Magnetic Particle Testing
acc. to EN ISO 9934-1

Black/White Testing

MR® CHEMIE
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Process description
Magnetic Particle Testing acc. to EN ISO 9934-1
Black/White process

1. Step:
Precleaning with MR® Remover

The workpieces resp. the areas of the workpieces which are to be examined must be cleaned thoroughly: rust, scales and other contaminations must be removed with suitable tools, other contaminants (oils, greases, etc.) must be removed from the surface with MR® Remover. Before taking the next step please make sure that the surface is completely dry.

2. Step:
Application of MR® White contrast paint

Now MR® White contrast paint may be applied to the prepared workpiece. The white paint shall enhance the contrast between the detection media and the test surface. Spray a thin film MR® White contrast paint (layer thickness max. 40 µm) on the surface and allow to dry for a few seconds. If the paint film is too thick it will reduce sensitivity, and discontinuities may not be detected.

3. Step:
Application MR® Magnetic powder fluid spray or suspension, black

Apply the detection media MR® Magnetic powder fluid spray or suspension black immediately prior to and during magnetization on the white coated workpiece. The application shall cease before magnetiziation is terminated. Allow sufficient time for indications to develop before moving the workpiece. Discontinuities will appear as black magnetic particle indications on the white surface.
Magnetization may be achieved by an MR® Hand yoke. Please ask for our equipment list!

Fig. right: Indications on a welding seam, tested according to EN ISO 9934

4. Step:
Cleaning the workpiece after testing

After testing and acceptance, if required, remove detecting media from the surface. For MR® detection media you can use e.g. MR® 71 Remover. The white contast paint and the magnetic powder suspension loosen immediately and flow off the surface with the remover. If necessary, repeat the step.