Quantitive Quality Indicators (QQI™)

Use to verify your MPI procedures

Quantitive Quality Indicators (QQIs) are artificially-flawed, low-carbon steel specimens that you can use in magnetic particle inspection to verify your MPI procedures. They provide a quantitative method of establishing the correct field direction and strength that are needed to produce clear indications of flaws.

BENEFITS/FEATURES

- Improved inspection reliability
- Increased productivity through reducing the number of magnetising 'shots' that are needed.
- A simple procedure set-up, particularly for multi-directional applications
- Quantitative assessment: results can be compared with other parameters, such as Hall Effect Gaussmeter readings, to facilitate better process control.
- Assured field balance for multi-directional MPI.
- Effective assessment on any part, regardless of its shape.
- Reusable if carefully applied and removed. Alternatively, they can be permanently mounted.
- Helps prevent over-magnetisation.

SPECIFICATION COMPLIANCE

- AISI 1005
- AS5371.
- ASTM E1444
- ASTM E3024
- ASME Boiler & Pressure Vessel Code, Section V, Article 7-764.1.2.

PRODUCT PROPERTIES

Material	AISI 1005 steel
Dimensions	19 x 19 mm
Thickness	50 µm
Flaw tolerance	± 0.5 µm

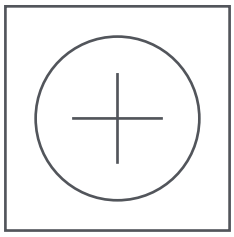
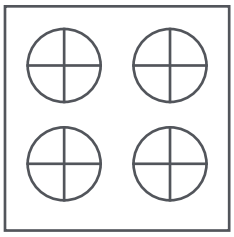
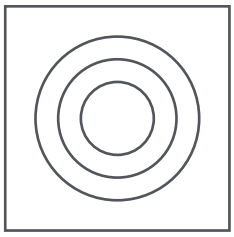
INSTRUCTIONS FOR USE

First, make sure that the test surface and the QQI shim are clean and dry.

Place the QQI shim flaw-side-down onto the test surface and secure it in place. The KSC-230 and KCST-234 shims are self-adhesive; KSC-4-230 can be secured with a cyano-acrylate superglue or clear pressure-sensitive tape (we recommend Scotch brand 191, 471 or 600 series). Make sure there are no air gaps between the shim and the test surface.

Take gaussmeter readings for both circular and horizontal fields at the point where the QQI is attached. Once you have recorded those readings, a daily meter reading will provide sufficient verification control.

Quantitive Quality Indicators (QQI™)

	KSC-230 / CX-230	KSC-4-230 / CX4-230	KSCT-234 / 3C2-234
Diagram			
Description	The standard QQI shim. Its circular and crossed bar flaw configuration is suitable for longitudinal and circular fields. The circular flaw is especially useful in balancing multi-directional fields.	A miniature QQI shim, like four KSC-230s in one, designed for small areas on a test part. It has four circular flaws with a cross in the centre.	For more quantitative work, this QQI shim has three evenly spaced concentric circular flaws of varying depth.
Flaw depth	15 µm, amounting to 30% of shim thickness	15 µm, amounting to 30% of shim thickness	10 µm = 20% of shim thickness 15 µm = 30% of shim thickness 20 µm= 40% of shim thickness
Circle diameter	12.88 mm	6.48 mm	12.88 mm 9.73 mm 6.55 mm
Bar length	6.35 mm	5.97 mm	N/A
Self-adhesive	Yes	No	Yes

PART NUMBERS

Our QQIs are sold in sets of 5.

KSC-230	625551
KSC-4-230	625552
KSCT-234	625554