

On-line moisture measurement of clay in brick works



Improving the manufacturing process of bricks by the reliable measurement of moisture of clay travelling on conveyors

Typical accuracy
±0.3% (2σ)

Understanding the problem

For the manufacture of bricks or tiles it is critical to have the clay or cement mix at the correct moisture level. Traditionally this has been achieved by relying on a skilled person who makes a judgment, either with a “thumb” test or by using a basic manual test to help them with this assessment but this is a spot check and not a continuous method. Since the clay is a natural product coming from a quarry recent weather and storage conditions will effect the moisture of the incoming material requiring constant adjustments to the amount of water that is added to the process to ensure the optimum moisture. The benefits to maintaining a precise control of moisture have a big impact on the plant yield by reducing scrap and poor quality product for both extrusion or mould lines.

NDC PrediktIR gauge solution

The gauge uses a non-contact near infra red (NIR) method to continuously measure the clay moisture with total precision to an accuracy of ±0.3% .



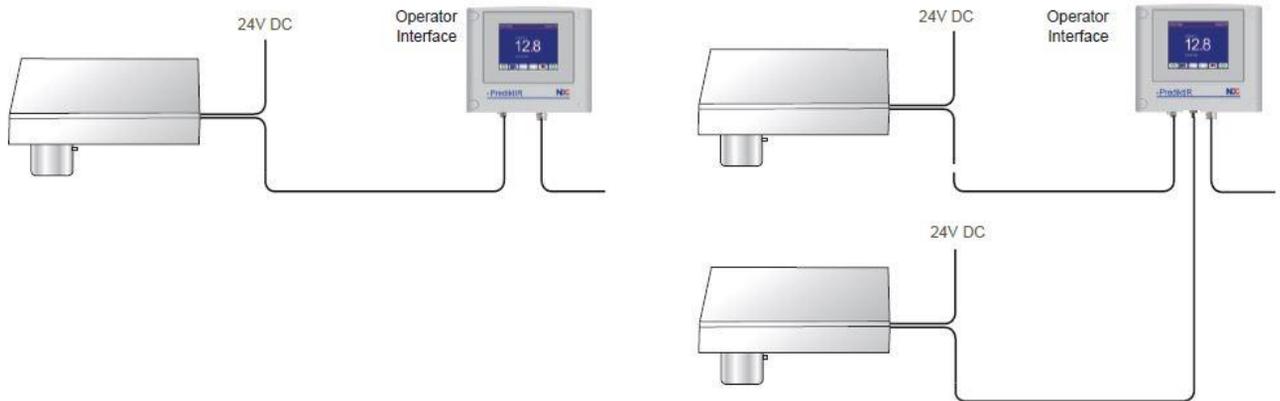
The patented dual detector design ensures a permanent stable calibration which is unaffected by ambient temperature, light and humidity changes that are typical for most brick works. Due to the accuracy and reliable measurement the result can be used as a critical control point for the process. Ultimately the measurement is used as part of an automated control loop to adjust the flow of water that is added to the process. On some lines there is an advantage to measure in two locations on the incoming material before the wet pan and also the outgoing side as a verification.

Typical installation



Installing a PrediktIR gauge

The PrediktIR can easily be retrofitted to any line by mounting the gauge above the conveyor. For particularly dusty installations, the included air purge tube utilized to reduce any manual cleaning of the gauge window. The gauge embraces the latest industry connectivity which means integrating more easily than ever into production control systems using the 4-20mA output or optional Ethernet based protocols or Profibus interface.



About NDC Technologies

NDC Technologies has over 45 years' experience of producing NIR (near infrared) sensing technologies and has become renowned all over the world for their rugged industrial gauges. The patented technology ensures a reliable and permanently calibrated design and is covered by a 5 year warranty. All new gauges will be commissioned on site by an NDC engineer to make sure of optimum setup and provide user training.



Specification PrediktIR

Accuracy (typical):	$\pm 0.3\%$ (2σ)	Outputs
Moisture range (typical)	5...26%	- 4-20mA
Sampling rate:	16 mS	Optional
Operating temp range	0...50	- Modbus TCP
Construction:	Stainless steel	- EtherNetIP
Protection class:	IP65	- Profinet
		- Profibus

Order code: PrediktIR-SG-5YW
PrediktIR-DG-5YW



LIMAB UK LTD
Unit 3L, Westpark 26, Wellington
TA21 9AD, United Kingdom

Official distributor of NDC Technologies moisture gauges

