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# Investing in the future – PRÜFTECHNIK opens its new high-tech measurement lab

The planning and construction of a new high-tech test laboratory began in parallel to the renovation and development works on the new PRÜFTECHNIK building back in July 2007. With this new lab, PRÜFTECHNIK ensures that high quality requirements are met, its technological prominence strengthened and at the

same time surging ahead in other measurement technology areas.

The requirements for the measurement and test lab are stringent to the extent that the new optical tabletops have been mounted on a vibration and shock free foundation isolated from the building ensuring that any environmental swaying

is not transmitted to the tabletop.

The following photos are presented in chronological order and show the progress of the construction works, bearing in mind that normal production operation for our measurement systems and sensor proceeded unabated.



*Despite the heavy excavation works, normal production operation continued unabated*



*For a virtually vibration-free working surface, the concrete walls were mechanically separated from the building's foundation slab*



*A special concrete mix with steel fibres that cures slowly to counter the formation of cracks*



*Seismographic measurements formed the basis of the interpretation and calculation of the dampers and the spring isolators*



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### After months of preparation – The long awaited day

With preparation completed, the granite surface plates arrived in February 2008. Getting the surface plates into the lab would be no mean task considering that one of the plates measures 6 m x 2 m and weighs 12 metric tonnes.

Painstaking effort and plenty of time was required to ensure that human injuries or damage to property and in particular, the granite table, were avoided. Well coordinated teamwork, that also involved man and machinery resulted in a smooth flow of events.

In order to operate a top optical laboratory, it is imperative that in addition to stable and precise tabletops, the tight environmental conditions within the measurement and test room must be met.

The installed air conditioning plant regulates the incoming and return air through an elaborate piping system. An accurate equalization of flow ensures that identical environmental conditions exist at every point within the laboratory. The installed air conditioning plant stabilizes the air temperature at  $22^{\circ}\text{C} \pm 0.1^{\circ}\text{C}$ . The humidity being regulated to a stable 40%.

### The final stage

The successful installation of the granite surface plates was to be followed by the mounting of the three-dimensional measurement table. The experience gathered during the installation of the granite surface plates would prove more than useful.

The project – ***New Measurement and Test Lab*** – was completed in August 2008 after one year of construction work coupled with debris, high levels of noise and of course a great deal of commitment from PRÜFTECHNIK employees. PRÜFTECHNIK is extremely proud of this new high-tech lab, whose completion marks a positive step in further



*The delivery of the 12 m<sup>2</sup> 12-tonne granite surface plate was no mean feat*



*Despite modern technology, human power was still required and lots of it too*



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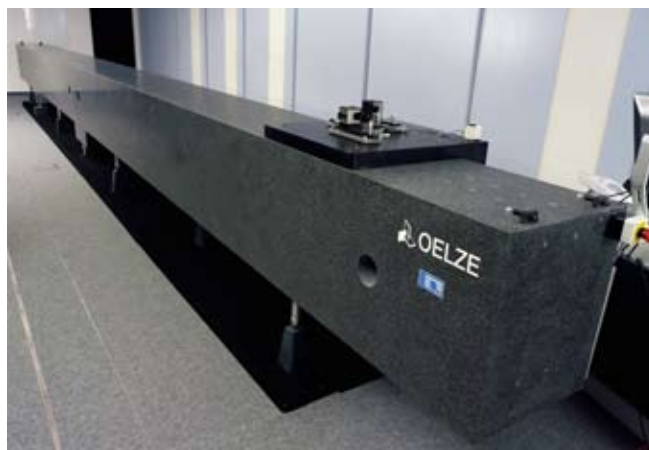
development of the company. Sensors, laser and new systems will be developed in this lab which will further enhance and guarantee the quality of the production units. PRÜFTECHNIK is well equipped to meet market demands on the current products and at the same time, set high standards. Together we can maximize the potential of this new infrastructure at our headquarters in Ismaning near Munich.



*Installing the three-dimensional measurement table in the test laboratory*



*The optical tabletop*



*The measurement bench*



*The three-dimensional measurement table*



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