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Ensuring the optimal water-cement ratio of precast concrete products

Quality control is a critical factor in the manufacture of concrete products for the civil engineering, building and construction and gardening and landscaping industries. Responding to this need for reliable testing, German company Ludwig Moisture Control has developed the FL-Mobi Mic Profi-Check.



This testing device is used to accurately determine the moisture content and temperature of a specific aggregate before batching, during the mixing cycle and after discharge of the mixed concrete. Key to the device's versatility is that it can be used in several places during the mixing-and-batching process.

“The exact percentage of moisture values can be determined rapidly and exactly upon arrival of the raw materials,” says Manfred Ludwig, MD of Ludwig Moisture Control. “Moreover, it delivers valuable and measurable results on the water-to-cement ratio and the media temperature during production of no-slump or plastic concretes in the plant, laboratory or at the construction site.”

The measuring head of the FL-Mobi Mic Profi-Check is manufactured from high-quality stainless steel. It is designed for easy insertion and/or penetration into the aggregate or concrete being measured. The moisture measuring probe, protected by a ceramic coating, is integrated into the measuring head itself.

The measuring head is connected to the evaluation and transmission part of the device by means of a 250-mm-long V2A connecting cable. The robust IP65 die-cast housing protects the measuring head from mechanical wear. An adjustable carry handle attached to the housing facilitates simple insertion and replacement of the measuring unit if need be.

Ludwig explains that the tried-and-tested microwave technology used in the device is based on the 433 MHz frequency. Major design criteria were user-friendliness and compactness. “This makes the FL-Mobi Mic Profi-Check highly suited to emerging contractors who wish to guarantee the quality of their precast products, but who do not yet have the necessary capital to invest in major moisture control systems,” Ludwig adds.

The device forms part of a comprehensive suite of concrete production technology available locally from PMSA, the largest manufacturer of concrete brick, block and paving machinery on the continent.

Celebrating its 40th anniversary this year, the company has accumulated extensive expertise and experience in the concrete products industry in Africa. “We are continually fine-tuning our products in order to be able to offer our customers the best total solution for their specific requirements,” Quintin Booysen, sales and marketing manager at PMSA, concludes.