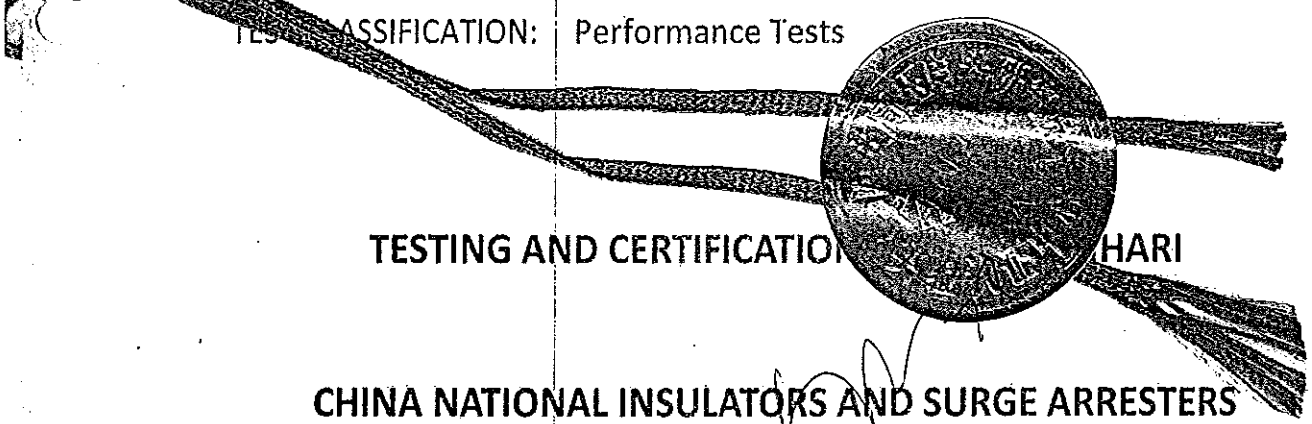
20150001196Z (2015)国认监认字(059)号 检测 CNAS L0223 XIHARI No. 150874J

TEST REPORT

TEST OBJECT:	CLP6-125/600
	24kV Composite Pin Insulator
CLIENT:	NIKDIM Ltd.
MANUFACTURER:	Zhejiang Gaoneng Electric Installation Co., Ltd.
TEST CLASSIFICATION:	Performance Tests



TESTING AND CERTIFICATION CENTER OF XIHARI

CHINA NATIONAL INSULATORS AND SURGE ARRESTERS

QUALITY SUPERVISION & INSPECTION CENTER

ВЯРНО С ОРИГИНАЛА

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Summary

Test object		CLP6-125/600 24kV Composite Post Insulator
Client	Name Connection	NIKDIM Ltd.
Manufacturer		Zhejiang Gaoneng Electric Installation Co., Ltd.
Manufacture date		2015.11
Serial No.		No.1 ~ No.3

Rated Value Assigned By the client	Rated voltage kV	24
	Specified cantilever load kN	6
	Height mm	309
	Min. Creepage distance mm	600
	Dry lightning impulse withstand voltage kV	125
	Wet power-frequency withstand voltage kV	50

The tested object is guaranteed by the manufacturer to comply with the following technical documents and drawings	GN0001618F (CLP6-125/600) 24kV Composite Post Insulator
Note	/

Representation of client: Zhu Xiao jie	
Reception date: 2015-12-09	
Date of tests:	From 2015-12-14 To 2015-12-18

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Test Conclusion

Client:	NIKDIM Ltd.
Test object:	CLP6-125/600 24kV Composite Post Insulator
Manufacturer	Zhejiang Gaoneng Electric Installation Co., Ltd.
Test classification:	Performance Tests

Tests have been performed:

Dry Lightning Impulse Withstand Voltage Test
Wet Power - Frequency Withstand Voltage Test
Cantilever Failing Load Test

The tests have been performed in accordance with:
IEC61952:2008 Insulators for overhead lines - Composite line post insulators for a.c. systems with a nominal voltage greater than 1 000 V - Definitions, test methods and acceptance criteria.
GN0001618F (CLP6-125/600) 24kV Composite Post Insulator (Drawing)

Conclusion:	The results of tests met the requirements of the standards and technical specifications.

Translated by: 刘志强	Checked by: 胡宇峰	Verified by:	Approved by:
Date: 2015-12-23	Date: 2015-12-24	Date: 2015-12-24	Date: 2015-12-25

检验报告专用章 XIHARI

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Dry Lightning Impulse Withstand Voltage Test

Test circuit diagram : XGJT04 Date of tests: 2015-12-16

t_d=23.5℃. t_w=21.4℃. P=98.0kPa. The arc distance L=260mm

Specifications: 125kV. Correction factor K_t=0.985.

Specimen No.	Times	Voltage applied kV	Corrected voltage kV	Result
1	Positive 15 shots	126 ~ 128	128 ~ 130	No flashover
	Negative 15 shots	128 ~ 131	130 ~ 133	No flashover
Specifications	15	/	≥125	Flashover times ≤ 2

The result met test standard and the technical specifications.

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Wet Power- frequency Withstand Voltage Test

Test circuit diagram : XGJT03 Date of tests: 2015-12-16

t_d=23.5℃. t_w=21.4℃. P=98.0kPa. The arc distance L=260mm
t_{water}=22.3℃. Resistivity of water ρ=127.5Ω·m. Corrected resistivity ρ_{20}=100.4Ω·m
Precipitation rate: Horizontal component is 1.29mm/min.
Vertical component is 1.35mm/min.
Specifications: 50kV. Correction factor K_t=0.987.

Specimen No.	Voltage applied kV	Corrected voltage kV	Duration s	Result
1	50	51	60	No flashover
Specifications	/	≥50	60	No flashover

The result met test standard and the technical specifications.

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Cantilever Failing Load Test

Date of tests: 2015-12-17

1. Verification of the specified cantilever load

Specimen No.	Load applied kN	Duration s	Result
1	6.03	60	No damage
2	6.08	60	No damage
3	6.06	60	No damage
Specifications	6.00	60	No damage

The result met test standard and the technical specifications.

2. Cantilever failing load test

Specimen No.	Failing load kN	Result
1	8.50	Core broken
2	9.32	Down fitting broken
3	8.87	Core broken

Provide datum only.

ВЯРНО С ОРИГИНАЛА

Appendix

1 Drawing

GN0001618F (Date:2015-06-12)

2 Test circuit diagram

XGJT03 XGJT04

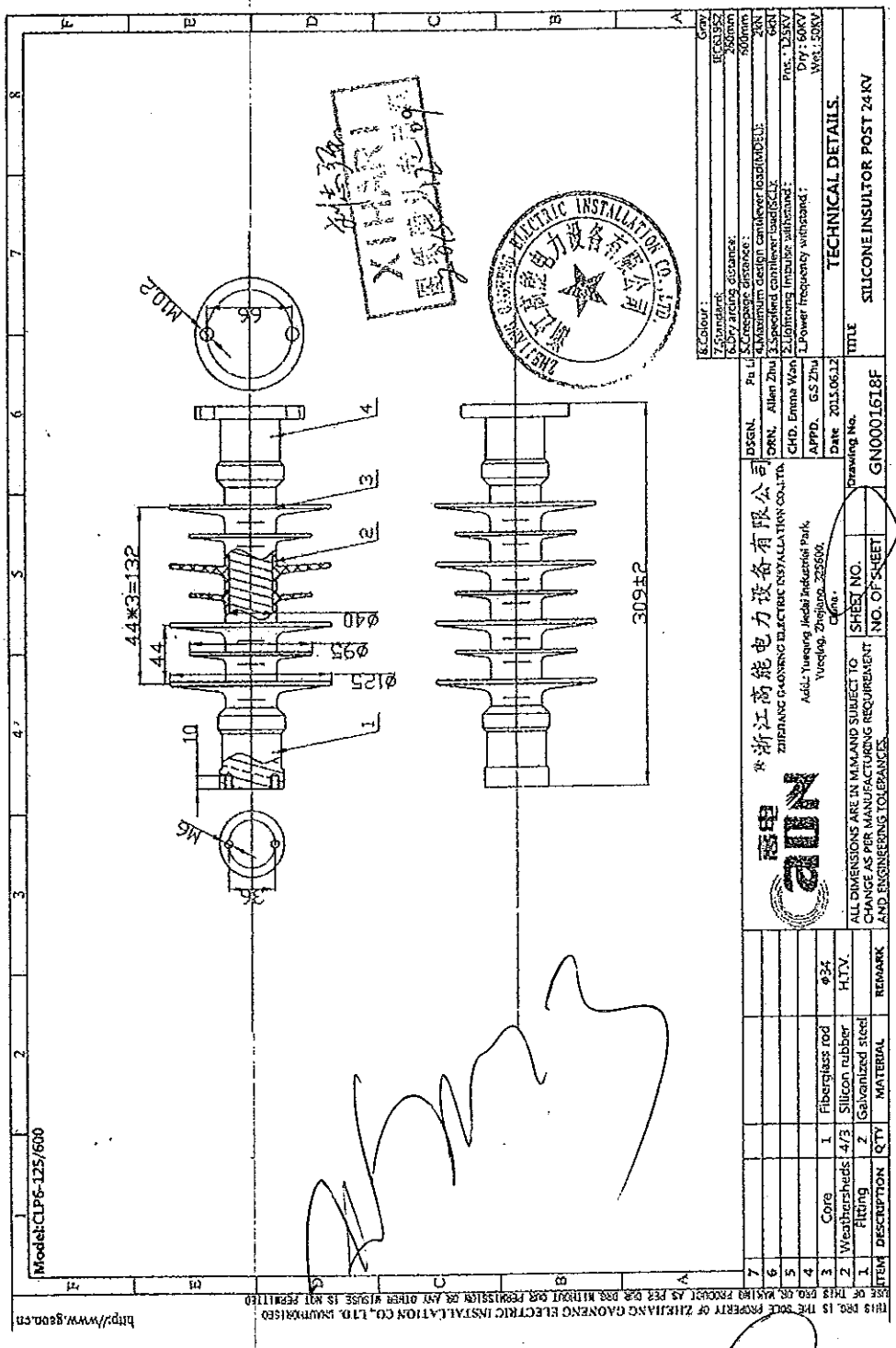
3 Typical oscillogram

Dry Lightning Impulse Withstand Voltage Test

No.1-1 (Positive) No.1-1 (Negative)

