

ConTec has introduced a new coaxial cylinder measuring system for the BML-Viscometer that requires only 3 litres of sample mix for testing.



The M-170 measuring system is designed for testing of mortar and cement paste but works equally well with grout and cement based repair materials. Compared to the standard M-200 measuring system for mortar, that requires in excess of 12 litres of sample mix, the new M-170 measuring system now will make the test procedure more economical and less time consuming.

The M-170 measuring system is based on the same design principal as the standard M-200 coaxial cylinder measuring system. Constructed

as a two-part inner cylinder unit, a outer cylinder (the sample mix container) and a fixed length top ring. The two part inner cylinder, with the bottom part fixed, eliminates the effect of three dimensional shearing that normally occurs in other viscometer instruments at the bottom of the inner cylinder. The top-ring serves the purpose to minimise the additional shearing, caused by surface tension at the top of the inner cylinder and insure constant effective height of the inner cylinder. Consequently, error due to the bottom effect and top effect is virtually eliminated from the measuring system by this particular arrangement

The M-170 measuring system can test materials with yield value from approximately 1 Pa to 1.3 kPa. Mixes above 1 kPa are too stiff to measure (if the viscosity is low, <30 Pa·s). The

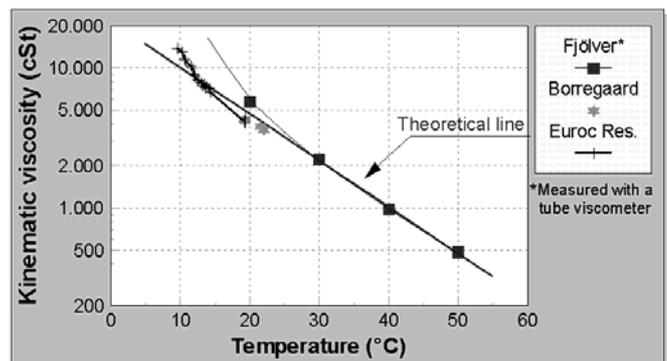
Now only a 3 litres sample size is required when measuring mortar and cement paste mixes with the new M-170 measuring system.

apparent or plastic viscosity can range from 0.2 to 200 Pa·s. Dry mortar mixes that do not have tendency of liquid behaviour are not suitable for the M-170 measuring system.

M-140 measuring system (~1.5 litre sample) for cement paste and in particular mortar containing EN 196 sand, will also be available

Astounding accuracy observed when measuring commercial gear-oil with the BML-Viscometer

In 1993 a test program was initiated at CBI in Sweden to verify the accuracy and reproducibility of the BML-Viscometer. The test material selected by CBI was CylWay 1500 a commercial gear-oil. The results from these initial tests demonstrate an astounding accuracy on the kinematics viscosity measurements made by the BML-Viscometer. As a result, further testing has been done at IBRI in Iceland, but with a different type of oil, the CylEsso 1000 gear-oil. These tests substantiate the results found at CBI. It is important to note that the instrument is operated during these tests within 0,2% - 0,8% of its maximum capacity. The BML-Viscometer was after all designed to measure the rheological properties of concrete but not oil. The relevance of these tests for the BML-Viscometer is that now ConTec verifies the correctness of the instrument calibration, by carrying out reference tests with CylEsso 1000 gear-oil at room temperature before shipping each instrument to customers.



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