

A GUIDE TO FASTENER QUALITY

Fastener quality is often overlooked, despite the critical role they play in the assembly of a product.

If a fastener is not made to the required specification, it can lead to a delay in the manufacturing process and subsequently, negative cost implications. If the problem isn't spotted, then it can lead to quality issues or product failure.

What are the common problems and how can we detect them?

Measurements

The fastener doesn't match the drawing, the dimensions, head or length is incorrect



Vernier

A vernier can easily pick up many of these issues



Micrometer

If you need a finer measurement, use a micrometer

It is not easy to tell right from wrong, it may look the same to the human eye



Shadowgraph

A shadowgraph provides point to point measurements and allows for an expanded view in very fine detail



Thread gauges

Thread gauges can measure the screw thread to check it is correct

These two pieces of equipment can detect 90% of faults

Finishing

- If the finishing is incorrect, parts can go rusty
- Finishes can be verified for thickness using a plating thickness gauge

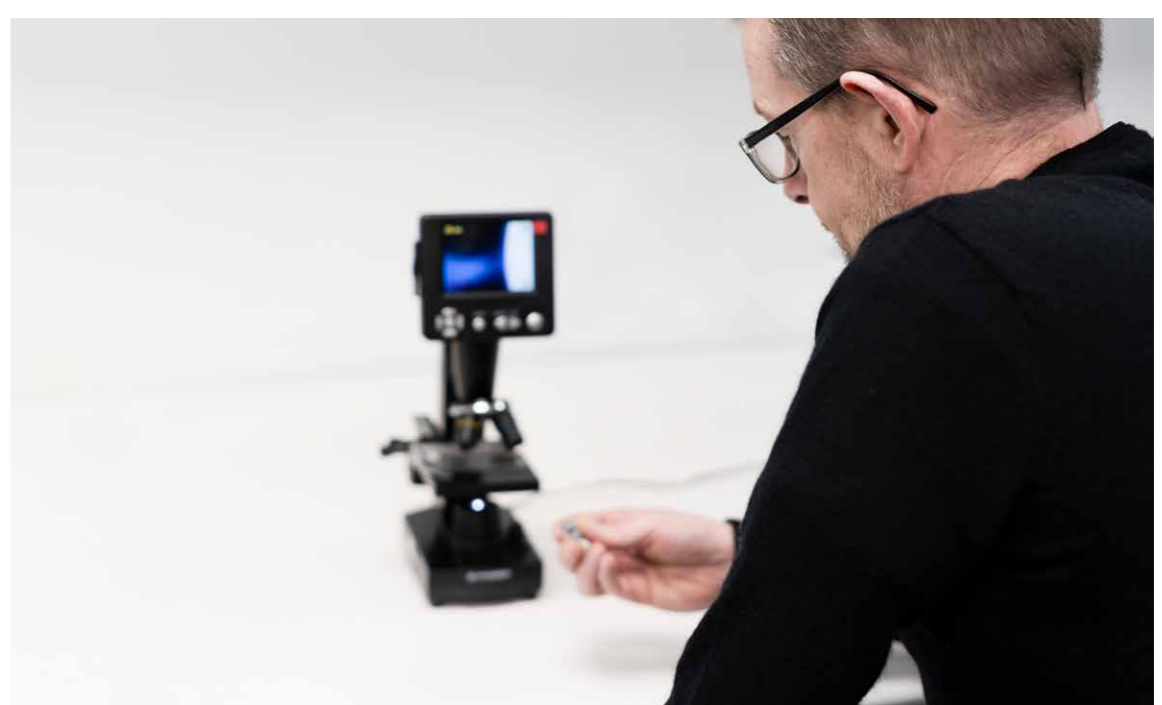


Material

- A PMI tester checks whether the fastener is the correct material
- Essential in the petrochemical industry

Hardness

- If a fastener is too hard it becomes brittle
 - If too soft it becomes ductile
- An ultrasonic hardness tester will verify hardness and allows for non-destructive testing



Surface Inconsistencies

- Electronic microscope allows visibility of surface inconsistencies