Appendix

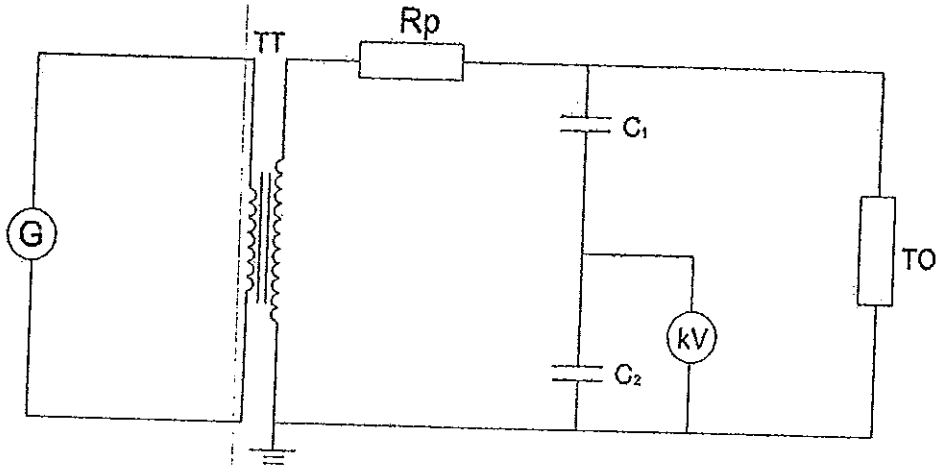
1 Drawing



Appendix

XGJT03

750kV工频试验回路图
(Diagram of 750kV power frequency voltage circuit)



G——发电机组(Generator); Rp——保护电阻(Protect resistor);

TT——工频试验变压器(Testing transformer) TO——试品(Tested object);

C_1——分压器高压臂电容(High voltage capacitor for voltage divider);

C_2——分压器低压臂电容(Low voltage capacitor for voltage divider);

kV——千伏表(Voltmeter)

试验所用设备主要参数

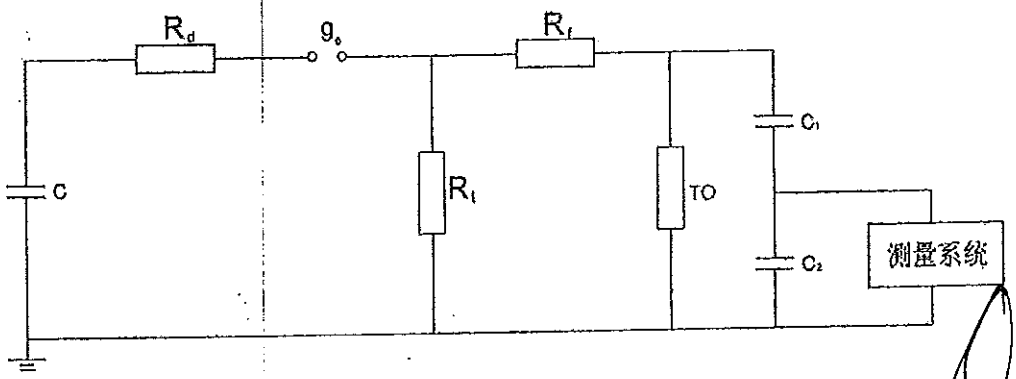
(Main parameters of testing equipment)

G (kW)	TT (kV/kVA)	Rp (kΩ)	分压比 (Voltage ratio)
2000	750/3000	12	10000: 1

Appendix

XGJT04

1200kV 冲击试验回路图
(Diagram of 1200kV impulse voltage circuit)



C：冲击发生器主电容 (Capacitor of impulse voltage generator)

R_t：发生器并联电阻 (Generator parallel resistor)

R_d：阻尼电阻 (Damp resistor)

R_f：发生器串联电阻 (Generator series resistor)

C_1：分压器高压臂电容 (High voltage capacitor for voltage divider)

C_2：分压器低压臂电容 (Low voltage capacitor for voltage divider)

TO：试品 (Tested object)

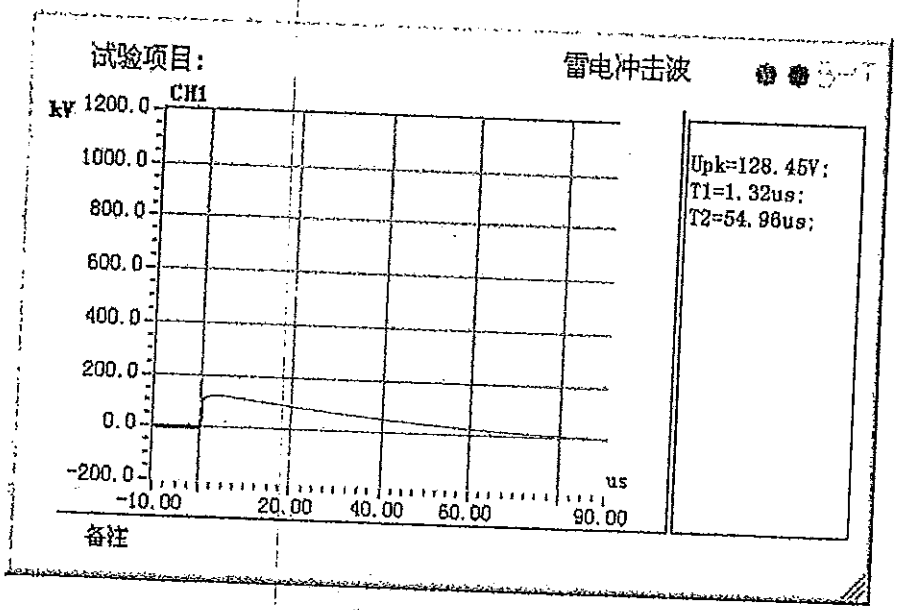
试验所用设备主要参数
(Main parameters of testing equipment)

波形 (Waveshape)	U_e (kV)	R_f (Ω)	R_t (Ω)	C_1 (pF)	C_2 (pF)
雷电波 (Lightning impulse)	1200	可调 (Adjustable)	可调 (Adjustable)	398	0.491

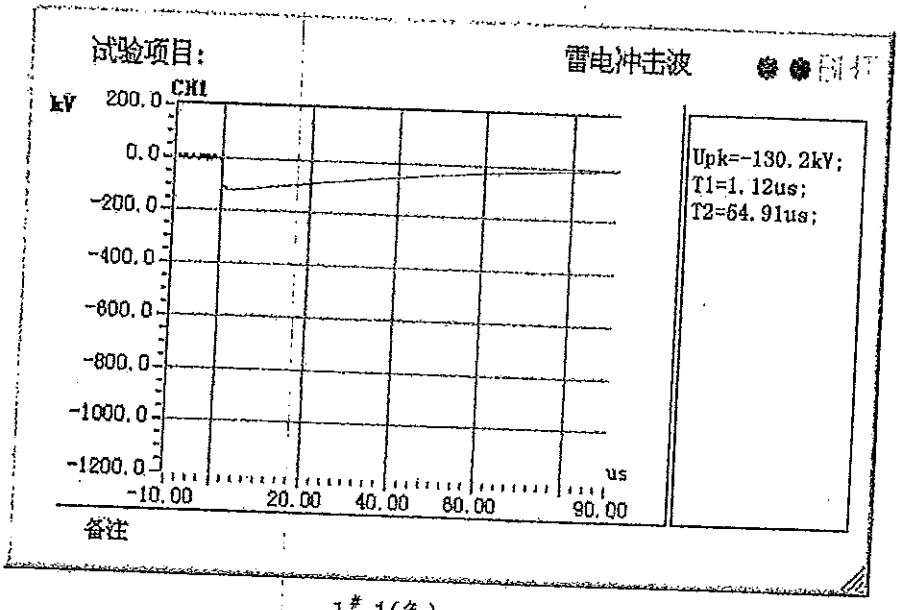
ВЯРНО С ОРИГИНАЛА

Appendix

Dry Lightning Impulse Withstand Voltage Test



1#-1(正)



1#-1(负)

STRI

Independent laboratory

STRI project number
82119

TEST REPORT T08-1814

5000h ageing test at 17,6 kV in accordance with IEC 61109 Annex C on four composite insulators

Customer ref
No. 080424-WQXS

2.3

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Yueqing, Zhejiang
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Mr.Thomas Dong Bound (3), email pdf

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ВЯРНО С ОРИГИНАЛА

STRI
Independent laboratory

TEST REPORT T08-1814

No. of pages in document: 13

Customer	Zhejiang Gaoneng Electric Installation Co., Ltd., Yueqing, Zhejiang, China
Test period	16 May - 12 December, 2008
Test object	Four composite insulators
Standards	IEC 61109 Annex C, 1992
Tests	5000 hours cycle test under operating voltage of 14,3 kV AC, 50 Hz with humidification, heating 50°C, rain, simulated solar radiation and salt fog.
Test result	The test objects fulfilled the requirements in accordance with the standard. No over current trip-out occurred. No tracking, cracking or treeing on external coating. No puncture of shed was found. No erosion down to next layer of material.

