

Description, application, and handling of the FLUXA[®]-test block (Article no. 9803.001)

Use: The FLUXA[®]-test block 9803.001 is used for checking and supervision of the indication sensitivity of fluorescent magnetic particle crack detection agents. It contains a permanent magnet and an artificial crack, which is indicated with different lengths depending on the indication sensitivity of the magnetic particle crack detection agent in use. By comparison of the indication lengths of different mixtures or charges with the same FLUXA[®]-test block, the indication sensitivity can be checked. Also, by periodical supervision of the indication length, the slow use-caused reduction of the indicating sensitivity can be controlled.

Description: The FLUXA[®]-test block consists of two precisely ground steel blocks which form an artificial crack at their contact areas. On one front side, a permanent magnet is arranged under a brass cover. This magnet causes a magnetic stray flux across the artificial crack, which decreases more and more with increasing distance from the magnet. Thus, a deterioration of indication sensitivity can be determined by a reduction of the indication length.

Application: The FLUXA[®]-test block is, for a few seconds, immersed into or carefully sprayed with the well-mixed inspection medium. Redundant inspection medium should be dropped off. After this, the artificial crack is to be inspected under UV light (inspection conditions according to EN ISO 3059 should be ensured) and its length to be read from the engraved mm scale and recorded.

Important notes for application:

- The FLUXA[®]-test block must be used for comparative measurements only.
- The indication lengths read from a test block should not be used as absolute values, but only relative to the initial performance of the detection agent under use.
- Different test blocks may cause different lengths of indication. The indication lengths read from the test block are, therefore, valid for the used test block only (to be identified by the serial number) and are not transferable to other test blocks.
- Ensure that the crack lengths indicated on the FLUXA[®]-test block are always determined under the same inspection conditions (UV lamp, distance, amount of daylight, etc.).

Different crack detection agents and inspection media of different manufacturers may give different results and should, therefore, not be compared with the FLUXA[®]-test block.

Handling, cleaning and maintenance: The crack indication of the FLUXA[®]-test block may be affected by con-

tamination, strong magnetic fields, or mechanical influences. Please, observe the following hints to ensure reliable results:

- To give correct indication, the test block should be free of dirt, oil, grease, and fluorescent particles from former applications. Therefore, the test block should be cleaned after each application and its surface be checked under UV-irradiation. Furthermore, it is recommended to clean the testblock from time to time thoroughly in an ultrasonic cleansing bath.
- A strong external magnetic field can badly influence the test block. This can be seen as a constant or interrupted line becoming visible at the right side again. In this case, we recommend to send the test block back to us for checking and proper demagnetization treatment. Normally, after a proper demagnetization, a full reuse can be obtained again.

- By a mechanical impact (e.g. falling down), the precisely ground areas can be shifted against each other. Also in this case, a continuous or interrupted or a re-appearing indication at the right side may be seen, in most cases together with a reduction of the indication sensitivity. In case of a mechanical damage, a repair, unfortunately, will not be possible. We therefore recommend a careful handling of the test blocks. Please avoid any engraving or marking punch. Furthermore, the FLUXA[®]-test blocks should not be clamped in a vice nor demounted.

The surface of the FLUXA[®]-test block is burnished to reach maximum possible contrast of indication. Therefore, any damage of the surface (e.g. with abrasive paper, steel wool, or glass brush etc.) should strictly be avoided.

Hints for the control of test equipment:

Before delivery, the indication sensitivity of each FLUXA[®]-test block is checked and documented in our company. For this, two identical photos of the crack indication obtained by use of FLUXA[®]-concentrate HRS, art.

no. 9306 (dilution 1:20 in water) are taken under defined and always same inspection conditions. One of them is added to the final test certificate which is delivered together with each test block. The second photo remains in our company; upon request, we can repeat the check under exactly same conditions as a repeated check of testing equipment for you. Indicated length and quality, in this case are compared with the initial values and recommendations are given with regard to the further use.

