



TROX[®] TECHNİK

The art of handling air

TROX UK

Instrumentation



Instrumentation

Temperatures are measured via a 32 channel Quat system. The probes are Quartz based and work on the frequency/vibration of the Quartz probe tip. The probes are individually addressed and produce a digital frequency count that is sent to the monitoring computer via hardware that converts frequency to temperature.

Dantec Omnidirectional Transducers measure local velocities. These are precision flow sensors specifically suited for use a low velocities where direction of flow is not known. A voltage signal from the velocity probe is converted by software to a local velocity reading. Local velocities in this report are time average values taken over a sampling period of 120 seconds, with each probe taking between 7 and 12 readings per second.

Temperatures and velocities can be also measured using 'Dantec Dynamics VIVO' combined temperature and velocity probes on a moveable stand. The instantaneous temperature and velocity values are recorded by the probes every second. The device is set to record data at this collection frequency for a period of 120 seconds. On completion of the data acquisition period the probes relay the collected data back to a laptop computer which is converted to meaningful data by software developed by 'Dantec Dynamics'. Other probes also measure space humidity and radiant temperature.

Sound pressure levels can be measured using CEL-593 Sound level analyzer.

The supply air flow rate can be measured by a sharp edged orifice plate built and maintained to the British standard or Venturi nozzles (different sizes). The pressure drop across the measuring device is converted into airflow rate and sent to the computer.

Water flow volume is measured using a Danfoss Magflow 2500 water meter. This instrument is accurate to +/- 2%.

All our instruments are calibrated on regular basis and records are available in the laboratory.

Apart from recording videos of smoke visualisations we can also carry out thermal imaging with ThermaCAM E45. The camera measures and images the emitted infrared radiation from the objects and temperatures are displayed via a range of colours.

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