Ludvika 29 December 2008

STRI AB
Testing

Johan Jonsson
Laboratory Manager

Lars-Olof Gunnarsson
Test Engineer

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1 Test object

Test objects	Test position	Sample no.	Measured creepage distance, [mm]	Creepage distance acc. to the drawing, [mm]
GN-080403(X), version B	Vertical	1	603 ± 5	610
GN-080403(X), version B	Horizontal	2	605 ± 5	610
GN-080403(Z), version A	Vertical	3	600 ± 5	610
GN-080403(Z), version A	Horizontal	4	604 ± 5	610

2 Tests

5000h test simulated weather conditions, in accordance with IEC 61109 Annex C.

One test object of each type was mounted in vertical position and one of each type in horizontal position.

According to the standard the test voltage was calculated as 610/34,6 = 17,6 kV.

The 24h test cycle is presented in table 1.

2.1 Test conditions

Test chamber:	2.1 x 2.0 x 2.1 (m) (W x L x H)
Test voltage:	17,6 kV
Test duration:	5028 hours
Salinity:	7 kg/m^3
Nozzles:	4 pcs according to IEC 60507, 1991
Rain water conductivity:	< 7 µS /cm
UV-radiation:	Xenon Arc lamp
Short circuit current:	Approx. 3A at 17,6 kV
Voltage drop:	< 2 % at 17,6 kV at 250mA resistive current

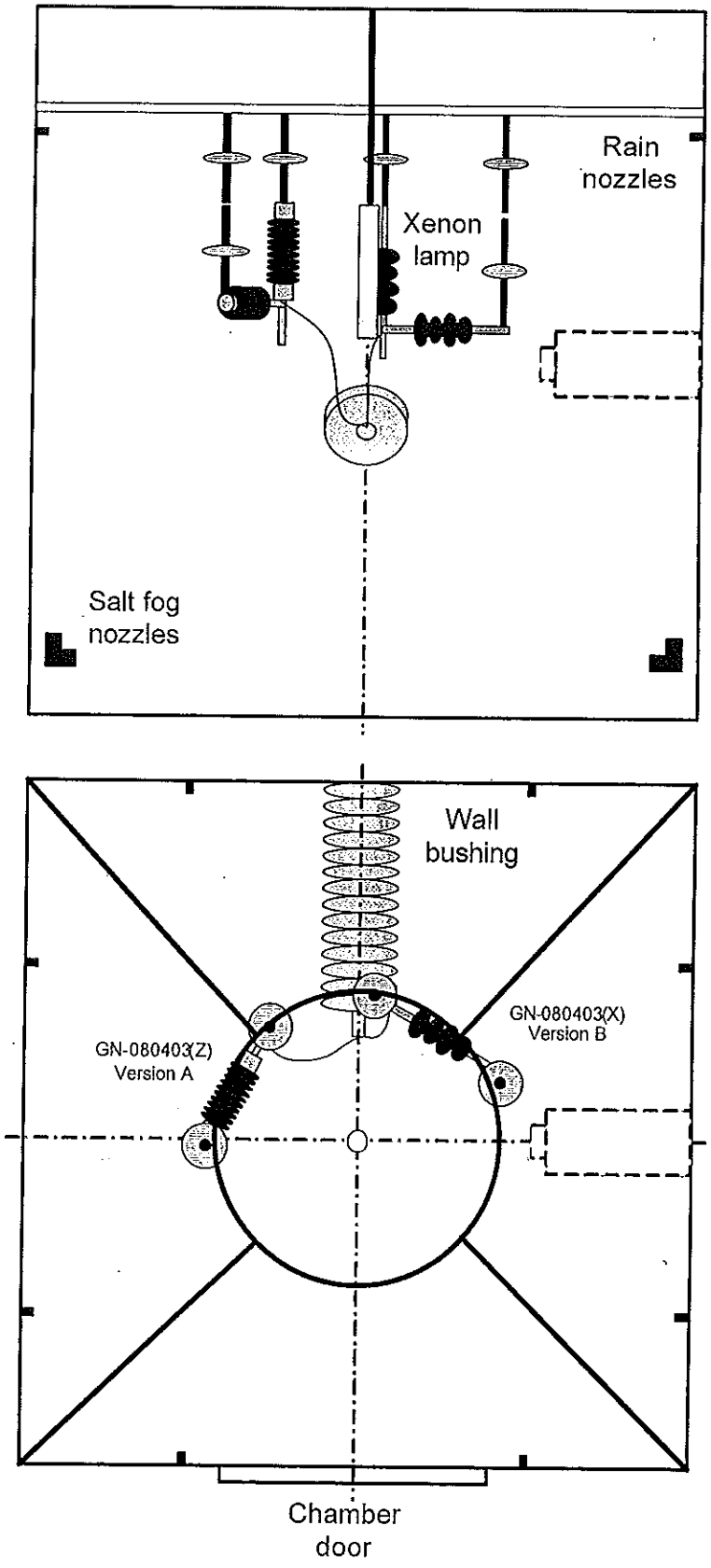
2.2 Test cycle

Time(hours)	00-02	02-04	04-06	06-08	08-10	10-12	12-14	14-16	16-18	18-20	20-22	22-24
Voltage	■	■	■	■	■	■	■	■	■	■	■	■
Artificial rain							■					
Humidity		■							■			
Heating	■	■				■		■	■			
Salt fog			■	■						■	■	
UV-radiation	■				■	■	■	■				■

