

## **IS 3298: Mild steel rivet bars for shipbuilding**

Mild steel rivet bars are specialized steel bars designed for use in shipbuilding, where they serve as essential fasteners to join metal plates and structural components. Known for their **low carbon content**, these bars offer excellent **ductility**, making them easy to shape and hammer into place during riveting. Their **strength** and **resistance to fracture** ensure secure and reliable joints, critical for maintaining the integrity and durability of ship hulls and frames, even under harsh marine conditions.

IS 3298 addresses these consumer expectations through detailed material specifications and testing requirements. The standard mandates that rivet bars be produced from steel using processes such as **open-hearth, electric, basic oxygen, duplex** or a combination. It mandates the use of **semi-killed** or **killed steel** and specifies the acceptable **chemical composition** of carbon, sulphur and phosphorus to achieve the desired strength and durability. Quality tests like the **sulfur print test** verify the material's internal integrity, while **tensile** and **dump tests** ensure the rivet bars can withstand the stresses of maritime applications. Additionally, **dimensional tolerance limits** and **rustproofing** measures are provided, ensuring rivet bars are accurate in dimension and protected from corrosion. For traceability, the standard stipulated marking specification which also reinforces quality control and assurance in manufacturing.

This standard thus ensures that mild steel rivet bars used in shipbuilding meet the critical safety, durability, and performance expectations necessary for shipbuilding.