

Custom Proposal

Exposure Time Control System for Thermal Shock Chambers

With the current Thermal Shock Chambers, the control is made using the set temperature reaching time of the test area (air temperature). Here, we propose an “Exposure time control system”, which starts to count the exposure time when the sample temperature has reached the set temperature.

Three functions are necessary to control the exposure time.

1. Measure the sample temperature
2. Measure a number of samples temperatures
3. Start counting the exposure time when the sample temperature reaches the set temperature

Using thermocouple module to measure several temperatures of the samples and the thermocouples module and Thermal Shock Chamber can be controlled using a dedicated PC. The exposure time start is triggered by the temperature reaching of all the samples that are measured. The reaching verification of the samples temperatures is made at each cycle in order to control using actual measurements. By controlling the samples temperatures, the load applied to the samples is homogeneous and the experiment reproducibility is increased. Moreover, the sample temperatures, the process value and the set point are simultaneously saved in the test log data.