Table 1

ВЯРНО С ОРИГИНАЛА

3 Test chamber

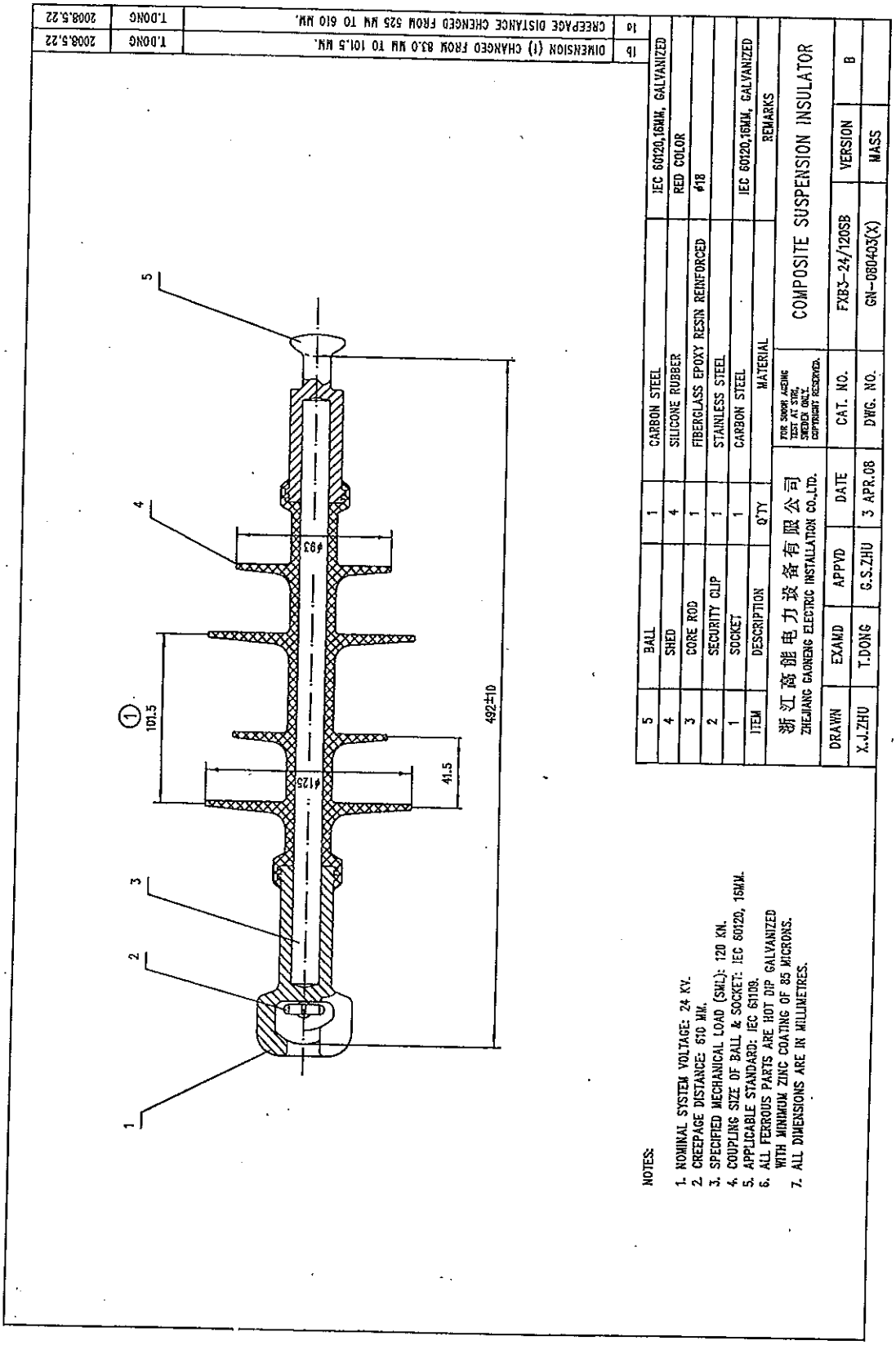


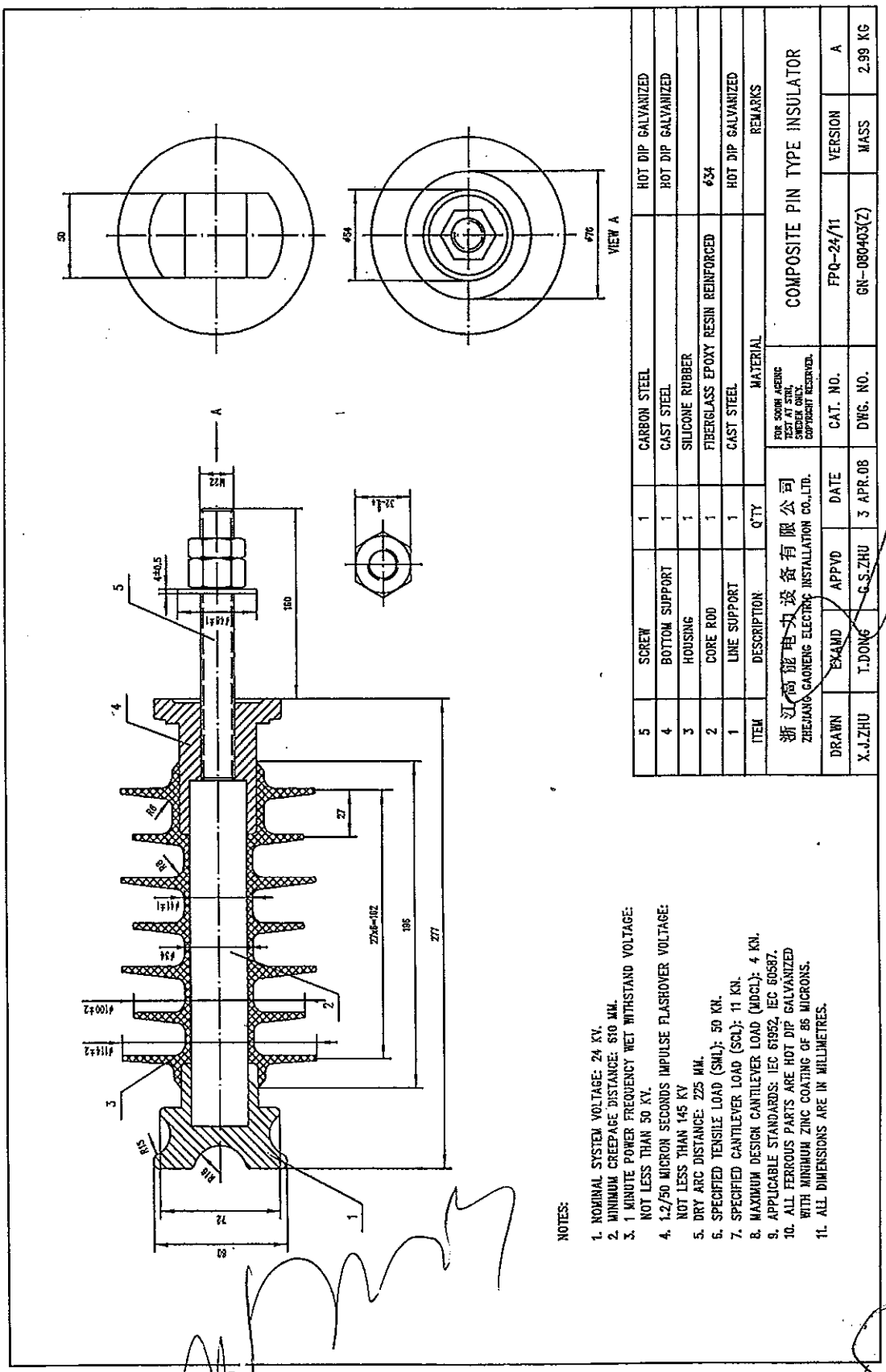
4 Test results

The test objects fulfilled the requirements in accordance with the standard.
No over current trip-out occurred.
No tracking, cracking or treeing on external coating.
No puncture of shed was found.
No erosion down to next layer of material.

