



RESEARCH DEVELOPMENT AND TESTING NATIONAL INSTITUTE FOR
ELECTRICAL ENGINEERING

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TEST REPORT

Nr. 164 / 01.08.2013

CUSTOMER: SCHIRTEC AG
Ignaz Köck Strasse 10 A-1210 Wien, AUSTRIA

MANUFACTURER: SCHIRTEC AG
Ignaz Köck Strasse 10 A-1210 Wien, AUSTRIA

TEST PRODUCT: Early Streamer Emission (E.S.E).Lighting Conductors
type SCHIRTEC - DAS (S-DAS)

REFERENCE STANDARD: NFC 17-102/2011, Annex C 3.3.1, Annex C 3.3.2;
UNE 21186/2011, Annex C ;
IEC 60068-2-52 /1996 ; SR EN ISO 6988/1997 ,
Specification SCHIRTEC

PERFORMED TESTS: Environmental conditioning:
I Cyclic salt mist conditioning
II Humid Sulphurous atmosphere Treatment

TEST PERIOD: 30.05.2013 + 02.06.2013 - Cyclic salt mist conditioning
24.07.2013 + 31.07.2013 - Humid Sulphurous atmosphere Treatment

Report contains 8 pages. It is edited in 3 copies: copy No.1, remains in the laboratory and copies 2 and 3 are sent to the customer.

HEAD OF HIGH VOLTAGE DIVISION,
Eng. Ion PATRU

4P-08

HEAD OF LABORATORY,
Eng. Valerica STANOI

Stanoiu

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b. Publication or reproduction of the contents of this report in any other form, unless its complete photocopying, is not allowed without writing approval of the division to which laboratory belong to.
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**1. Tested product identification:**

Name:	E.S.E.Lighting Conductors
Tip:	SCHIRTEC - DAS (S-DAS)
Serial number:	-
Technical specification:	Specification SCHIRTEC (annex 1)
Contract	705.2/ 8044 /16 .05.2013
Product receipt date:	22.05.2013
Product condition at receipt:	New product

2. Technical characteristics :

	E.S.E.Lighting Conductors
Material	Stainless steel
ΔT [μs]	45,6
Weight [Kg]	3,8

3. Acceptance criteria: The product does not present corrosion spots.
If the possible spots are removed after wiping the product with a damp cloth the product is considered to have passed the test.

4. Test program: Environmental conditioning:
I Cyclic salt mist conditioning
II Humid Sulphurous atmosphere Treatment

5. Persons responsible for tests : Tehn.Dumitru PETRIU
Tehn.pr. Elena CRAU

6. Test description and test result presentation:**I Cyclic salt mist conditioning**

- 1. Product receipt date :** 22.05.2013
- 2. Test period :** 30.05.2013 – 02.06.2013
- 3. Reference standard:** NFC 17-102 / 2011 , Annex C 3.3.1; IEC 60068-2-52 /1996
Specification SCHIRTEC
- 4. Atmospheric conditions :** $t = 20,6 \text{ }^{\circ}\text{C} \div 21,4$, $\text{RH} = 42 \% \div 58 \%$
- 5. Used equipment :**
- climatic room Votsch Germany, type VC 40 60, series 59566092700010, calibration certificate DJ – 013- 028-253 / 04.02.2011
 - salt mist room 8 m³

6. Working mode:

The product was placed in the salt mist room (fig.1) and sprayed for 2 hours with a 5% salt solution at ambient temperature



Fig.1

After that salt spraying period the product was transferred in the climatic room (fig.2) and stored at a 40 °C temperature and 93 % moisture for 22 hours.



Fig.2



A cycle is constituted by the period of exposure to salt mist plus the period of storage to moisture.

The product was subjected to 3 (three) such conditioning cycles.

