## **BITHERMA®**

## Franz Wagner & Sohn GmbH

MESSGERÄTE FÜR TEMPERATUR DRUCK FEUCHTE

Thermo-Hygrometer-Combination for surface measurements

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∘c Oberflächen-Temperatur

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Case: Diam. 130 mm stainless steel AISI 304

Bezel: Stainless steel AISI 304

Dial: Aluminium, white varnished

lettering and graduation black

with dewpoint scale

Pointer: Aluminium, black

adjustable

Window: Plastic, raised

Measuring system: 2 x bimetal for temperature

1 x rel. humidity

Measuring range: Air: -10... +40°C

Rel. humidity: 20... 100%
Saturation moisture: 4... 50 gr./m³
Dewpoint temperature: -8... +26°C
Surface temperature: -10... +40°C

Features: Flexible measuring pot for surface temperature

Accuracy class: Temperature ± 1°C

Humidity ± 2,5%

Mounting method: With 3 bar magnets

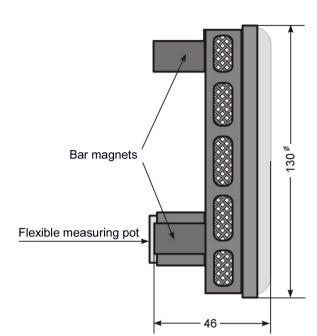
- Dial imprint in English

- OPTION

Article number:

1530011

Fig. 36



The thermo-hygrometer contains a precision humidity meter and two bimetal measuring systems. Here the temperature, the relative humidity, the saturation moisture and the dewpoint can be read off directly following the curves from the point of intersection of the surface temperature pointer and the relative surface humidity pointer. The back of the case is fitted with 3 strong bar magnets for steel part usage.

The instrument was developed for the requirements of the metallization and is normally used in the field of ship conservation, docks, bridges, steel constructions, mining and pipeline engineering. At work in such fields of application it is possible to define directly the dewpoint temperature on the surface of the steel girder. This measurement has to convey certainty, that there will be no dewpoint precipitation. In the coating technic difficulties often arise because the paint doesn't stay on a wet base coat.

If the ambient temperature is 3°C or more above the dew point, the conditions of BSS 5493\* are satisfied and the metal surfaces may be painted.

E.G. air temperature 22°C, rel. Humidity 61% = 14°C dewpoint at 21°C surface temperature.

The difference between surface temperature and dewpoint temperature is 7°C, so that the conserving works can begin, because it is higher than 3°C.

The air temperature shows 22°C. This indicates that the surface temperature sinks slowly and a dewpoint precipitation is possible.

For that reason the testing should be repeated in certain intervals.

## \*BSS 5493:

1977 lays down a code of practice for the protective coating of iron and steel structures against corrosion. One of the most important provisions is that coatings should not be applied in conditions of excessive humidity, i.e. when the metal surface temperature is less than 3°C above the dew point.

Replaced by BS EN ISO 14713:1999

Dimensions and technical data are conform to current company standard. Changes to improve our instruments will be made without preannouncement.