ВЯРНО С ОРИГИНАЛА

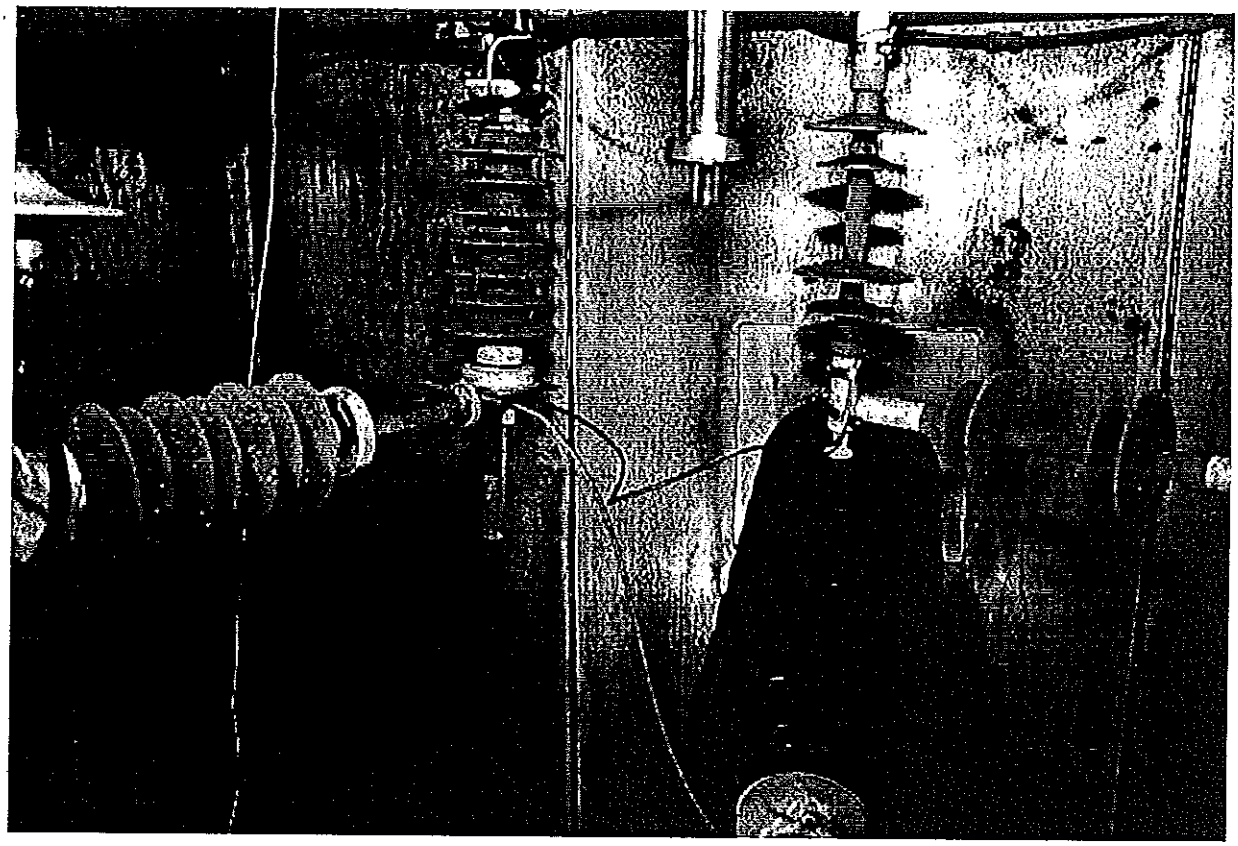
5 Dimension drawings



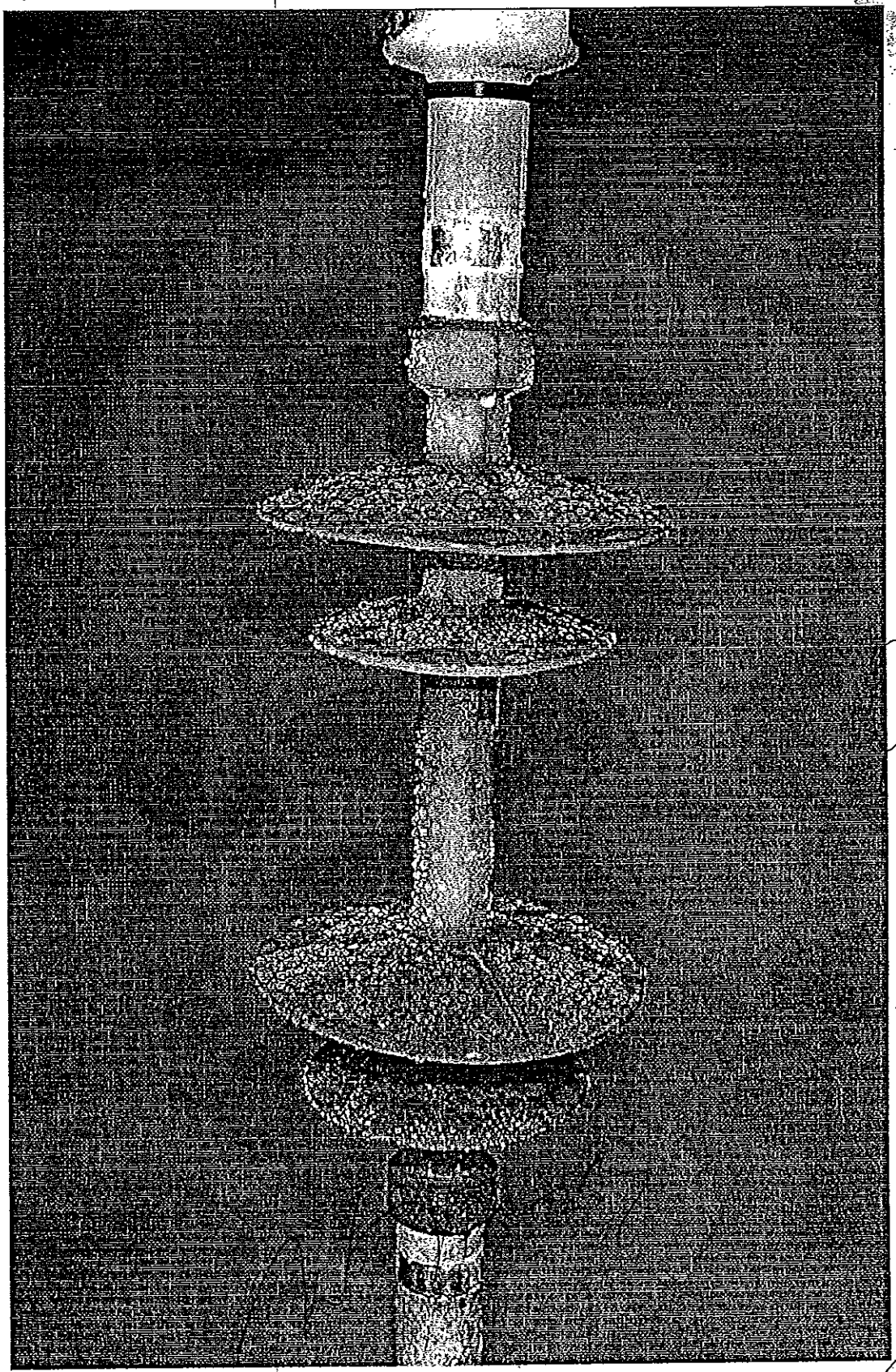


ВЯРНО С ОРИГИНАЛА

6 Photographs of the insulators after the ageing test

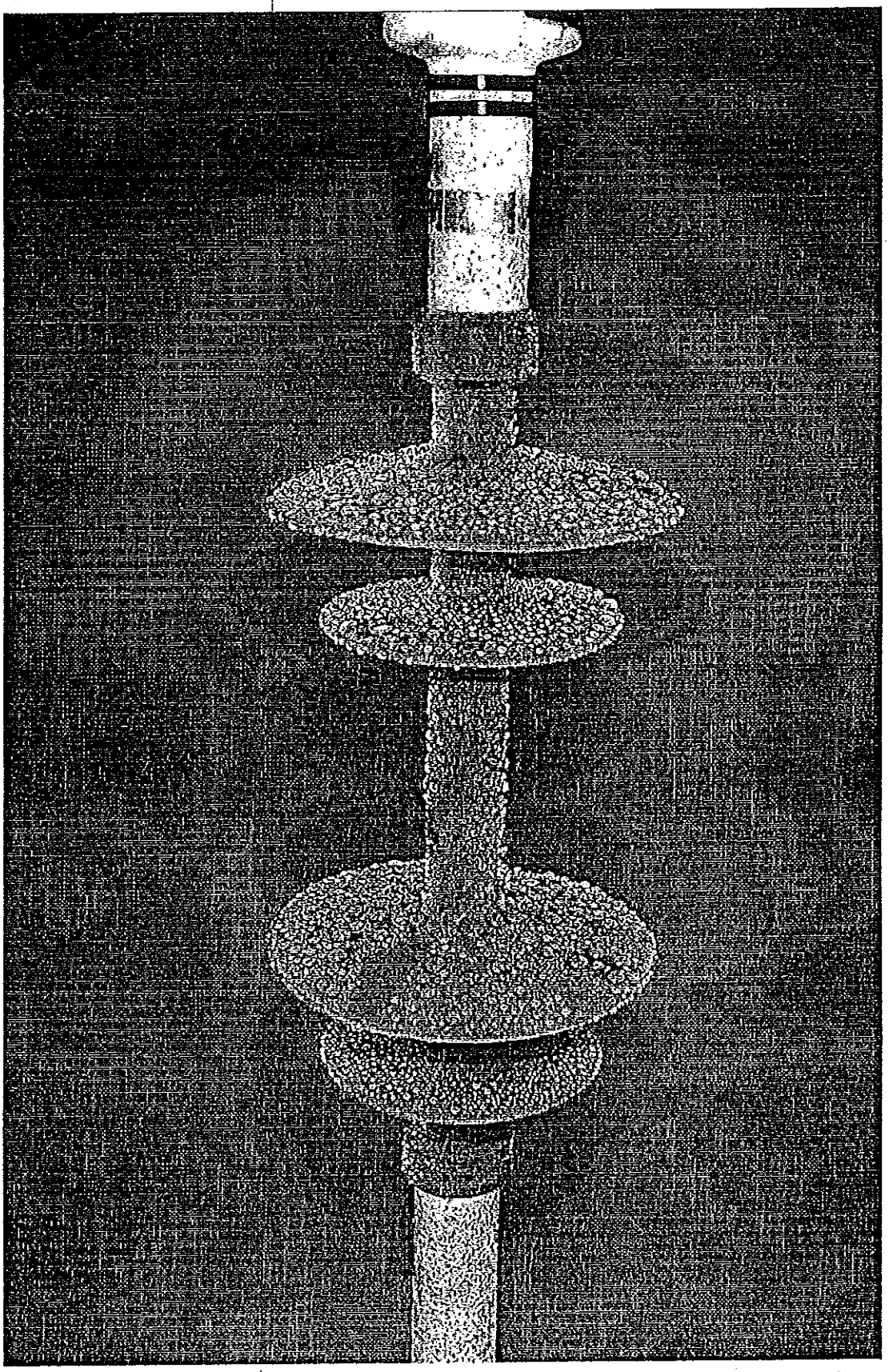


Photograph of the four insulators mounted in the test chamber.

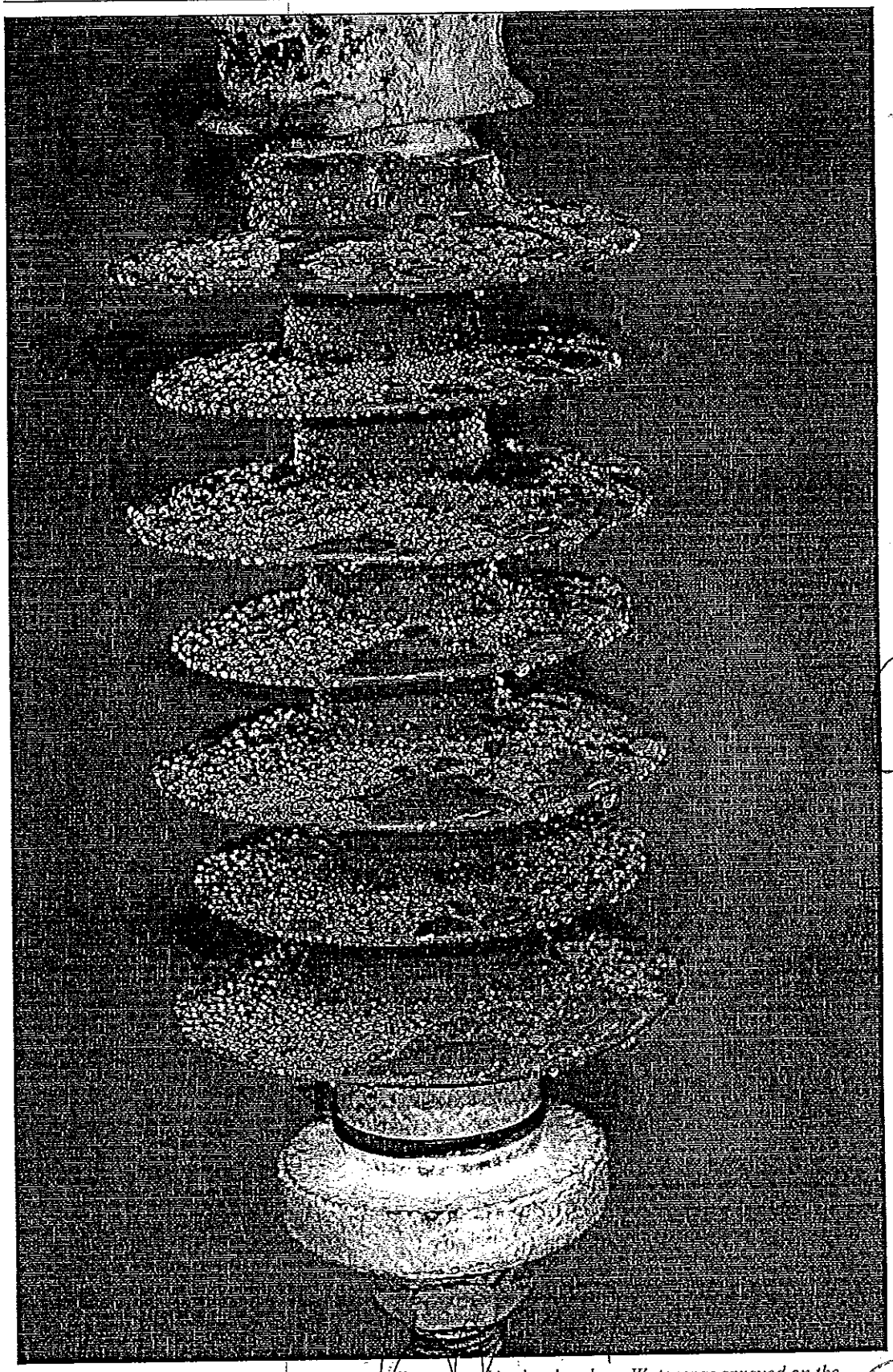


Photograph of sample no.1, which was vertically mounted in the chamber. Water was sprayed on the insulator to show the hydrophobicity condition after the test.

