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Zwick's *testXpert*[®] II software is a big step forward in eliminating traditional errors in Vicat and HDT testing

The plastics department of the Materials Testing Institute (MPA) in Darmstadt carries out tests on plastics and elastomers according to National and International Standards. Its business activities comprise durability analysis on plastic components including long-term internal pressure loading, long term behavior on electric insulating materials and the mechanic degradation on composites under static and cyclic loading.

An important activity is the determination of **thermal properties** (Vicat or HDT tests) according to ISO 306, EN 727 or ISO 75. During these tests, a plastic specimen in a silicone oil bath is mechanically loaded and then heated using a constant temperature gradient. At a specific deformation of the specimen the instantaneous temperature is recorded as the "Vicat softening temperature" or the "Heat deflection temperature".

Dependant on the different test methods, it is necessary for Vicat or HDT testers to be configured in a very versatile way:

- for pre-conditioning with or without mechanical loading
- for the degree of mechanical loading during the test
- for the loading time in the non-heated bath
- for the temperature gradient

All these procedures require a well structured and unambiguous system to guide the operator – particularly if a Vicat/HDT-tester consists of several individual test stations. Even inexperienced operators will not have difficulty in using the instrument and the process capability can be maintained.



Fig. 1: HDT/Vicat-tester comprising 6 test stations

Zwick's market leading software *testXpert*[®] II helps operators to meet these requirements by using a powerful wizard which steps through the instrument's parameters. As a result, no settings can be forgotten or be input in an inconsistent way.

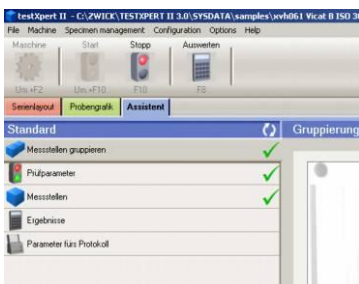


Fig. 2: *testXpert*[®] II -wizard: completed actions are ticked off

Parameter setting for each test station is done individually which allows the instrument to perform tests to different Standards at the same time.

The MPA performs damage analysis and as these tests differ one from another so the easy-to-use *testXpert*[®] II report editor allows the customization of each report. This makes sure that the reports are clear and easy to understand, whilst minimizing the risk of errors due to misinterpretation of data.



Fig 3: The *testXpert*[®] II report editor generates customized test reports

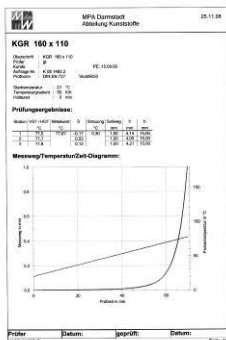


Fig 4: Customized test report

Laboratory Assistant, Cornelia Grant explains about her experience with *testXpert*[®] II: “*testXpert*[®] II software offers operators logic and clear guidance through its wizard. Even students who have no knowledge about materials testing quickly become familiar with our HDT/Vicat tester. Using the test report editor we are able to comply with different test conditions in a fast and flexible way.”

About the Zwick Roell Group

Zwick Roell Group customers benefit from more than 150 years of experience in the manufacturing of high quality testing systems. Zwick is the global leader in static testing and is experiencing significant growth with its dynamic test systems. A financially strong and family run business, its innovative product developments, diverse product range, and global support provide tailored solutions targeted specifically at the needs of both Research and Development and Quality Assurance customers. Serving more than 20 industry sectors with 960 employees, via manufacturing facilities in Germany, regional headquarters in Atlanta, Georgia, USA and Singapore, as well as offices in 56 countries worldwide, the brand name Zwick is a guarantee of the highest quality and support. For more information see: www.zwick.com

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