

Directions for Use

DIFFU-THERM[®] Magnetic-Particle- Method for non-destructive testing **BLACK**

BLACK Magnetic-Particle - Suspension

MPS - S

The test medium are type approved and accepted as per DIN EN ISO 9934 (DIN 54 132) It shows a good detection sensitivity for material separations and forms a good contrast to the white Background colour **DPM**.

The products are free of chlor, fluor and sulphur to ASTM - Code Section V

Scope

The Magnetic-Particle-Inspection is capable of locating material separations on the surface of ferromagnetic components.

The **DIFFU-THERM MPS - S** can be used for the Magnetic-Particle-Inspection under day-light.

Sequence of operations

1. Pre-cleaning
2. Spray on the background-colour DPM
3. Magnetization
4. Application of the testing-material
5. Inspection
6. Cleaning

1. Pre-cleaning

Before testing the surface must be cleaned from all residues. Rust and dust can cause wrong interpretation of defects, therefore they must be removed. Grease and oil films obstruct the moving of the magnetic particles and must also be removed. Therefore it is necessary to wipe off the surface. Varnish and galvanic coatings are normally tolerable up to a coating-thickness of 40 µm.

2. Spay on the background-colour DPM

For the improvement of the contrast - lighten the surface - DIFFU-THERM - **DPM** background-colour white can be used. The background-colour **DPM** shall be uniformly applied to the test surface.

3. Magnetization of the surface

After drying of the background-colour **DPM** the magnetization of the test surface occurs par example with a yoke-magnet. Under no circumstances coatings of varnish or phosphate on the contact areas are allowed, on the contrary, they must be metallic shiny.

4. Application

The testing-object must be rinsed during the magnetization. Before the end of the magnetization the rinsing must be stopped. The time for sequent magnetization after application should be minimum 3 - 5 seconds. Before application the container must be shake. The testing temperature of the material can amount to 50° C.

5. Inspection

The inspection of the surfaces occurs under day-light. By the magnetic-particle-inspection the indications are mostly like a line (straight or in cracks). From the indication it is only possible to suggest to the length of the separation of the material.

6. Cleaning

The testing-oil evaporates after 1 - 2 hours. If necessary, the background-colour **DPM** can be removed with the cleaner **BRE**.

Security

Please ensure for a good ventilation.