</sub></b>
780	1130	9

## CHEMICAL COMPOSITION (%) Ladle Analysis

<b>Carbon</b>	<b>Silicon</b>	<b>Manganese</b>	<b>Phosphorus</b>	<b>Sulphur</b>
0.65 - 0.82	0.15 - 0.58	0.95 - 1.07	0.025 max	0.025 max

# 50 KG HEAD HARDENED RAIL

RT 23 HH



DEPTH OF HEAT TREATMENT			HEAD HARDNESS MINIMUM	
<b>Dimensions (mm)</b>	<b>a</b>	<b>b</b>	Surface Hardness	340 HB
	15 min	20 min	<b>Rails are manufactured from fully killed steel.</b>	
	23 max	35 max		

HARDNESS IN HEAT AFFECTED ZONES			
HV30	Position C	Traverse 1	Traverse 2
At any point	-	430 max	430 max
10 mm from surface	-	360 min	340 min
2 mm below surface	430 max	-	-