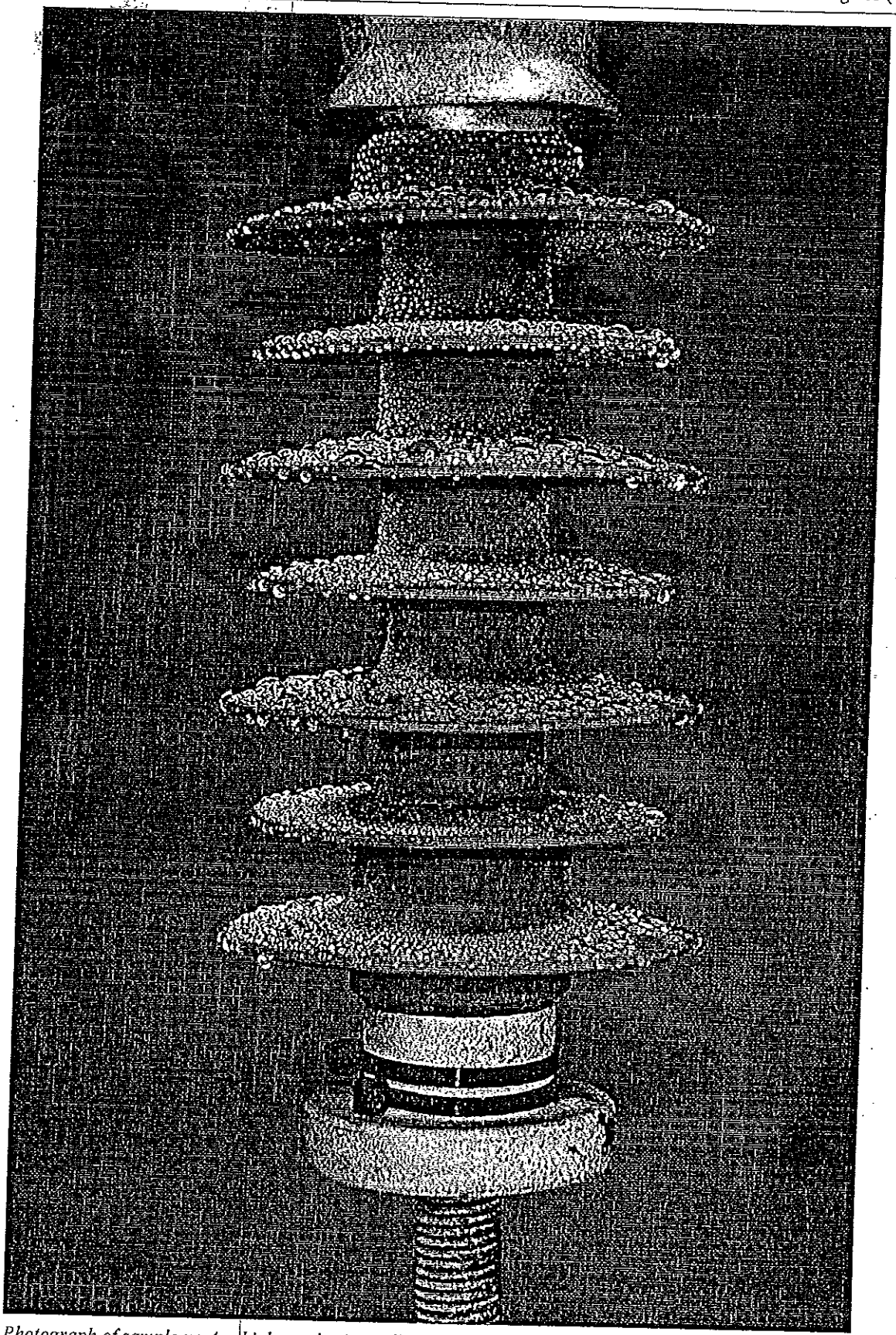
ВЯРНО С ОРИГИНАЛА



Photograph of sample no.2, which was horizontally mounted in the chamber. Water was sprayed on the insulator to show the hydrophobicity condition after the test.



Photograph of sample no.3, which was vertically mounted in the chamber. Water was sprayed on the insulator to show the hydrophobicity condition after the test.



Photograph of sample no.4, which was horizontally mounted in the chamber. Water was sprayed on the insulator to show the hydrophobicity condition after the test.

Приложение 5-Заверени копия на акредитации на независимите изпитвателни лаборатории.

China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L0223)

Xi'an High Voltage Apparatus Research Institute Co., Ltd.

No.18, North Section of Xi'erhuan, Xi'an, Shaanxi, China

is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories(CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence of testing.

The scope of accreditation is detailed in the attached appendices bearing the same registration number as above. The appendices form an integral part of this certificate.

Date of Issue: 2015-06-29

Date of Expiry: 2018-07-26

Date of Initial Accreditation: 1999-08-12

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is the signatory to International Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (ILAC MRA) and Asia Pacific Laboratory Accreditation Cooperation Multilateral Recognition Arrangement (APLAC MRA).

No.CNAS AL 2

0013867

ВЯРНО С ОРИГИНАЛА

Field of Accreditation High-Voltage Testing

STRI is in general accredited for performing tests in accordance with IEC 60060-1 for product standards according to the table below and for the following voltage types and levels:

- AC 2 kV up to 1050 kV
- DC 10 kV up to 1200 kV
- LI 50 kV up to 2600 kV
- SI 100 kV up to 1750 kV
- PD 1 pC up to 2 nC
- Cap 20 pF up to 1 µF
- Tan d $5x10^{-5}$ up to 0.01 rad (0,005 up to 1%)
- RIV 5 up to 5000 µV
- AC current 200 up to 8000 A
- DC current 200 up to 8000 A
- Resistance 10 up to 500 µohm
- Temperature -40°C up to +125°C

Scope of accreditation:

Standard	Edition	Title	Paragraph
ANSI/SAIA A92.2	2015	American National Standard for Vehicle-Mounted Elevating and Rotating Aerial Devices	5.4.2
C225-10	2011-06	Vehicle-Mounted Aerial Devices	5.4

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Standard	Edition	Title	Paragraph
Cigré	TB 496, 2012-04	Recommendations for Testing DC Extruded Cable Systems for Power Transmission at a Rated Voltage up to 500 kV	Whole except 5.2.2
ELECTRA	No. 189, 2000-04	Recommendations for tests of power transmission dc cables for a rated voltage up to 800 kV (ELECTRA 72, 1980 – Revision)	Whole
IEC 60044-8	Ed. 1, 2002-07	Instrument transformers. Part 8: Electronic cur-rent transformers	8.3.2-3, 8.5, 9.2.2
IEC 60060-1	Ed. 3, 2010-09	High-voltage test techniques Part 1: General def-initions and test requirements	Whole, except par 9
IEC 60060-2	Ed. 3, 2010-11	High-voltage test techniques Part 2: Measuring Systems	Whole, except pollution testing with DC
IEC 60076-6	Ed. 1.0, 2007-12	Power transformers – Part 6: Reactors	12.8.12
IEC 60099-4	Ed. 3.0, 2014-06	Surge arresters – Part 4: Metal-oxide surge ar-resters without gaps for a.c. systems	8.2, 8.9.4, 8.11, 8.14, 10.8.14, 10.8.17.2, parts of 11, 12 and 13
IEC 60137	Ed. 7.0, 2017-03	Insulated bushings for alternating voltages above 1 000 V	7.1, 8.1- 8.7, 9.1-9.5
IEC 60143-1	Ed. 5.0, 2015-06	Series capacitors for power systems – Part 1: General	5.1 - 5.6, 5.9 - 5.13
IEC 60168	2001-04	Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nomi-nal voltages greater than 1 000 V	4.1-4.9
IEC 60230	Ed. 1, 1966	Impulse tests on cables and their accessories	Whole
IEC 60270	Ed. 3.1, 2015-11	High voltage test techniques – Partial dis-charge measurements	Whole, except 4.5.2-4.5.4
IEC 60358-1	Ed. 1.0, 2012-06	Coupling capacitors and capacitor dividers	9.2, 10.1-10.4

Standard	Edition	Title	Paragraph
IEC 60358-1	Corr. 1, 2013-06	Coupling capacitors and capacitor dividers. Corrigendum 1.	9.2, 10.1-10.4
IEC 60383-1	1993-04	Insulators for overhead lines with a nominal voltage above 1 000 V Part 1: Ceramic or glass insulator units for a.c. systems Definitions, test methods and acceptance criteria	9-14, 15.1
IEC 60383-2	1993-04	Insulators for overhead lines with a nominal voltage above 1 000 V Part 2: Insulator strings and insulator sets for a.c. systems Definitions, tests methods and acceptance criteria	5-11
IEC 60437	Ed. 2, 1997-09	Radio interference test on high-voltage insulators	Whole
IEC 60502-2	2005-03	Power cables with extruded insulation and their accessories for rated voltages from 1 kV up to 30 kV. Part 2: Cables for rated voltages from 6 kV up to 30 kV.	16.3, 16.4, 18.1.3, 18.1.5, 18.1.7, 18.1.8, 18.2.3, 18.2.4
IEC 60502-4	Ed. 3, 2010-12	Power cables with extruded insulation and their accessories for rated voltages from 1 kV (Um=1,2 kV) up to 30 kV (Um=36 kV) – Part 4: Test requirements on accessories for cables with rated voltages from 6 kV (Um=7,2 kV) up to 30 kV (Um=36 kV	AC dry and wet DC dry PD at ambient PD at Θt Imp. at ambient Imp. at Θt Heat. cycle in air Heat. cycle in water
IEC 60507	Ed. 3, 2013-12	Artificial pollution tests on highvoltage insulators to be used on a.c. systems	Whole
IEC 60660	1999-10	Insulators - Tests on indoor post insulators of or-ganic material for systems with nominal voltages greater than 1 000 V up to but not including 300 kV	3.3-3.6, 5.4
IEC 60700-1	Ed. 2.0, 2015-07	Thyristor valves for high voltage direct current (HVDC) power transmission – Part 1: Electrical testing.	6, 7, 8 (not 8.3.6)
IEC 60811-203	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions	4.2
IEC 60811-401	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven	4.2.1-4.2.5
IEC 60811-501	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 501: Mechanical tests – Tests for determining the mechanical properties of insulating and sheathing compounds	4.2.1-4.2.7 (except 4.2.3 c and 4.2.4 b), 4.3.1-4.3.7 (except 4.3.3 c and 4.3.4 b),

