COPY No 2

RESEARCH, DEVELOPMENT AND TESTING NATIONAL INSTITUTE FOR ELECTRICAL ENGINEERING – ICMET CRAIOVA

HIGH VOLTAGE DIVISION – HVD
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Testing Laboratories:
RENAR LI 450: High Voltage + EMC
RENAR LI 004: High Power
RENAR LI 529: Low Voltage

TEST REPORT
No. 1966/ 06.12.2012

1. Product: E.S.E Lightning Conductor, type Schirtec - A

2. Tests:
1. Documentary information and identification
2. Marking
3. Mechanical tests

3. Order: Contract no. 705.2/ 7946/ 20.09.2012

4. Customer: SCHIRTEC AG Ignaz-Köck Strasse 10 A – 1210 Wien Austria

5. Manufacturer: SCHIRTEC AG Ignaz-Köck Strasse 10 A – 1210 Wien Austria

6. Reference Standard: NFC 17-102:2011, Annex C 3.1; 3.2

7. Testing date: 05.12.2012

8. Responsible for tests: Dipl.Eng. Dinu Ion

Head of HVD,
Dipl.Eng. Ion PATRU

ICMET DIVIZIA DE ÎNALTĂ TENSIUNE CRAIOVA

9. Test Result: Product passed the test

10. This Test Report contains 5 pages and it is edited in 4 copies: 1 for HVD and 3 for the customer

CAUTION :
a) Results refer to test product only.
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 division to which laboratory belongs to.
c) All the signatures of this Test Report are in original ones.

1. Documentary information and identification
(NFC 17 – 102: 2011, Annex C, 3.1.1)

1.1. Product receipt date: 03.12.2012

1.2. Test date: 05.12.2012

1.3. Environmental conditions during the test:
- temperature: +19°C ± 1°C;
- relative humidity: 50 % ± 3 %.

1.4. Test and measurement equipment: -

1.5. Testing procedure:

SCHIRTEC – A Early Streamer Emmision Lightning Conductor (Fig. 1) was identified by the information indicated on the product marking (Photo. 1) and by the technical documentation.
- Name (logo and trade mark) of the manufacturer: SCHIRTEC
- Product reference:
  - Model: E.S.E.
  - Type: S – A
  - Reference standard: NFC 17 – 102: 2011
  - Early streamer emmision efficiency ΔT(μs): 60
  - Serial number: prototype

1.6. Test result: The product passed the test

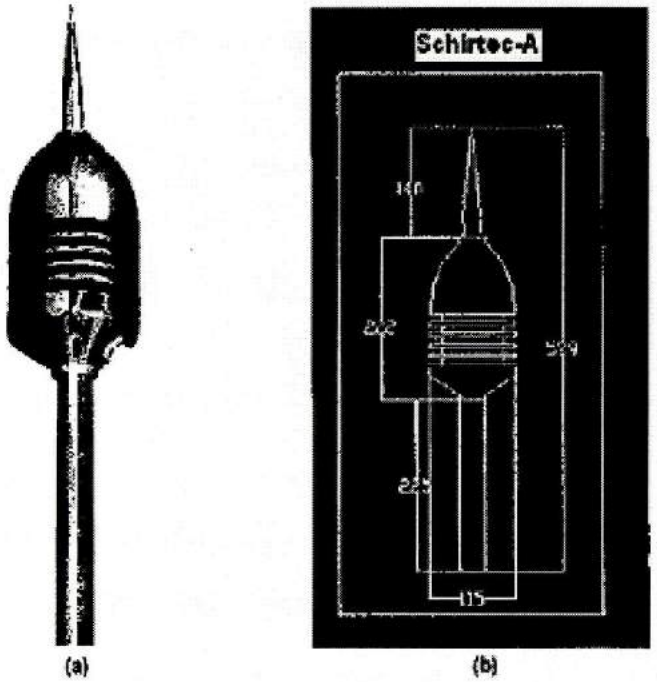


Fig. 1

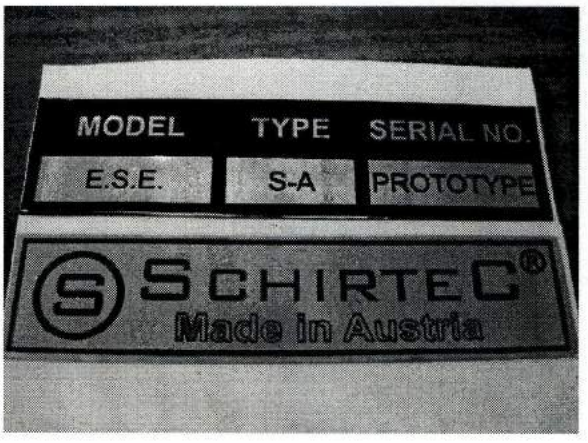


Photo 1

2. Marking
(NFC 17 – 102: 2011, Annex C, 3.1.2)

2.1. Product receipt date: 03.12.2012

2.2. Test date: 05.12.2012

2.3. Environmental conditions during the test:
- temperature: +19°C ± 1°C;
- relative humidity: 50 % ± 3 %.

2.4. Test and measurement equipment:
- cotton rag;
- water;
- hexane aliphatic.

2.5. Testing procedure:
The test was carried out by rubing the marking by hand for 15s with a cotton rag dipped in water and for 15s more with a cotton rag dipped in hexane aliphatic. After the test the marking was legible.

