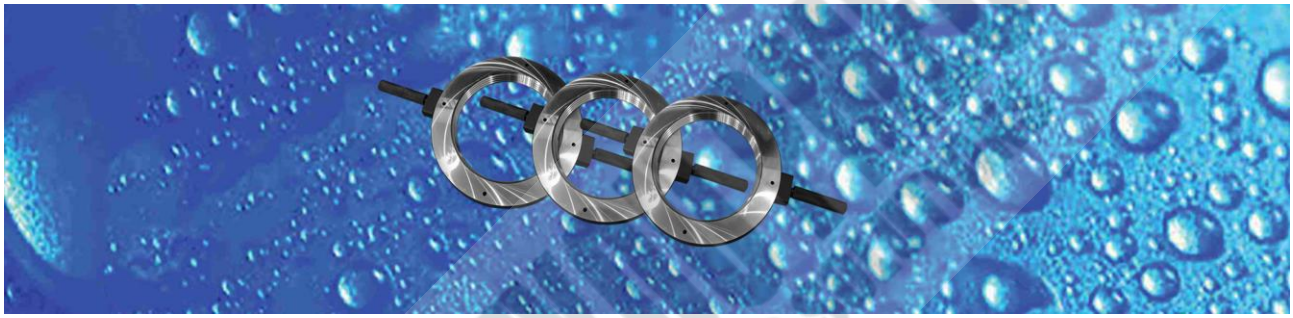
How to Measure the Pitch Diameter of Taper Thread for Nipple?

a) **Measuring method** The value C_2 of a set block gauge shall be measured with a dial gauge. Then, ring gauges RA and RC are fitted with the specified clamping torque as given in figure 13, the space C_2' is measured, and the difference ΔC_2 between C_2' and C_2 is calculated. However, ΔC_2 may be directly measured in the measurement of C_2' by adjusting the scale of the dial gauge to zero point in the measurement of C_2 of the set block gauge.



b) **Calculation** The pitch diameter B' of taper thread to be obtained shall be calculated according to formula (5), and rounded off to two decimal places (see figure 14).

$$B' = B + \frac{\Delta C_2}{6} \quad \cdots\cdots (5)$$

where, B' : pitch diameter of taper thread to be obtained (mm)

B : standard dimension of pitch diameter of taper thread (mm)

C_2 : standard dimension of gauge space as given in tables 4-1 and 4-2 (mm)

ΔC_2 : difference between C_2 and C_2' [4] (mm)

Note [4] The sign of the measured value ΔC_2 is positive when pitch diameter B' is larger than standard dimension B, and negative when smaller.

c) **Illustration**

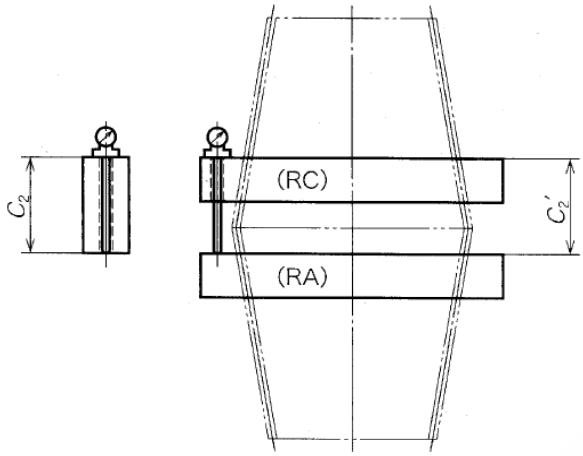


Figure 13 Combination of nipple pitch diameter measuring gauges

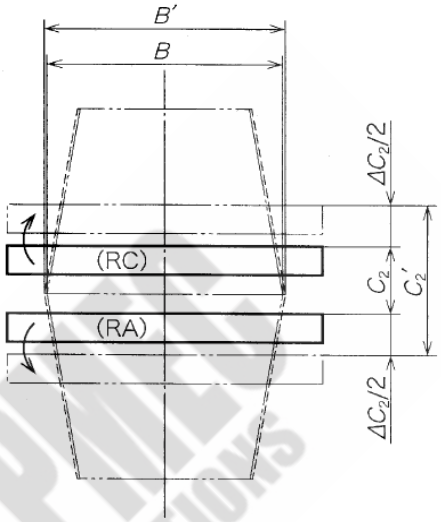
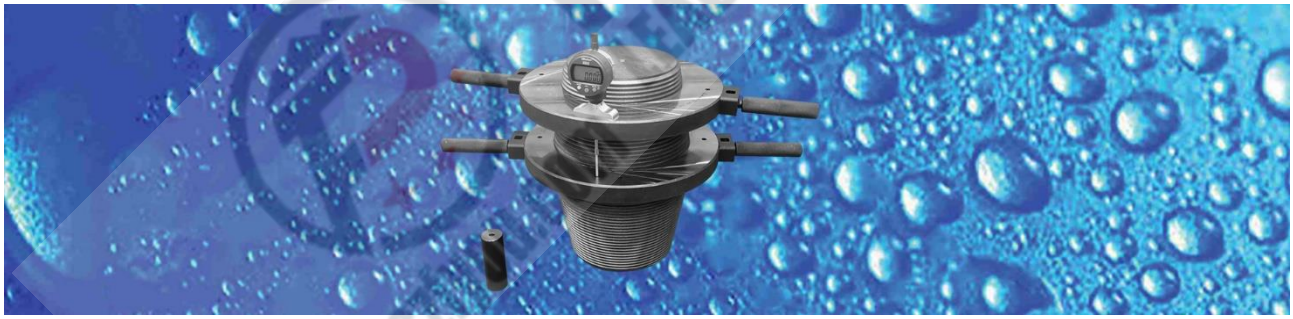


Figure 14 Pitch diameter of nipple

The clamping torque of a ring gauge shall be calculated according to figure 10 and formula (3).



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