

● Uranus Comparative UV Analysis

Customer:



Ensto Electric Oy
Finland

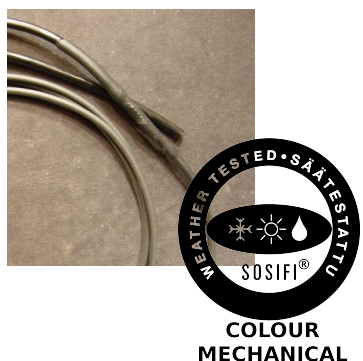
Research Contract:

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Target:

3 m of Ensto Electric TASH Cable 0.21 ohm/m, (with two cold leads joined in factory)

The sample with a cold lead joint is pictured.



Testing time:

The start of the test: 9th of October, 2009

The end of the test: 1st of January, 2010

Total test time: 2000 h

Purpose of the test:

To test the withstand of the samples to UV-radiation, condensation and heat

Test method:

ISO 4892-3, UVA340

Cycle: 8 h UV 60°C and 4 h Condensation 50°C

Test time: 2000 h

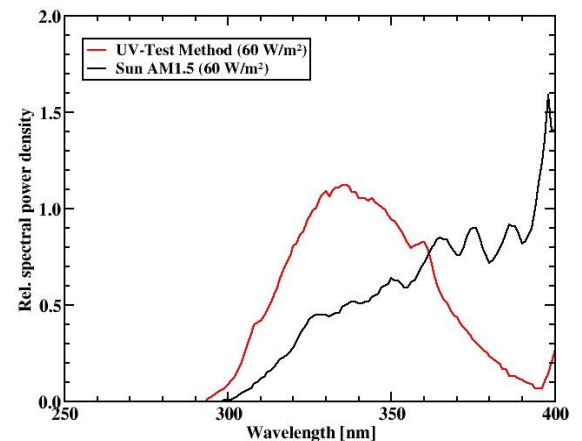
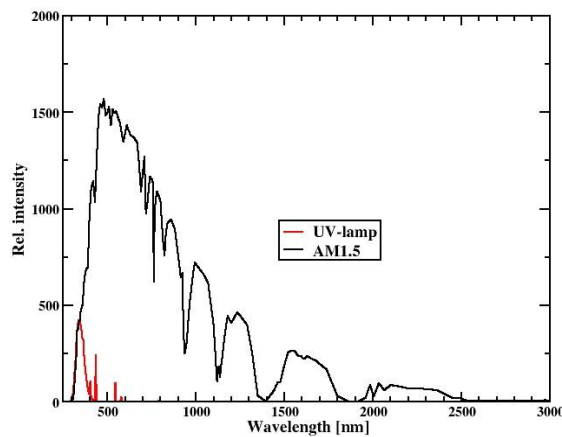
Validation of test method:

The test method was according to the requirements of the customer.

Actions done:

The samples were fastened with short cords to the test stand. Aluminium radiation shield was attached to the hot end of the cable. The samples were put into a UV Tester. The test cycle was 8 h of UV-radiation with UVA340 lamps at 60°C and 4 h of condensation at 50°C.

The spectrum of the used UV-lamp and the solar spectrum are figured on the left. In the picture on the right are the UV-parts of the corresponding spectra.



The non-radiated sides of the cable were marked with short white paint markings. The cable was attached to the test stand with metallic cords which caused during the 2000 test hours some disruption to the surface of the tested cable, like in the picture.



The colour of the 0.21 ohm/m cable did not fade during the test. The aluminium radiation shield is temporarily put a little aside when the picture was taken after the test. The cable was shielded by the radiation shield from the black line to the right. No cracking of the surface of the cable is observed.





Solar Simulator

Solar Simulator Finland Ltd.

Executive Summary

Public

3/3

ref.no.: EnstoElectric_TASH_cable0_21.pdf

Conclusions:

The strain of the test onto the samples was UV-radiation, condensation and heat.

The Ensto Electric TASH 0.21 ohm/m cable seem to be unchanged after the test. No cracking was observed in the cable.

The Ensto Electric TASH 0.21 ohm/m cable passed the test.

Remarks:

Used testing and measuring equipment:

Accelerating Weathering Tester, No. 43

Temperatures: PT100, calibrated 19th of February, 2009, calibration is valid

Actions, operations and reporting are in accordance with IEC/ISO 17025 'General requirements for the competence of testing laboratories'.

Signatures:

Timo Oksa
Littoinen, 10th of March, 2010

