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”Simulated solar radiation test”

(1 enclosure)

Assignment

Simulated solar radiation test according to ISO 4892-2 of a VHF-radio.

Test object

One orange VHF-radio, type TRON TR20 GMDSS from JOTRON.

The test object was delivered from JOTRON on 24th of October 2001.

Test performance

The test object was exposed for 80 hours in an Atlas Weather-Ometer Ci 65. The light source was a 6,5 kW water cooled Xenon lamp. The lamp was equipped with an inner filter and an outer filter, both of borosilicate glass. With this filter system a spectral power distribution with a lower limit of 290 nm is obtained. The inner filter is replaced each 400 hours and the outer filter is replaced each 2000 hours.

The light intensity was $60 \pm 6 \text{ W/m}^2$ within the band pass 280-400 nm, $550 \pm 55 \text{ W/m}^2$ within the band pass 280-800 nm and $1300 \pm 130 \text{ W/m}^2$ within the band pass 280-3000 nm.

The temperature on a black standard thermometer was $65 \pm 2 \text{ }^\circ\text{C}$, the air temperature $38 \pm 3 \text{ }^\circ\text{C}$ and the relative humidity $60 \pm 5 \%$.

After the exposure the VHF-radio was visually inspected and a function test of the keys were performed.

The exposure was carried out from 2nd to 5th of November 2001.



Test result

Visual inspection of the VHF-radio

Requirement:

There shall be no harmful deterioration of the equipment visible to the naked eye.

Result

Some local variations of the colour have appeared in the area of the microphone/speaker at the front of the VHF-radio and on both sides of the LCD-display.

See photographs in appendix 1, taken before and after the exposure.

Function

Requirement:

The requirement of the performance check shall be met.

Result

It was not possible to perform a complete performance check. Only a function test of all keys was done. All the keys and their functions seem to work as before the exposure.

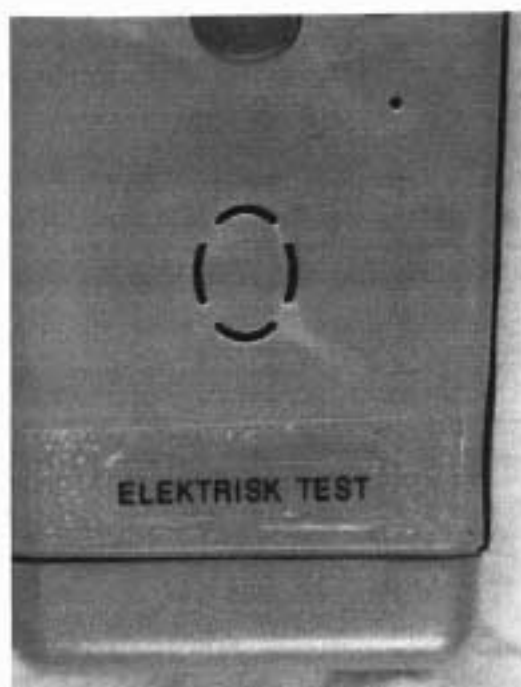
SP Swedish National Testing and Research Institute
Surface Protection And Corrosion

Magnus Palm
Technical Manager

Sven-Arne Bylander
Technical Officer

Enclosure: Photos of the specimen before and after the exposure.

Photographs taken before exposure



Photographs taken after exposure

