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## **Technical Bulletin 316**

### **Reference Block Type 1 (MTU-3)**

The Reference Block is a permanently magnetized steel disc containing coarse and fine cracks that have been induced onto the surface through a special treatment. The surface is then ground and coated. The disc is used to test the performance of the magnetic particle materials and lighting environment being used and to check the sensitivity of the materials on a daily basis for material degradation and/or bath contamination. A reference photograph accompanies the Reference Block so the existing bath can be compared to indications from an optimum system.

#### **Directions for Use**

Apply the magnetic particle solution to the Reference Block surface in a horizontal position, allowing five seconds to develop. Then place the Reference Block on an absorbent cloth, in an upright position, to allow excess fluorescent media to drain off. Visually evaluate the crack indications utilizing appropriate lighting conditions.

Note: To get accurate crack indications, the disc must be free of dirt, oil, grease and magnetic particles from former tests. Therefore, the disc should be cleaned after each use. The disc should never be demagnetized, exposed to strong magnetic fields or magnetic holding plates, as these may influence the residual field of the disc by altering the field strength and direction. The disc can be remagnetized using a central conductor through the central bore hole with direct current at 1000 Amperes.

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