

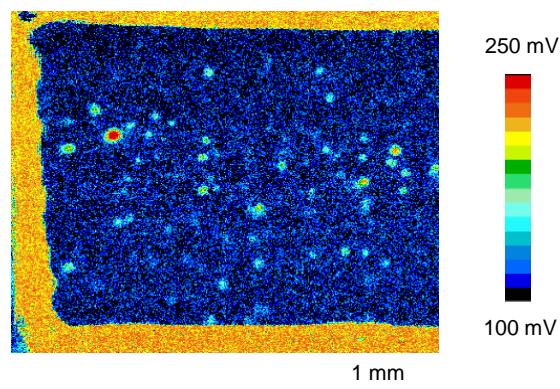
Ultrasonic Localization of Flaws in Base Materials

Procedure

The use of focussing ultrasonic probes allows the localization of material separations. The lateral extension is evident in C-scans. Furthermore, depth information can be extracted from A-, B- or D-scans.

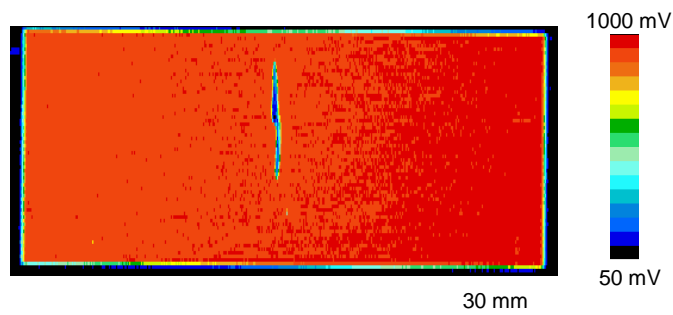
Example: Pores in Ceramik (Zirkonium Oxide)

- Frequency = 50 MHz, immersion technique
- Evaluation: C-scan



Example: Vertical Crack in Steel

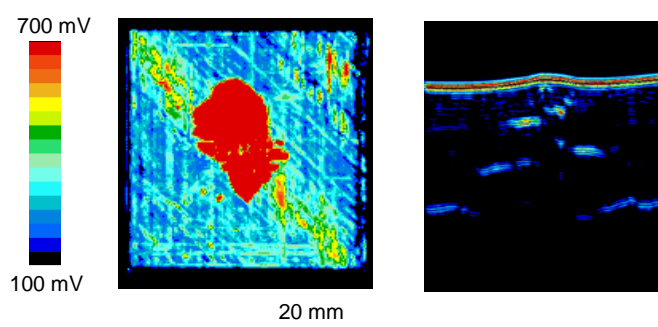
- Frequency = 20 MHz, immersion technique
- Evaluation: C-scan of the backwall echo



- Thickness of plate: 10 mm
- Depth of crack: approx. 6 mm
- Amplitude reduction due to mode conversion to transverse waves

Example: Delamination in Carbon Fiber Reinforced Polymer

- Frequency = 10 MHz, immersion technique
- Evaluation: C- und B-scan



- Thickness of plate: 3 mm
- Impact energy: 2 J