SMARTPOUR 2D is a non-contact infrared molten metal temperature monitoring system, which automatically checks the stream temperature as it pours into the mould.
THE SYSTEM COMPRISSES:
A 2 - colour, ratio, infrared sensor with air purge, water cooler, adjustable mounting bracket, protective lens assembly, eyepiece filter and cable.
A Microprocessor based Signal Processor/Indicator unit, in steel cabinet with front door.
1 Interconnection cable, Sensor to Signal Processor.
1 Floppy disc, with download program for clients computer: Windows 95/98/2000/NT.
SMARTPOUR, installed on the moulding line, automatically monitors, stores and displays the pouring temperature into each mould.
In “normal” mode, it alerts the operator and gives a printout if HIGH or LOW Limits of acceptance are exceeded.
High and Low temperature limits are set, manually, at the front panel.
SMARTPOUR may be used to monitor a continuous molten stream, when a representative temperature will be computed, for each 20 seconds segment of time.
The sensor, powered by a dc supply, in the signal processor, unit generates a linear 4 to 20 mA signal. The computer enhancement program cleans the signal and computes the representative POUR TEMPERATURE for up to each 20 second period. This temperature is displayed.
Temperature, time, date, pour number and pouring time period are computed, stored then transmitted to the printer and/or Computer. Temperature may also be transmitted to remote indicator(s) from the processor unit.
UP & DOWN buttons are provided inside the door of the processor unit to change the temperature range, set alarm levels and change time and date, using the temperature indicator, but in CALIBRATION mode. Lamps indicate the state of the measurement process.
A digital potentiometer allows EMISSIVITY SLOPE adjustment versus a dip temperature check measurement.
Printer controls enable ‘PRINTER OFF’, ‘PRINT ON ALARM’ or ‘PRINT ALL’ to be selected. An invalid lamp at the sensor and at the front panel indicates ‘No signal’ (or inadequate signal level).
SPECIFICATION:
TWO COLOUR RATIO SENSOR
FOCUSING DISTANCE: Adjustable, 380mm (15”) to infinity.
TARGET DISTANCE: Up to 20 metres, for mould temperature application.
OPTICAL RESOLUTION: Target distance, “D” divided by 100, for high temperature ranges; “D” divided by 50 for lower temperature ranges. Up to 99% Obscuration of Target Reticle; “INVALID” signal above this.
EMISSIVITY SLOPE ADJUSTMENT: 0.85 to 1.15
AMBIENT TEMPERATURE RANGE: (without auxiliary cooling): 0 to 55 deg. C (30 to 130 deg.F)
INDICATOR / PROCESSOR UNIT
STANDARD RANGES, all adjustable
700 to 1400 deg C (1300 to 2500 deg F)
900 to 1600 deg C ( 1800 to 2000 deg F)
1100 to 2000 deg C ( 2000 to 4000 deg F)
ACCURACY: 0.75% of full-scale temperature or 6 deg C (10 deg F), whichever is greater. REPEATABILITY: 0.3% of full temperature scale +/- 1 deg, or +/- 4 deg. C (7deg F)
SERIAL DIGITAL OUTPUTS
RS 232 for Computer and Printer.RS 485 for remote Indicator(s)
QUALITY ASSURANCE
Calibration Certificate Traceable to UK National Standards and Certificate of Conformance are available.
Instruments are guaranteed for one year against faulty components or workmanship.
Our policy is one of continuous research and development. We, therefore, reserve the right to amend the specifications given in this document without notice.