WIAP® MEMV®

Metall entspannen mit Vibration

REPORT WM MEASURE VOLTAGES 886

Stress Vision Method

1 INDICATOR OF MECHANICAL STRESSES "STRESS VISION"

Indicator of mechanical stresses "STRESS VISION" is for scanning, evaluating, and visualizing mechanical fields (residual, technological) designed voltages of ferritic alloys.

Capabilities "STRESS VISION":

• processing received indications and development of 2D and 3D maps, the principle of principles Mechanical stresses (DPMS), Concentration Mechanical stress-factor (CMS) and gradient of DPMS in the "sum of the layers," "thin 0 to 3 mm" , "thickness of layer 0 to 6 mm" to a depth of 12-15 mm;

• processing of indications and construction diagrams of DPMS, gradient and concentration of DPMS in the profiled cross-section of the object;

• Long-term non-volatile memory;

• Software data management administration for storing DSMS;

• the device housing, protection class IP54 from external influences;

• Optionally, housing IP64 protection class for extreme conditions and waterproof

Performance of STRESSVISION® indicator according to the principle of the measurement of electro-motive Forces (EMF), excited in measurement sensors of the sensor by the magnetic field initiated by exciting coil in the electromagnetic field of the examined object. The signal of the sensor unit received is proportional to the difference of the major mechanical stresses (DPMS) to the installation area of the sensor on the surface of the monitoring object, and in the direction indicated.

The measurement of metal by special electromagnetic fields enables a high reproducibility of indications and collects information about the stress state in layers. The measurements provide information that

is sufficient to quantify the coefficients of the concentration of mechanical stresses CMS, the evaluation of the level of the difference of the major mechanical stresses DPMS in "direction", the gradient of DPMS and the determination of conditions for the development of the fault in investigated area of the object under test,

The process of data collection

• on the surface of the examined site of the product (control zone) is placed a rectangular coordinate grid. The minimum size of the grid is 5 x 5 (row * column).

• pitch depending on the specific question to be deleted from 5 mm in the examination of a particular point CMS up to 25 cm in the analysis of stress-strain structures.

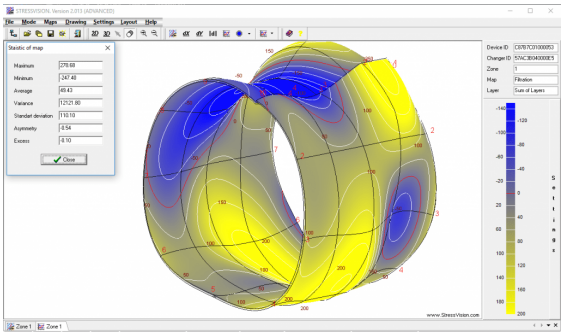
• The probe (sensor) is consistently in the nodes (intersections) placed a grating region, with its constant orientation relative to the axes of the products with the pointer (main marker) is retained at the side edge of the probe.

• performing a point-by-point measurement aka as "manual scan"

• The received results (the measurement block) are prepared and stored in non-volatile memory in the processor device.

• After scanning is complete accumulated results are transmitted to a laptop or computer, where they are stored and displayed for final processing, evaluation, and as cartograms DPMS, CMS, etc..

• Beware of the Edge effect while scanning.



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End report WM 886, measure voltages
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