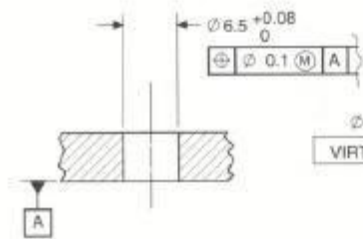


Virtual condition for a hole

EXAMPLE

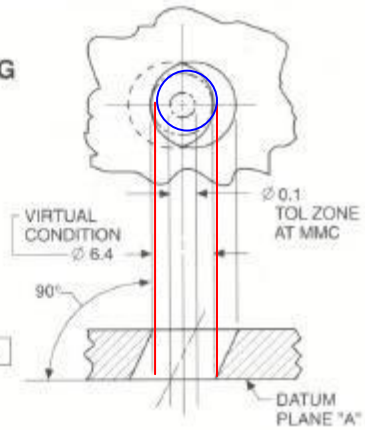


MEANING

$$\text{MMC} - \text{TOL} = \text{VC}$$

$$\phi 6.5 - \phi 0.1 = \phi 6.4 \text{ VC}$$

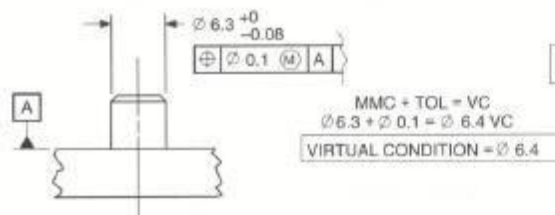
VIRTUAL CONDITION = $\phi 6.4$



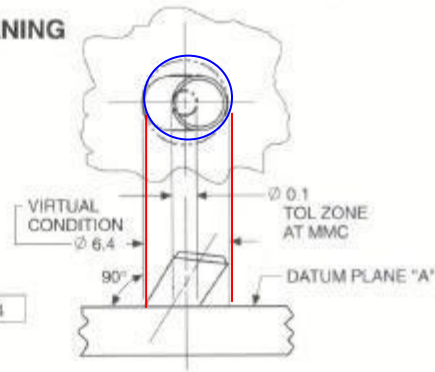
Reproduced from Foster

Virtual condition for a pin

EXAMPLE



MEANING



Reproduced from Foster

Maximum Material Condition: State of a feature when it is at the limit of size such that the part contains the maximum amount of material.

Maximum Material Size: Dimension defining the MMC of a feature; smallest size for a hole and largest size for a shaft.

Virtual Condition (VC): The size generated by maximum material size and geometric tolerance; the size that guarantees mating. It is the size of the functional gauge pin.

for shaft, $VC = MMS + \text{geometric tolerance}$ (this slide)

for hole, $VC = MMS - \text{geometric tolerance}$ (next slide)