



### IS 9550: 2001 – Know what type of steel goes into automobile engines

**Bright Steel bars**, as the name suggests, have **bright surface finish**. These are manufactured with tight **dimensional tolerances** and are useful in applications which demand close tolerances such as that of the engine of the car. Imagine, what happens if the diameter of the piston rod of the engine is more than that of the engine block in which it is fitted. Engine gets jammed. In order to avoid such kind of mistakes, rods conforming to IS 9550: 2001 are to be used in these kinds of applications.

A bright bar can be identified with the help of the nomenclature of grade designation which is prefixed with IS 9550. If no grade designation exists as per relevant product standard, it is replaced with XXXX. Ex. IS 9550 CPS 6911 304.

IS 919(Part 2)- *Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes: Part 2 tables of standard tolerance classes and limit deviation for holes and shafts* covers the tolerance classes “**h tolerances**”(negatively disposed) and “**k tolerances**”(positively disposed). However, IS 9550 covers only “h” tolerances applicable to Bright Steel bars. For example, 20 mm nominal diameter having a tolerance class h9 has 20 mm – 0.052/+ 0 mm or 19.948/20.000 mm.

Based on the manufacturing process employed, bright steel bars can be delivered in a variety of treatment conditions such as **cold drawn( designated by symbol +C), peeled/turned(+SH), ground(+G)** etc.

Following forms the basis of the order for Bright steel bars-

Chemical composition, Mechanical properties, Dimensions, Dimensional tolerances, treatment condition of bars, surface condition, surface class, decarburization depth and any other optional tests, if required.