2.6. Test result: The product passed the test

3. Mechanical test
(NFC 17 – 102: 2011, Annex C, 3.2)

3.1. Product receipt date: 03.12.2012

3.2. Test date: 05.12.2012

3.3. Environmental conditions during the test:
- temperature: +19°C ± 1°C;
- relative humidity: 50 % ± 3 %.

3.4. Test and measurement equipment:
- digital caliper, serial no. G111089, manufactured by PROFIX Poland, calibration certificate no. DJ 006-186 1085/ 2010

3.5. Testing procedure:

The test was carried out by checking of the dimensional characteristics with their tolerances, according to the manufactured drawings and data.

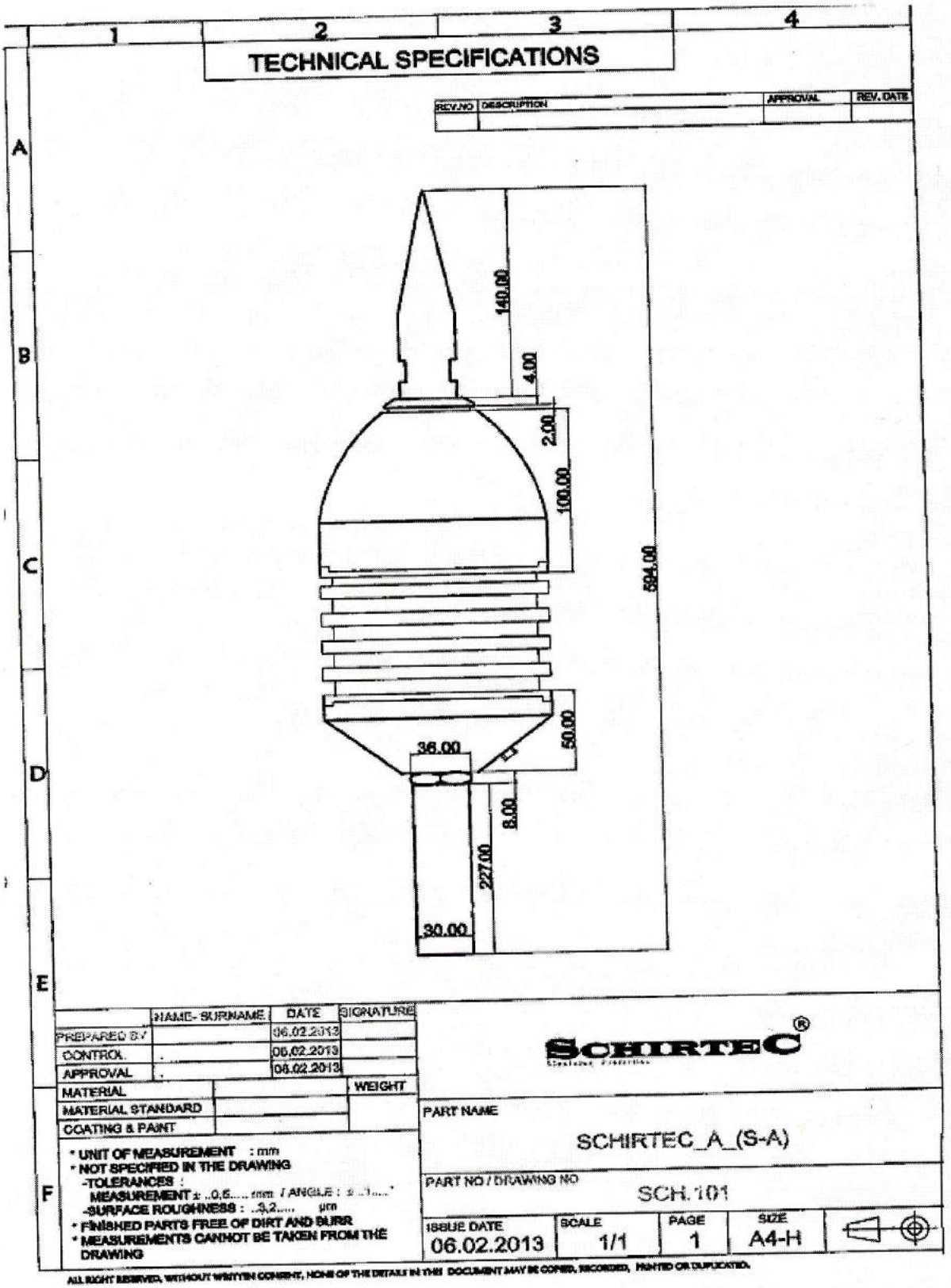
Using the digital caliper, there were measured the dimensions specified in the drawing no. SCH 101 (Annex). The measured values are presented in Table 1.

Table 1

Dimension acc. drawing (mm)	Measured dimension (mm)
30±0.5	30.00
227±0.5	227.02
8 ±0.5	7.98
36±0.5	35.97
50±0.5	50.01
100±0.5	100.02
2 ±0.5	2.00
4 ±0.5	4.01
140±0.5	140.01
594±0.5	594.02

3.6. Test result: The product passed the test

Annex



-End of Test Report –