CHAUVIN® ARNOUX
CHAUVIN ARNOUX GROUP

C.A 1875

From theory to practice...

... become an expert in thermographic measurement

THERMOGRAPHY TRAINING BENCH

50 °C heating plate for measurement in total safety!

- **Use your camera and software to view the causes of possible errors**
- **Multiple experiments**
  - ⇨ Measurements on materials with different emissivity values
  - ⇨ Highlighting of the influence of positioning opposite the target
  - ⇨ Study of reflection and transmission phenomena
  - ⇨ Study of spatial resolution

THERMOGRAPHY TRAINING BENCH

Growing demand for training in infrared thermography has led CHAUVIN ARNOUX to develop measurement equipment specially designed for this purpose.

The operations proposed are not exhaustive and are intended to provide examples illustrating the erroneous measurement readings that can be made with a camera. The goal is to make students aware of the need to learn thoroughly how to use an infrared camera, which is a precision measurement instrument.

The **C.A 1875 training bench** comprises a heating plate (50 °C) equipped with several targets with different surface states and materials, as well as test screens which are fastened to the front of the training bench by magnets. This kit allows the following experiments to be carried out:

Problem of material emissivity

A material's emissivity (ε) is a characteristic of the material and its surface state, representing a body's capacity to absorb and re-emit radiated energy.

Major measurement errors can occur if this parameter is incorrectly assessed. To remedy this, the camera must be adjusted correctly.

Using plates with different emissivity values, the purpose of the operation is to highlight the impact of emissivity on temperature measurement.

Positioning problems

For correct measurements, the camera must be positioned perpendicular to the target to be measured so that the emissivity value entered in the camera corresponds to reality. The purpose of the operation is to make this phenomenon clearly visible.

Problem of reflection and transmission

Real objects only absorb a fraction (α) of the incident radiation, while reflecting a part of it (ρ) and transmitting only a fraction (τ).

Thus, when making a thermographic measurement, the reflected radiation and infrared radiation transmission problems must be taken into account.

Problem of spatial resolution

The purpose of this operation is to show what can and cannot be measured with an infrared camera. A target comprising several slots represents the various cable widths which may be encountered in an installation.

TO ORDER

• **C.A 1875** P01651620

The training bench is delivered in a carrying bag with an experiment guide, test screens and a power supply cable

YOUR DISTRIBUTOR

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