

Infrared to Measure Moving Product Temperature

Process monitoring of all products is becoming an absolute requirement due to increased demand from quality control and management information systems. Measuring the temperature of moving products has never been easy with conventional temperature devices like Thermocouples and PT100's. Also with the ability of today's modern conveyor systems moving hot and unstable product from one area to another has become easier.

The problems of drag, friction and static generation rule out conventional contact measurement in most cases. Also response time is critical on today's fast moving conveying systems. Slow response units allow large volumes of over spec or dangerous product to flow past the detector before an alarm can be generated.

The Solution, Non Contact Infrared Thermometers.

Infrared technology is not new and it has been utilised successfully in industrial and research applications for decades. New innovations however have reduced cost, increased reliability and resulted in non-contact Infrared sensors offering smaller units suitable for most demanding applications.

The advantages of non-contact temperature measurement are:

- Fast response to temperature changes in the millisecond range.

- Measurement of small spots of hot product can be detected on open conveyors moving at speed.

- Corrosive products are not touched and if you can see it you can measure it.

- I.S. units also available

- You can measure anywhere between -50 and 3000°C by choosing the correct product to fit the application.

- Signal processing like Peak, Valley Hold, Emissivity and Transmissivity adjustment.

- With no contact you can't contaminate the product.

With many different models of infrared units available from the Raytek and Ircon range it is easy to select the correct unit for your application. Your product will determine the temperature range, the distance from the sensor to the product will determine the optical resolution and the product movement speed will set the speed of response of the instrument required.

Other factors like environmental conditions like smoke, dust and adverse weather conditions will determine what other accessories are required like IP rating or air purge collars for the lenses.



On large coal and coke moving conveyors the Raytek TX and MID systems have been used throughout South Africa, and the world.

On smaller packaging plants the size of the Raytek CM range fits the requirements with small units having large processing power.

To chose a system suitable for your plant conditions, give us a call with your application and we will specify what will work for you.

For more information on any of the fixed automation systems or portable infrared and thermal imaging products please contact:

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