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TECHNICAL BULLETIN #201

MI-GLOW UNDERWATER #1

MI-GLOW UW #1 is a red magnetic powder used for visible and fluorescent magnetic particle inspection. This product is a premix of dual-light particles and WETTING AGENT for use in an underwater system. MI-GLOW UW #1 is designed to be used for a variety of underwater inspections, including offshore structural welds, pipeline inspection, and ship husbandry. It is a versatile particle with a broad particle size range and the ability to be used in both black light and natural light systems.

PROPERTIES

Particle Color: Fluorescent red under black light and visible pink-red under white light

Specific Gravity: 0.9 g/ml

Particle Size: Not less than 98% passage through US Standard No. 100 (150 μm) sieve. Based on Mass Distribution, typical median diameter is 8.4 μm . Based on Number Distribution, typical median diameter is 1.2 μm .

Sensitivity: MI-GLOW UW #1 offers a wide range of sensitivity through its broad range of particle sizes -- 1 μm to 100 μm . This sensitivity provides a high probability of detection for fine non-visual discontinuities as well as enhancement of larger discontinuities.

Preparation:

It is suggested that MI-GLOW UW #1 be added at a concentration of 2 oz. av. per one gallon (15 grams/liter) of water. The preparation may vary due to customer practice and specific application. The storage reservoir should have mechanical or air agitation to help keep the particles in suspension.

It is recommended that adequate particle concentration for the specific application be checked by use of a magnetic field indicator or by observation of the particles applied to a magnetization device (i.e. electromagnet yoke leg).

When these particles are used in a salt water environment, a fresh batch solution should be made daily to prevent corrosion of the particles.

May 1998