



IS 4367 : 1991 Alloy steel forgings for general industrial use – Specification

IS 4367 : 1991, issued by the **Bureau of Indian Standards**, outlines specifications for alloy steel forgings intended for general industrial use. The standard sets precise guidelines on material composition, mechanical properties, heat treatment, testing, and inspection processes to ensure high-quality, durable forgings suitable for demanding **industrial applications**.

The specification defines acceptable chemical composition limits for various alloying elements like **carbon, manganese, chromium, nickel, and molybdenum**. These elements are essential in achieving the desired mechanical properties and performance levels for different grades of alloy steel. Additionally, IS 4367 specifies minimum requirements for tensile strength, yield strength, elongation, and impact resistance, ensuring that the forgings can endure the high stress and wear typical in **industrial environments**. To meet these mechanical property standards, the specification mandates specific heat treatment processes, such as **annealing, normalizing, quenching, and tempering**, tailored to the application's needs.

Testing and quality assurance are vital parts of IS 4367, with requirements for tensile tests, hardness tests, and impact tests to assess **mechanical properties**. The standard also prescribes inspection methods, including non-destructive testing techniques like ultrasonic testing, to identify any internal flaws. By providing criteria for dimensions and surface finish, IS 4367 ensures that forgings meet strict tolerances, fit accurately in assemblies, and have smooth, defect-free surfaces. Each forging must be marked with identification symbols for traceability, and manufacturers must certify compliance with the specification, which is crucial for industrial users who rely on consistent **quality and reliability**.

The forgings produced under IS 4367 : 1991 are suitable for a wide range of industries, including automotive, machinery, oil and gas, and construction, where **high performance** and durability are paramount. This standard provides a comprehensive framework for manufacturers and quality assurance teams to ensure **alloy steel forgings** meet rigorous **industrial standards**, offering confidence in their use across various demanding applications.