BI-POINT Thread Gage Inspection Practices

By
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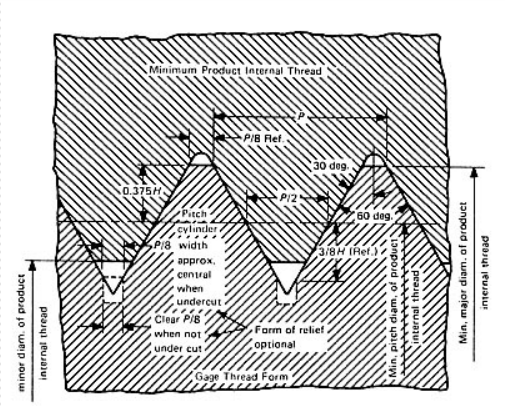
Thread Inspection Applications

- **Process Set-up / Final Inspection**
  This requires the evaluation of all applicable thread characteristic to assure their conformance to all requirements.

- **Process Control**
  During manufacturing fewer measurements need to be made to assure the process is "in control". Which characteristics to measure, in what sample sizes, and at what frequency must be at the discretion of the manufacturer.

Internal Thread Segment Gage for Measuring Maximum Material (Functional Pitch Diameter)



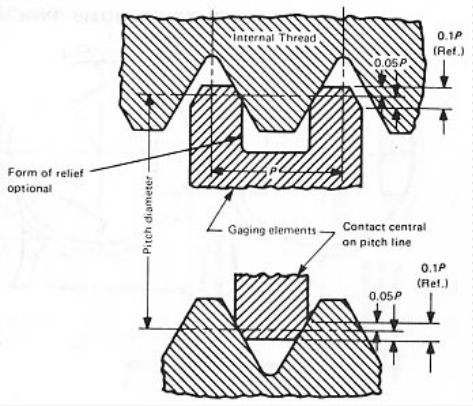
Setting Internal Thread Segment Gage for Measuring Maximum Material

Set gage to the ring's certified pitch diameter size.

Internal Thread Segment Gage for Measuring Maximum Material (Functional Pitch Diameter)

- Close segments and place part on segments.
- Release segments and rotate part slightly and observe the reading.
- Rotate the part two to three more times until the part has been rotated 360 degrees.
- Record the smallest reading observed.

Internal Thread Segment Gage for Measuring Minimum Material (Pitch Diameter)



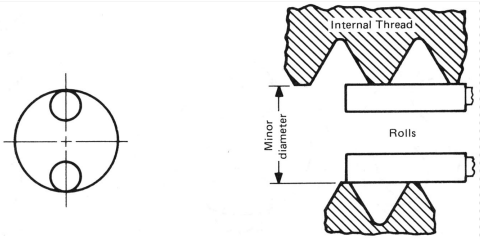
Setting Internal Thread Segment Gage for Measuring Minimum Material

Set gage to the ring's certified pitch diameter size.

Internal Thread Segment Gage for Measuring Minimum Material (Pitch Diameter)

- Close segments and place part on segments.
- Release segments and rotate part slightly and observe the reading.
- Rotate the part two to three more times until the part has been rotated 360 degrees.
- Record the largest reading observed.

Internal Thread Segment Gage for Measuring Minor Diameter



Setting Internal Thread Segment Gage for Measuring Minor Diameter

Set gage to the ring's certified minor diameter size.

Internal Thread Segment Gage for Measuring Minor Diameter

- Close segments and place part on segments with face of part in contact with face of segments.
- Release segments and rotate part slightly and observe the reading.
- Rotate the part two to three more times until the part has been rotated 360 degrees.
- Record the largest reading observed provided the smallest reading is not below the lower size limit.

Process Control for Internal Threads

- All thread characteristic **MUST BE IN CONFORMANCE** before the threading process is put into full production.
- Once production has started the manufacturer must decide which characteristics to monitor, how many samples to measure, and at what frequency.
- At a minimum the **maximum material size** should be measured periodically. A single observation per part in one orientation is adequate. The results must be recorded on a control chart to determine if the process remains **"in-control".**

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