

PERFORMANCE INDICATORS *pi* SERIES

M (pi) : Performance indicators for Magnetic Particle Inspection

ALLUMINIUM QUENCH BLOCK *pi* 31

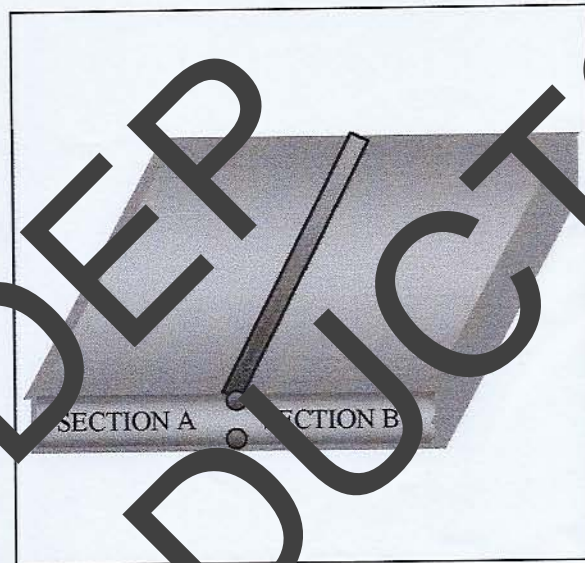
For consistency and reproducibility of test results from penetrant inspection, artificially produced defects are used which can rate and compare overall system effectively.

Automag *pi* 31, is a general purpose block with artificial cracks. This is made up of duralium and as per IS 12889/1989 and ASME Sec V Article 6-T-653.2. The duralium, and aluminium alloy is of 2024 type and as specified by ASTM-B 209 and federal specification QQ-A-250 and revised specification of QQ-A-355c. The standard dimension of block is 12mm X 50mm X 75mm. A groove of 1.6 mm deep and 2 mm wide is machined across the centre of each face making two halves marked as section A & section B. This is to permit side by side comparison without cross contamination between two different penetrants.

TEST PROCEDURE

Follow the procedure which is as given below specified by IS 3558

1. Clean the surface of the block to make it free from dirt, lint, grease or any other material that could obscure surface openings.
2. Dry the block completely.
3. Apply penetrant and allow it to remain on the block for minimum 10 min.
4. Remove the excess penetrant.



- b. Apply developer, preferably by spraying to give an even coat.
- Compare section A & B for the following
- a) Completeness of crack pattern.
 - b) Sharpness of crack definition.
 - c) Brilliance.
 - d) General visibility.

IMPORTANT

- Block used for visible penetrant should not be used for fluorescent penetrant checking.
- Black light intensity for fluorescent penetrant should be minimum $800\mu\text{w}/\text{cm}^2$ as specified by ASME Sec V.
- Clean the block by soaking it overnight in the Acetone, dry it completely and allow it to remain at the room temperature for some period. Heat the block moderately and cool it to room temperature.