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Standard	Edition	Title	Paragraph
IEC 60811-507	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 507: Mechanical tests – Hot set test for cross-linked materials	4.1-4.4
IEC 60811-508	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 508: Mechanical tests – Pressure test at high temperature for insulation and sheaths	4.2-4.4
IEC 60811-605	Ed. 1.0, 2012-03	Electric and optical fibre cables – Test methods for non-metallic materials – Part 605: Physical tests – Measurement of carbon black and/or mineral filler in polyethylene compounds	4.2
IEC 60840	Ed. 4.0, 2011-11	Power cables with extruded insulation and their accessories for rated voltages above 30 kV up to 150 kV - Test methods and requirements	9.2-9.3, 10.12, 12.4.4-12.4.7, 13.2.4-13.2.5, 13.3.2.4, 14.4b-e, 15.4.2a-f, An-nex E, Annex G (not LI<50 kV)
IEC 60871-1	Ed. 4, 2014-05	Shunt capacitors for a.c. power systems having a rated voltage above 1 000 V. Part 1: General	10, 16
IEC 60871-2	Ed. 3, 2014-11	Routine test	
IEC 60885-2	Ed. 1987 Ed. 1.0, 1987-03	Electrical test methods for electric cables. Part 2: Partial discharge tests	Whole
IEC 60885-3	Ed. 2.0, 2015-04	Electrical test methods for electric cables. Part 3: Test methods for partial discharge measurements on lengths of extruded power cable	Short cables (≤50 meter)
IEC 61071	Ed. 1.0, 2007-01	Capacitors for power electronics.	5.5.2, 5.9
IEC 61109	Ed. 2.0, 2008-05	Composite insulators for a.c. overhead lines with a nominal voltage greater than 1000 V - Defini-tions, test methods and acceptance criteria	10.1, 11.1

Standard	Edition	Title	Paragraph
IEC 61245	Ed. 2.0, 2015-03	Artificial pollution tests on high-voltage insula-tors to be used on d.c. systems	Whole
IEC 61284	Ed. 2, 1997-09	Overhead lines – Requirements and tests for fittings	14
IEC 61284	Corr. 1998-09	Overhead lines – Requirements and tests for fittings. Corrigendum 1.	14
IEC 61325	Ed. 1.0, 1995-03	Insulator for overhead lines with a nominal voltage above 1000 V – Ceramic or glass insulator unit for d.c. systems – Definitions, test methods and acceptance	11-16, 21
IEC 61442	Ed. 2, 2005-03	Test methods for accessories for power ca-bles with rated voltages from 6 kV (Um =7,2 kV) up to 30 kV (Um=36 kV)	4.1-4.3, 5.2-5.3, 7.2, 20
IEC 61462	Ed. 1, 2007-02	Composite hollow insulators – Pressurized and unpressurized insulators for use in elec-trical equipment with rated voltages greater than 1 000 V – Definitions, test methods, acceptance criteria and design recommendations	7.2.2, 7.2.5.3, 7.4.2
IEC 61813	Ed. 1, 2000-10	Live working – Care, maintenance and in-service testing of aerial devices with insulating booms	8.1.2, 8.1.5
IEC 61869-1	2007-10	Instrument transformers – Part 1: General re-quirements	7.2.3.2.1-2
IEC 61869-2	Ed. 1, 2012-09	Instrument transformers – Part 2: Additional requirements for current trans-formers	7.2.2-7.2.3, 7.3.1, 7.4.3
IEC 61869-3	Ed. 1, 2011-07	Instrument transformers – Part 3: Additional requirements for inductive volt-age transformers	7.2.2-7.2.3, 7.3.1-7.3.2, 7.4.3
IEC 61869-5	Ed. 1, 2011-07	Instrument transformers – Part 5: Additional requirements for capacitor volt-age transformers	7.2.2-7.2.4, 7.2.501, 7.3.1, 7.3.501-7.3.504, 7.3.2, 7.4.1, 7.4.3
IEC 61869-5	Corr. 1, 2015	Instrument transformers – Part 5: Additional requirements for capacitor voltage transformers. Corrigendum 1.	7.2.2-7.2.4, 7.2.501, 7.3.1, 7.3.501-7.3.504, 7.3.2, 7.4.1, 7.4.3
IEC 61952	Ed. 2, 2008-05	Insulators for overhead lines – Composite line post insulators for A.C. systems with a nominal voltage greater than 1 000 V – Def-initions, test methods and acceptance criteria	10.2.3, 11.1
IEC 62067	Ed. 2.0, 2011-11	Power cables with extruded insulation and their accessories for rated voltages above 150 kV (Um = 170 kV) up to 500 kV (Um = 550 kV) - Test methods and requirements	9.2-9.4, 10.5, 10.10, 10.12, 10.13, 11.2, 12.4.4-12.4.7, 13.2.4-13.2.5, 13.3.2.4, Annex E, Annex G

ВЯРНО С ОРИГИНАЛА

12

Standard	Edition	Title	Paragraph
IEC 62155	2003-05	Hollow pressurized and unpressurized ceramic and glass insulators for use in electrical equip-ment with rated voltages greater than 1000 V	10.4
IEC 62217	Ed. 2, 2012-09	Polymeric HV insulators for indoor and outdoor use – General definitions, test methods and acceptance criteria	9.2.4, 9.2.7, 9.4.2
IEC 62231	Ed. 1, 2006-02	Composite station post insulators for substations with a.c. voltages greater than 1000 V up to 245 kV - Definitions, test methods and acceptance criteria	8.2.3, 8.2.6, 8.5, 9.2.1-9.2.2
IEC 62271-1	Ed. 2.0, 2017-07	High-voltage switchgear and controlgear – Part 1: Common specifications for alternating current switchgear and controlgear	7.2.7-7.2.4, 7.2.6, 7.2.7.2, 7.2.7.3, 7.2.8.2-7.2.8.4, 7.2.10, 7.2.12, 7.3, 7.4.3, 7.4.4.1-7.4.4.3, 7.9.1.1, 8.2, 8.4, 8.6
IEC 62271-100	Ed. 2.2, 2017-06	High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers (Consolidated version)	6.2.1-6.2.3, 6.2.5, 6.2.6.1, 6.2.6.2, 6.2.7.1-6.2.7.3, 6.2.9, 6.2.11, 6.3, 6.4, 6.9, 7.1, 7.3, 7.5
IEC 62271-102	Ed. 1.2, 2013-02	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earth-ing switches	6.1, 6.2.1 - 9, 6.2.11, 6.3 – 6.5, 6.9, 6.102.3, 6.103, 6.108, 7.1, 7.3, 7.5, 7.101, Annex F
IEC 62271-102	Corr. 4, 2014-06	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches. Corrigendum 4.	6.1, 6.2.1 - 9, 6.2.11, 6.3 – 6.5, 6.9, 6.102.3, 6.103, 6.108, 7.1, 7.3, 7.5, 7.101, Annex F
IEC 62271-108	Ed. 1, 2005-10	High-voltage switchgear and controlgear – Part 108: High-voltage alternating current disconnecting circuit-breakers for rated volt-ages of 72,5 kV and above	6.2-6.3, 6.4.1, 6.5, 6.9.1.1, 6.102.9.4, 6.114.1, 7.1, 7.3
IEC 62271-109	Ed. 2, 2008-11	High-voltage switchgear and controlgear – Part 109: Alternating-current series capacitor by-pass switches	6.2-6.3, 6.4.1, 6.5, 6.9.1.1, 6.101-6.102, 7.1, 7.3
IEC 62271-109	Amd. 1, 2013-05	High-voltage switchgear and controlgear – Part 109: Alternating-current series capacitor by-pass switches. Amendment 1.	6.2-6.3, 6.4.1, 6.5, 6.9.1.1, 6.101-6.102, 7.1, 7.3
IEC 62271-200	Ed. 2.0, 2011-10	High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV	6.2.6.1-6.2.6.2, 6.2.9, 6.2.11, 6.2.101, 6.4.1, 6.5, 6.9.1.1, 6.104, 7.1, 7.3, 7.5, 7.101
IEC 62271-200	Corr. 1, 2015	High-voltage switchgear and controlgear - Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV. Corrigendum 1.	6.2.6.1-6.2.6.2, 6.2.9, 6.2.11, 6.2.101, 6.4.1, 6.5, 6.9.1.1, 6.104, 7.1, 7.3, 7.5, 7.101

