RAUNAQ
TRUSTED STEEL

SA387 Grade 91 – Technical Datasheet

1. Chemical & Mechanical Properties

A. Chemical Composition

Element	% Composition
Carbon (C)	0.08 – 0.12
Manganese (Mn)	0.30 – 0.60
Silicon (Si)	≤ 0.50
Phosphorus (P)	≤ 0.025
Chromium (Cr)	≤ 0.025
Sulphur (S)	8.00 – 9.50
Molybdenum (Mo)	0.85 – 1.05
Vanadium (V)	0.18 – 0.25
Niobium (Nb)	0.06 – 0.10
Nitrogen (N)	0.03 – 0.07

B. Mechanical Properties

Property	Value
Yield Strength	≥ 450 MPa
Tensile Strength	620 – 830 MPa
Elongation	≥ 18 %

3. Common Applications

- Ultra-supercritical boiler headers

- HRSG components

- High-temp thick-wall vessels

4. Standard Conformance

ASTM A387 / ASME SA-387 — Chromium-Molybdenum Alloy Steel Pressure-Vessel Plates.

5. Disclaimer

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