Tool Steel Forgings for Metal Forming- (Indian Standard) IS 13387: 1992

Tool steel forgings are essential materials used in the **manufacturing of tools and dies for metal forming processes by** forging, stamping, casting, and extrusion**.** These steels are **specially designed to withstand the extreme stresses, high temperatures, and wear conditions encountered during the shaping, cutting, and forming of metals**. They are critical components in industries such as automotive, aerospace, and heavy machinery, where precision and durability are of paramount importance.

In addition to forming tools, tool steel forgings are used in the production of cutting tools for machining, such as drills, taps, and milling cutters, due to their hardness and wear resistance. Tool steels are used in the manufacturing of molds for both metal and plastic forming processes, including **injection molding, blow molding, and compression molding**.

Tool steel forgings offer a **unique combination of hardness, toughness, wear resistance, and heat stability**, enabling them to perform reliably under the extreme conditions found in metal forming operations. With their ability to withstand high stresses, elevated temperatures, and abrasive wear, **tool steel forgings are indispensable in industries** that rely on precision metal shaping and cutting processes.

Taking the importance of the subject ahead, **Bureau of Indian Standards (BIS)** has formulated an Indian Standard "**Tool Steel Forgings for Metal Forming**" as per **IS 13387 : 1992**.

This **IS 13387 : 1992 outlines the requirements of tool steel forgings which includes chemical composition, heat treatment, destructive and non-destructive tests for the material.**

Ministry of Steel **through Steel & Steel (Quality Control) Order mandates compliance and compulsory use of Standard Mark under a license from the Bureau of Indian Standards** to ensure the product is expected to meet the prescribed specifications and a curb on sub standards products is in place.

In conclusion, **tool steel forgings play a critical role** in ensuring the performance and longevity of the tools used in metal forming processes. Their composition and properties are carefully tailored to meet the demanding conditions of these applications, including resistance to wear, heat, and mechanical stresses.