Standard	Edition	Title	Paragraph
IEC 62271-203	Ed. 2.0, 2011-09	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV	6.2.6.1-6.2.6.2, 6.2.7.1-6.2.7.3, 6.2.9, 6.2.11, 6.3, 6.4.1, 6.5, 6.9.1.1, 7.1, 7.3, 7.5
IEC 62271-203	Corr. 1, 2013-07	High-voltage switchgear and controlgear - Part 203: Gas-insulated metal-enclosed switchgear for rated voltages above 52 kV. Corrigendum 1.	6.2.6.1-6.2.6.2, 6.2.7.1-6.2.7.3, 6.2.9, 6.2.11, 6.3, 6.4.1, 6.5, 6.9.1.1, 7.1, 7.3, 7.5
IEC 62501	Ed. 1.1, 2014-08	Voltage sourced converter (VSC) valves for high-voltage direct current (HVDC) power transmission – Electrical testing	4 (except 4.4), 7, 8, 8.1, 8.2, 8.3, 8.3.1-8.3.4, 9, 9.1, 9.2, 9.3, 9.3.1-9.3.4
IEC/TR 62730	Ed. 1.0, 2012-03	HV polymeric insulators for indoor and outdoor use tracking and erosion testing by wheel test and 5000 h test	7.2
IEEE std. 4	2013	IEEE Standard Test Techniques for High-Voltage Testing	Whole
IEEE std. 48	2009	Test Procedures and Requirements for Alternating-Current Cable Terminations Used on Shielded Cables Having Laminated Insu-lation Rated 2.5 kV through 765 kV or Ex-truded Insulation Rated 2.5 kV through 500 kV	See validation document
IEEE std. 82	2002	Test Procedure for Impulse Voltage Tests on Insulated Conductors	Whole, except 3.2, 5.3-5.5
IEEE std. 404	2012	Extruded and Laminated Dielectric Shielded Cable Joints Rated 2.5 kV to 500 kV	Whole, except 7.8.2
IEEE C57.13.5	2009	Performance and Test Requirements for In-strument Transformers of a Nominal System Voltage of 115 kV and Above	Whole, except 10.3-10.5, 12.1
IEEE C57.19.00	2004	IEEE Standard General requirements and Test Procedure for Power Apparatus Bush-ings	7.3.1
IEEE C63.4	2014	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	4.2.2
IEC/IEEE 65700-19-03	Ed. 1, 2014-07	Bushings for DC applications	8.1-8.5, 9.1-9.7, 10.1-10.3
CISPR 16-1-1	Ed. 4.0, 2015-09	Specification for radio disturbance and im-munity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus – Measuring apparatus	Quasi-peak de-tector, band B
CISPR 18-2	Ed. 2, 2010-06	Radio interference characteristics of over-head power lines and high-voltage equip-ment. Part 2: Methods of measurement och procedure for determining limits	Quasi-peak de-tector, band B

ВЯРНО С ОРИГИНАЛА

A2

Updated 2017-11-20

Приложение 6- Техническо описание, инструкция за експлоатация, поддържане,транспортиране и съхранение

НИКДИМ ООД Казанлък България
ПРОИЗВОДСТВО НА ЕЛЕКТРОАПАРАТУРА 6100 Казанлък, бул. „23-ти Шипченски Полк" 60
Тел: 0431 / 65016 e-mail: info@nikdim.bg
Факс: 0431 / 65028 web: www.nikdim.bg

ТЕХНИЧЕСКО ОПИСАНИЕ

*ИНСТРУКЦИЯ ЗА ЕКСПЛОАТАЦИЯ И ИЗИСКВАНИЯ ЗА ПОДДЪРЖАНЕ НА КОМПОЗИТНИ ПОДПОРНИ ИЗОЛАТОРИ СРЕДНО НАПРЕЖЕНИЕ ЗА ОТКРИТ МОНТАЖ тип **CLP6-125 / 600***

Техническото описание и инструкцията са предназначени за транспортиране, складиране, монтиране и поддържане на композитни подпорни изолатори за открит монтаж 20 kV, произведени от НИКДИМ ГАОН - - Китай.

1.Предназначение

*Подпорните изолатори от композитни материали за открит монтаж тип **CLP6-125 / 600** , са предназначени за изграждане на външна шинна тоководеща мрежа и окомплектоване на въздушни електрически комутационни апарати. Монтират се вертикално и хоризонтално.*

Описание

Подпорните композитни изолатори за открит монтаж се произвеждат от пръчковидна епоксидна смола сърцевина, усилена със стъклени нишки, обвита с негорим, химически пасивен, електроизолационен полимер с UV защита и водоотблъскващи стрехи. В двата края на пръчковидната сърцевина са запресовани монтажни, горещо поцинковани фитинги от лята стомана с носещ отвор М24 в основата и фиксиращ М10 и спомагателни М8 на горната капа.

***Съответствие** със стандартизационните документи:*

БДС IEC 60273:2003 "Характеристики на подпорни изолатори за работа на закрито и на открито за системи с номинални напрежения, по-високи от 1000 V"

БДС EN 61952:2008 „Изолатори за въздушни електрически линии. Съставен подпорен линеен изолатор за мрежи за променлив ток с номинално напрежение по-голямо от 1000 V. Термини и определения, методи за изпитване и критерии за приемане (IEC 61952:2008)"

БДС EN 62217:2013 „Полимерни изолатори за високо напрежение за използване на открито и на закрито. Общи определения, методи за изпитване и критерии за приемане (IEC 62217:2012)"

БДС EN ISO 1461:2009 „Горещо цинкови покрития на готови продукти от чугун и стомана. Технически изисквания и методи за изпитване (ISO 1461:2009)"

2.Технически данни:

- номинално напрежение:

*Подпорен изолатор тип **CLP6-125 / 600***	*- 24kV*
- номинална честота	*- 50Hz*
- разрушаваща сила на огъване	*- 6 kN*
- тегло	*- 3,2 кг.*
- експлоатационна дълготрайност	*– 30 год.*

НИКДИМ ООД Казанлък България
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Тел: 0431 / 65016 e-mail: info@nikdim.bg
Факс: 0431 / 65028 web: www.nikdim.bg

3. Условия на работа:

- режим на работа	*– продължителен*
- монтаж	*– на открито*
- температура на околната среда -	*- 25°C ÷ +40 °C*
- надморска височина	*– до 1000м*
- влажност на въздуха	*– 100% при 20 °C*

4.Монтаж /замяна/ на подпорни изолатори за закрит монтаж.

4.1 Монтажа се извършва след изключване на напрежението и само от правоспособни лица, притежаващи необходимата квалификационна група.

4.2 Монтират се неподвижно чрез болт М24 към долният фланец на изолатора.

4.3 Към горният фланец чрез фиксиращ болт М10 и спомагателни болтове М8 се монтира тоководещата арматура.

5.Съхранение и транспортиране на подпорни изолатори.

5.1 Изолаторите да се транспортират в стандартни опаковки на производителя. Не се допуска хвърляне, удряне и нанасяне на други механически повреди върху изолаторите.

5.2 Всички изолатори да се съхраняват в закрити помещения, без влага.

януари 2018г.
гр.Казанлък

Приложение 3 към Техническо предложение

За Обособена позиция 3

СРОКОВЕ ЗА ДОСТАВКА

№	Наименование	Мярка	Количество със срок на доставка до 7 кал. дни	Количество със срок на доставка до 30 кал. дни
1	2	3	4	5
1	Изолатор подпорен, композитен, 20 kV, ОМ	бр.	20	70

Забележки:

1/ Срокът на доставките започва да тече от датата на изпращане на поръчката.

2/ Количествата в колона 4, със срок на доставка до 7 /седем/ календарни дни, се доставят след SAP поръчка до посочените в обявлението складове на Възложителя за покриване на спешни нужди на Възложителя.

Възложителят може до поръчва посоченото спешно количество веднъж месечно.

3/ В случай, че крайният срок на доставката съвпада с празничен или неработен ден, то доставката се извършва не по-късно от първия работен ден след изтичането на срока.

4/ При поръчки на Възложителя на количества в рамките на потвърдените от Изпълнителя и недоставени в посочените срокове, ще бъдат налагани неустойки, съгласно условията на договора.

5/ Възложителят може да поръча количества по-малки от посочените в колони 4 и 5.

6/ Възложителят може да поръчва количества по-високи от посочените в колони 4 и 5, като това обстоятелство ще бъде посочено текстово в съответната поръчка изпратена към Изпълнителя. С потвърждението на поръчката, Изпълнителят вписва в същата очаквана дата за доставка на количествата надвишаващи посочените в колони 4 и 5.

7/ Количествата за доставка в колони 4 и 5 са отделни и независими едно от друго.

8/ Количествата за доставка в колона 5 не включват в себе си количествата за доставка в колона 4.

9/ Възложителят има право да направи едновременно поръчки за доставка на количества от колони 4 и 5.

На основание чл.2 от ЗЗЛД

Дата 10.01.2018 г.

ПОДПИС и ПЕЧАТ: инж.Мария Георгиева

(име и фамилия)

Управител

(длъжност на представляващия участника)

Приложение № 4
поставя се в комплекта на техническото предложение
ОБРАЗЕЦ!

Д Е К Л А Р А Ц И Я

за приемане на условията в проекта на рамково споразумение и проекта на конкретен договор, неразделна част от рамковото споразумение

Долуподписаният/-ната/ инж.Мария Георгиева, в качеството ми на Управител

представляващ Никдим ООД, участник в процедура за възлагане на обществена поръчка с реф. № PPD 17-134 и предмет: "Доставка на керамични и композитни изолатори", обособена/и позиция/и №

Обособена позиция 3- