

Chemical

Application notes

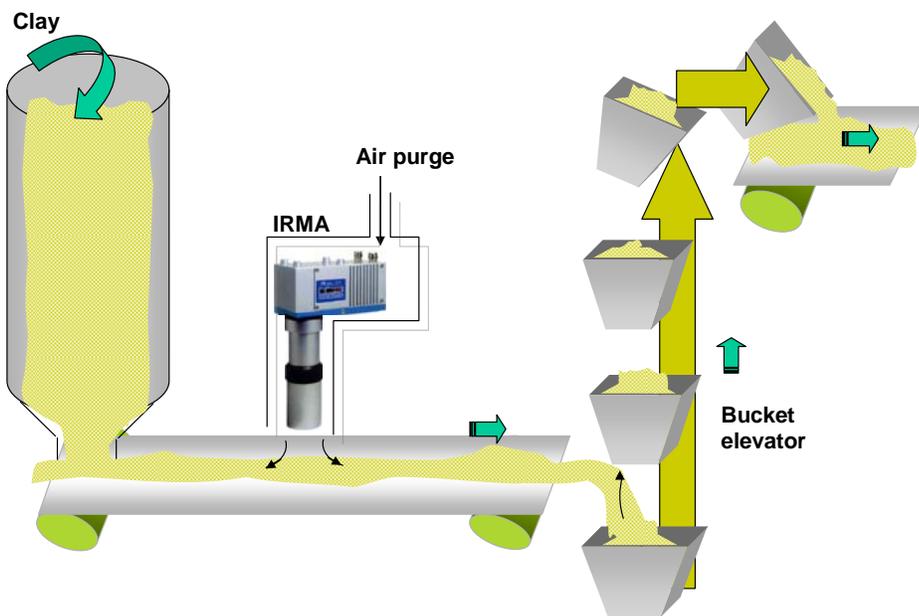
Moisture in cement raw clay

The CHINO IM series is an on-line multi wavelength analyzer utilizing infrared absorption technology to measure percent water in clay. The standard moisture range of the unit is 0.0% to 15.0% with a 0.3% resolution or 0.0% to 30.0% with a 0.8% resolution. Moisture control on cement clay plays an important role in order to determine high quality in its final form.

Controlling moisture may also be necessary to prevent the clay from sticking to conveyers or hopper, eliminating frequent process break and clean up.

Signal processing capabilities are built into the compact designed detector unit for easy installation and operation. A maximum of 99 calibration curves can be stored into the detector memory for numerous measurement applications.

The detector can be used by itself or connected to a PC or DCS plant control system. Both analog (4 to 20mA DC) and digital (RS-485 or LAN Ethernet) outputs are provided. A remote setting display unit, which connects up to 9 detector units, can be used to set various detector functions and also displays measured values.



Products / Location	Parameter	Range
Clay	Moisture	5 to 15%
Clay	Moisture	5 to 30%

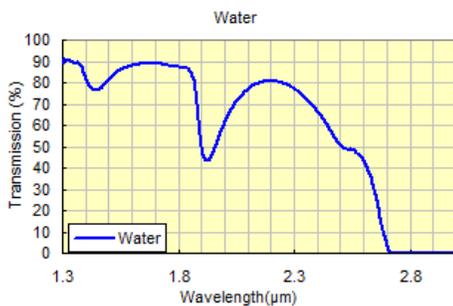
Recommended model / Item

- * General moisture unit
Model : IRMA1100S Qty : 1
- * Air purge hood
Model : IR-WEA Qty : 1
- * Checking plate
Model : IR-WEB Qty : 1

Installation

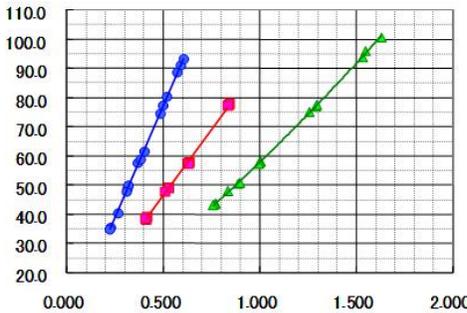
Typical installation is over a conveyer with air purged protection box in order to prevent dust from clogging the measuring light path. In some cases, the level of the product on a conveyer may be not leveled evenly. It is recommended to use a leveling board prior to the measuring point.

Absorption characteristic



Moisture(water) has a unique infrared absorption spectrum regions. Water absorbs at wavelength of 1.43, 1.94, and 3 micrometers.

Calibration curve



Calibration curve is a correlation between moisture determined by customer's reference instrument and IR absorption measured by IRMA.

[Basic sample test for moisture]

1. Prepare samples with various moisture content
 2. Show each sample to IRMA and record absorption level
 3. As conducting step-2, determine moisture level with your reference instrument
 4. Put all data points on a X/Y graph and see if there's a correlation
- Note: Reference instrument may vary depending on the method (by volume or weight).



Mirror type



Fiber type



Liquid cell type



Setting & Display unit



Contact

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