



ROHINI

COLLEGE OF ENGINEERING AND TECHNOLOGY

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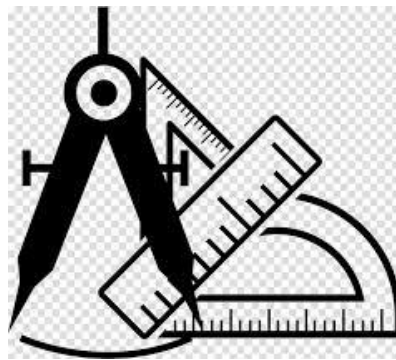
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DEPARTMENT OF MECHANICAL ENGINEERING

24ME403 - METROLOGY & MEASUREMENTS

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24ME403 - METROLOGY & MEASUREMENTS

2) Discuss the Taylor's principle applied to limit gauges.

Taylor's Principles:

* Taylor formulated the Taylor's principles in 1905, which are the key concepts in the field of metrology and measurements.

* Taylor's principles provide a systematic approach to designing and selecting limit gauges, which are essential tools for checking the size of parts.

Principle 1:

GO gauges should be designed to check the maximum metal condition while the NOGO gauges should be designed to check the minimum metal condition.

Plug gauges to check holes:

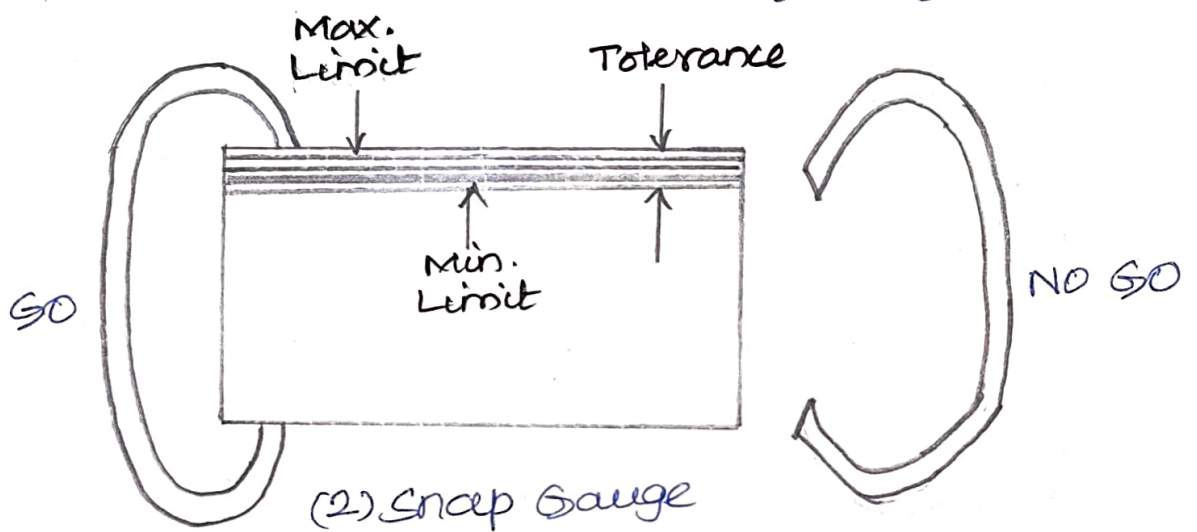
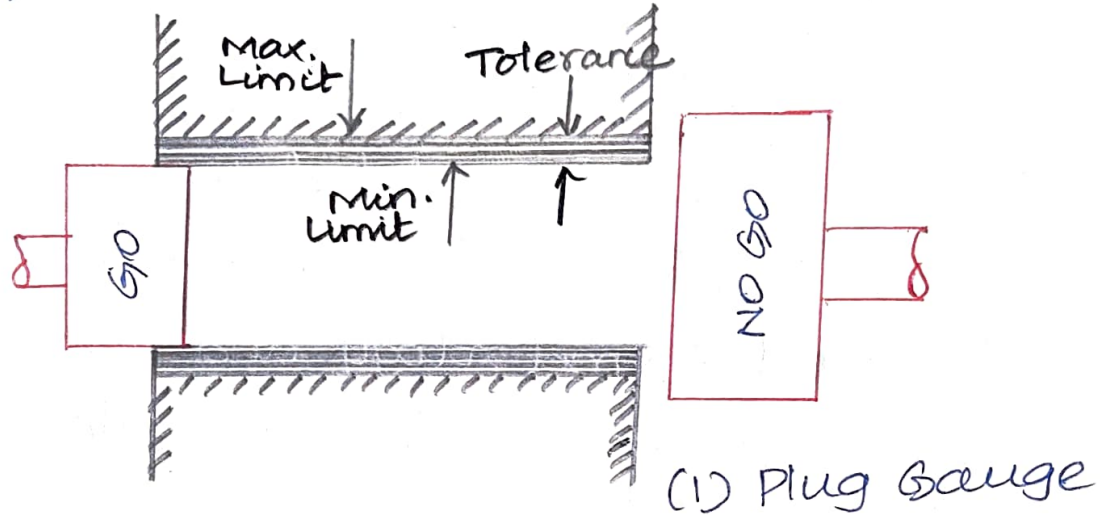
⊕ The size of GO plug gauge should correspond to the lower limit of a hole.

⊕ The NOGO plug gauge corresponds to the upper limit of a hole as shown in the figure (1).

Snap gauges to check shafts:

⊕ GO snap gauge corresponds to upper limit of a shaft.

* NO GO snap gauge corresponds to lower limit of a shaft, as shown in the figure (2).



Principle 2:

* GO gauges should check all the related dimensions (roundness, size, location, etc.) simultaneously, whereas NO GO gauge should check only one element of the dimension at a time.

* According to this rule, GO plug gauge should have a full circular section for the whole length of the hole to be checked.

* NO GO plug gauge should be in the form of pin or bar, and should check the upper limit of the hole.