DIAL GAUGE TESTER

(Prepared: 14 Jan 2008)

Principle:

Ideally, the dial gauge should be calibrated over each revolution of the dial and covering the complete range, but this will require a large number of readings. If the dial gauge is calibrated only at points corresponding to full revolutions of the dial, the progressive errors in the travel can be detected, but the periodic errors during rotation of the pointer and errors in the marking of the dial are not revealed. Hence a compromise would be to divide the total range into suitable steps such that readings are obtained over different parts of the dial and along the full range of travel.

Procedure:

1. Rotate the micrometer head and set the index disc to read zero.
2. Insert the stem of the dial gauge to be calibrated into the hole of the holding rod and clamp using the knob.
3. By adjusting holder and holding rod, set the contact point at the centre of the measuring surface of the micrometer head and normal to it.
4. Lower the dial gauge till the dial rotates by a few divisions and clamp.
5. Adjust the bezel of the dial to read zero.
6. Rotate the micrometer head to obtain the desired dial gauge reading.
7. Note the corresponding micrometer index disc reading.
8. Repeat for all desired dial gauge readings.