

## **IS 4509 : 2024 Ring Slugging Wrenches (Spanners)**

### **About the Product**

Ring slugging wrenches are short, thick wrenches with a block-shaped end on the handle. These are used for tightening and loosening of bolts/nuts by impact load which is applied by hammering on the striking end of the spanner. These are commonly used in refineries, pipelines, chemical plants, flanges, and for other similar applications.

### **Expectations of the customer wrt quality of the product**

A customer/End user would expect the wrench to be robust in construction, free from sharp edges or burrs, accurate in dimensions, having requisite markings wrt size/grade etc, should not get worn out or rusted under normal working conditions. It should be tough and durable to bear the hammering/impact loads.

### **Specifications and Parameters laid down in ISS**

The Indian Standard IS 4509 : 2024 specifies the quality parameters for the slugging wrenches for sizes ranging between 19 mm to 230 mm. The ISS also prescribes the critical dimensions (overall length, overall width, thickness and width across flat etc) along with applicable tolerances. The ISS also specifies suitable protective coating to prevent rusting, mode of packing with marking of the requisite information to facilitate the user to choose appropriate wrench. The other specified parameters include grade and composition of the steel, suitable for manufacture of Ring Slugging wrenches.

Further, it has been prescribed in the ISS that the spanners shall be well forged to shape and finished smooth all over. All sharp corners shall be removed. The spanners shall be free from burrs, cracks, seams or other manufacturing defects. This ensures that the wrenches so manufactured are of robust construction, acquire requisite toughness and are safe for the user. These wrenches are subsequently case hardened to prevent wear and tear. The hardness values prescribed in the ISS take care of performance and durability requirements of wrenches, enhancing their ability to bear severe impact loads and adverse usage conditions thus ensuring a longer service life.