The test parameters are given in Fig.3

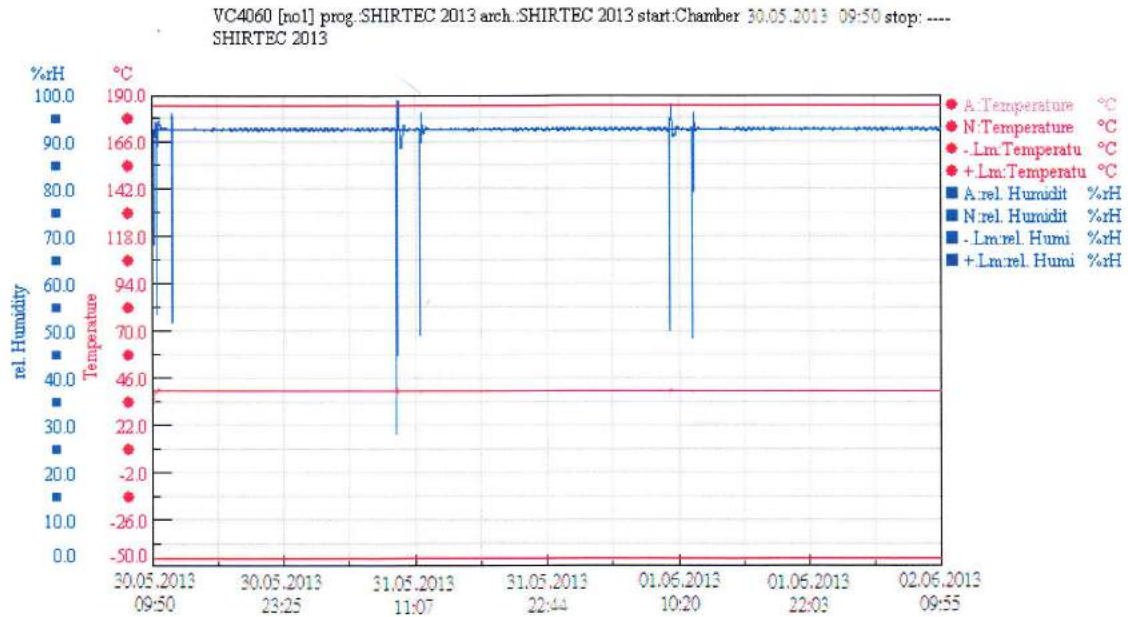



Fig.3

After the three cycles were finished the product was analysed and it was found out that the product was not affected by salt mist and moisture conditioning

7. Test responsible:

Tehn.pr.CRAU Elena

Tehn.PETRIU Dumitru 

8. Test result :

The product passed the test.

II Humid Sulphurous atmosphere Treatment

1. **Product receipt date :** 22.05.2013
2. **Test period :** 24.07.2013- 31.07.2013
3. **Reference standard:** NFC 17-102 / 2011 , Anexa C 3.3.2; SR EN ISO 6988/1997 Specification SCHIRTEC
4. **Atmospheric conditions :** $t = 23,4 \text{ }^{\circ}\text{C} \div 27$, $\text{RH} = 53 \% \div 67 \%$
5. **Used equipment :** - special room for Sulphurous atmosphere treatment
6. **Working mode:**

The product was subjected to 7 (seven) conditioning cycles in humid sulphurous atmosphere. One cycle lasted for 24 hours and consisted of an 8 hour exposure inside the room followed by a 16 hour exposure to environmental atmosphere.

The product was placed in the special room for sulphurous atmosphere treatment where 2 dm^3 distilled water had been placed previously (fig.1) . The room door was tightly closed and $0,2 \text{ dm}^3$ sulphur dioxide was introduced using the supply system of SO_2 cylinder .



Fig.1

Then heating was started and the temperature rose to $40 \text{ }^{\circ}\text{C}$. The temperature was maintained within the limits $(40 \pm 3) \text{ }^{\circ}\text{C}$ using a thermostating system . The product was kept in the above conditions for 8 hours .




After that 8 hour conditioning period the product was exposed to environmental atmosphere for 16 hours.

At the end of the 7 cycles the product was analysed and it was found out that the product was not affected by humid sulphurous atmosphere conditioning.

7. Test responsible:

Tehn.pr.CRAU Elena 

Tehn.PETRIU Dumitru 

8. Test result :

The product passed the test.



ANNEX 1

1	2	3	4														
TECHNICAL SPECIFICATIONS																	
		REV NO	DESCRIPTION														
		APPROVAL	REV DATE														
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B																	
C																	
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