

## HUNAN BALING STEEL CO.,LTD

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### Datasheet for C90 Casing Pipe

#### C90



#### What Is API 5CT C90 Casing?

C90 is a high-strength, sour-service casing grade defined under API 5CT, with a controlled yield strength of 90,000 – 105,000 psi and a minimum tensile strength of 100,000 psi. C90 casing is specifically engineered for wells containing hydrogen sulfide ( $H_2S$ ), meeting the strict sulfide stress cracking (SSC) resistance requirements of NACE MR0175 / ISO 15156. API 5CT C90 casing undergoes quenching and tempering to achieve a refined microstructure that balances high strength with superior toughness in corrosive downhole environments. C90 casing tubing covers sizes from  $2\frac{3}{8}$ " to  $13\frac{3}{8}$ " , serving both production and intermediate string applications in medium-to-deep sour gas and sour oil wells. As a reliable C90 steel pipe, it offers an optimal combination of mechanical performance and  $H_2S$  resistance, making it the preferred choice where API 5CT C90 casing tubing is required for safe, long-term well integrity in aggressive sour-service conditions.

- Material Grade: C90-1, C90-2
- Applicable Product: Casing & Tubing  $2\frac{3}{8}$ "– $13\frac{3}{8}$ "
- Thread Types: BC, STC / LTC, Premium Connections
- Available Lengths: R1 / R2 / R3
- Service Environment: Sour Service ( $H_2S$ ), NACE MR0175 Compliant

#### Chemical Composition

Grade	C	Mn	Mo	Cr	Ni	Cu	P	S	Si
C90-1 / C90 Type 1	≤0.35	≤1.00	0.25–0.75	≤1.20	≤0.99	—	≤0.020	≤0.010	—
C90-2 / C90 Type 2	≤0.50	≤1.90	N.L.	N.L.	≤0.99	—	≤0.030	≤0.010	—

**Note: For C90-1, the lower limit of Mo may not be set when the wall thickness is less than 17.78 mm; N.L. in the standard table means no limit.**

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**Mechanical Properties**

Grade	Yield strength	Tensile strength	Hardness max	Elongation
	Rp0.2 / MPa	Rm / MPa		
C90-1	621–724	≥689	HRC 25.4 / HBW 255	0.005
C90-2	621–724	≥689	HRC 25.4 / HBW 255	0.005

**Test requirements**

Steel Grade	Mandatory Tests	Supplementary Tests	NDT	Corrosion Test	Key Control Requirements
C90 Type 1 C90 Type 2	Chemical analysis, Tensile, Hardness, Hydrostatic pressure	SSC,Impact	UT+MT	NACE TM0177	Anti-SSC