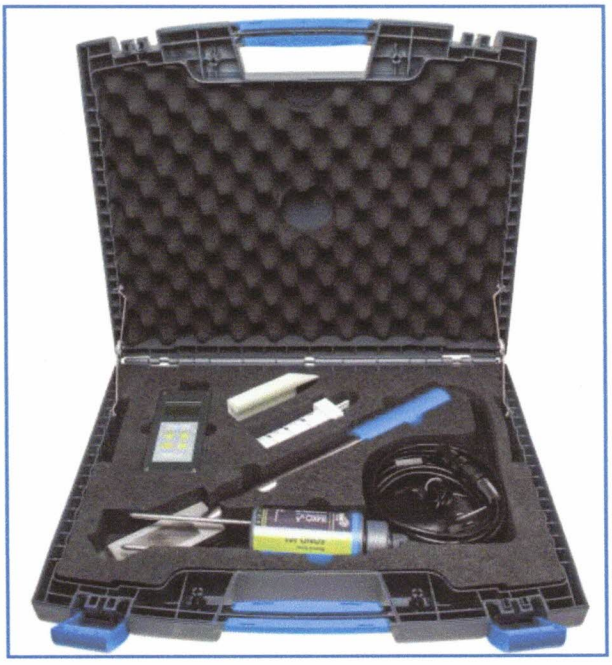
MESA Systems Co.

Portable measurements of the Water Content and W/C Ratio of Fresh Concrete using the SONO-WZ, SONO-DIS

SONO-WZ Probe and SONO-DIS



Robust Padded Carrying Case

Simple to Operate in the Field or Test Lab:

The portable SONO-WZ probe and SONO-DIS set can measurement of the moisture content of fresh concrete easy, fast and highly repeatable. Follow the SONO-DIS menu to enter the raw density, characteristics of the recipe and adjustments for type of concrete, aggregate absorptions and additives. Then using the SONO-WZ probe to take multiple measurements for highly accurate and repeatable moisture measurements yielding a direct display of w/c ratio. Values can be displayed in either Metric or Imperial units.

Measurements based on TRIME® TDR Technology:

The Innovative SONO-WZ probe use TRIME® TDR's Technology where the measuring field penetrates deep into a the fresh concrete, resulting in **highly accurate** and **repeatable** moisture measurement values.

MESA Systems Co. 8 Broad Street, Unit 1, Stonington, CT 06378 USA

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SONO-WZ measures three types of water:

In principle SONO-WZ measures the same water as measured by kiln (oven) drying procedure.

1. SONO-WZ measures the **free or effective water** in the concrete mixture, the water content which is required for the water/cement ratio (the desired result).

2. SONO-WZ measures **a part of the core water** (the capillary water absorbed by the aggregates). This water must not be counted when determining the water/cement ratio!

If the SONO-WZ is to measure the effective (active) water content:

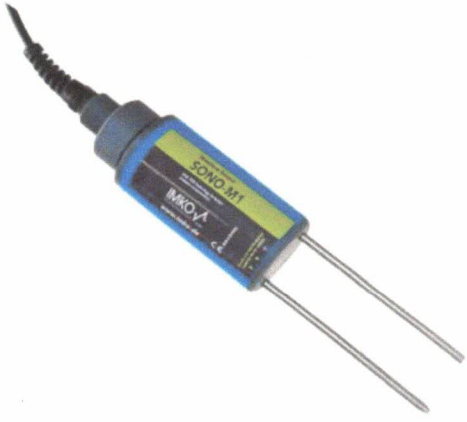
If a rock has e.g., 15 liters/m^3 (33 Lbs./CU. YD.) of core water, then SONO-WZ sees only 1/3 of it. That is, the G-Set must then be entered with the remaining 2/3 as a negative value to measure the effective (active) water content. For example: G-Set = -5 liters/m^3 (-11 Lbs./CU. YD.) if the core water is typically 15 liters/m^3 (33 Lbs./CU. YD.).

If the SONO-WZ is to measure the complete water content (the total kiln drying water content):

In this case, then the G-Set must be entered with a third of the positive value of the core water. Here G-Set = +10 liters (22 Lbs.) if the core water is typically 15 liters/m^3 (33 Lbs./CU. YD.).

3. SONO-WZ measures **Chemical additives** which behave like water are therefore also measured by SONO-WZ, which must be considered.

- With the addition of the portable SONO M1 probe to the SONO-DIS + SONO WZ set, it is possible to measure aggregate moistures. The SONO M1 probe is designed for portable moisture measurements of aggregates up to 32mm (1-1/4 inch).
- The SONO-VARIO series of probes measure moisture of any production aggregate, before the weigh hopper. The SONO-VARIO probes are typically connected to a batch control system.



SONO-M1 Probe

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