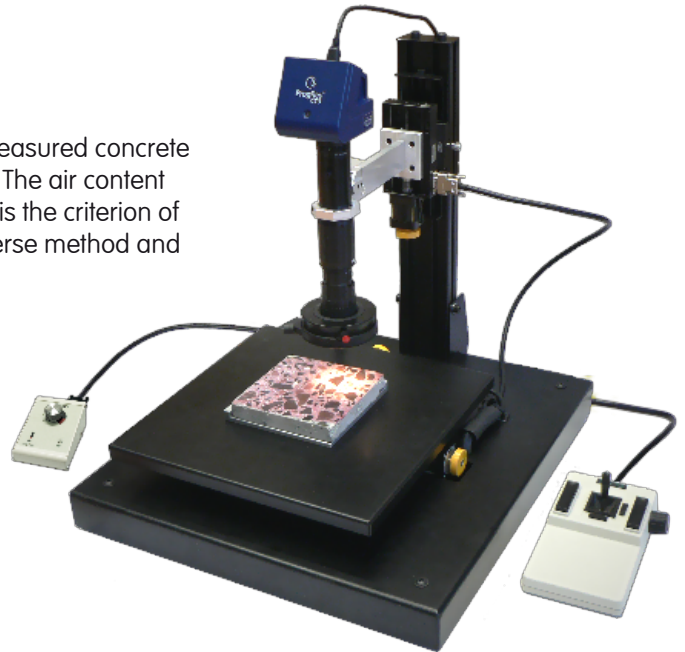


METHOD

The method strictly follows the European norm EN 480-11:2006 E. The measured concrete samples must be colored and carefully prepared for the measurement. The air content in micropores is measured by a traverse method. The micro air content is the criterion of concrete quality. The Concrete system brings full automation to the traverse method and thus speed up significantly the whole measurement.

HARDWARE AND SOFTWARE

Macrooptics stand or microscope, fast 3.3 MPix firewire camera, 3-axis motorized scanning stage with joystick, ringlight with controller, Concrete software.

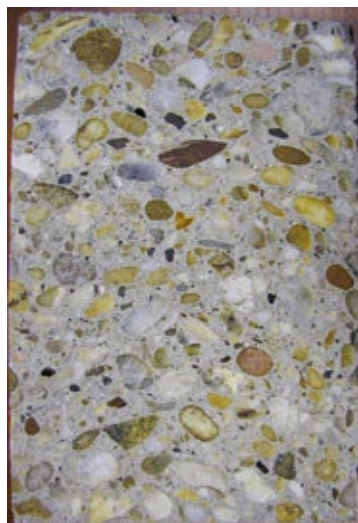


MEASUREMENT PROCEDURE

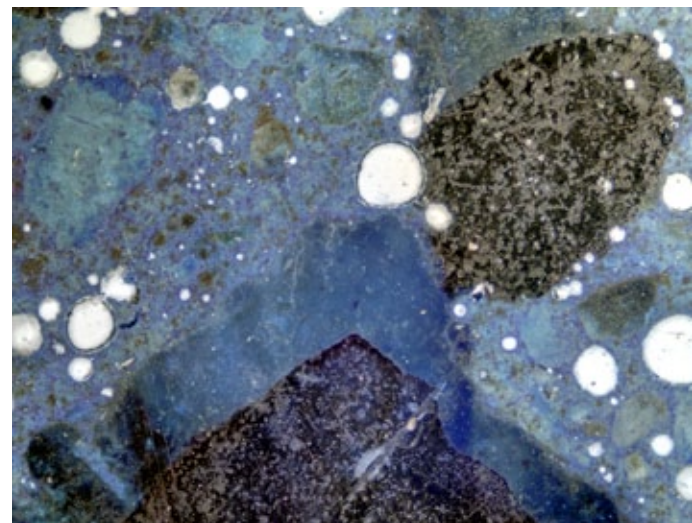
1. First the sample is adjusted and a measurement method is selected. The user is prompted to control the pores detection.
2. Then the measurement starts. System automatically changes the stage position and performs focusing. Pores are detected and analyzed during the measurement. Measurement can be fully automatic or semi-automatic. In semi-automatic mode the operator has to confirm the pores detection for every field and is enabled to manually edit the pores boundaries.
3. The measurement is ended with a MS Word and MS Excel reports. Reports are generated according to the norm EN 480-11.

QUANTITIES MEASURED BY THE CONCRETE MODULE

- The Pores distribution to classes, histogram
- Total number of chords measured
- Specific surface of the air
- Total traverse length
- Total air content
- Spacing factor
- Paste:air ratio



Concrete Sample



Concrete sample image captured via HDR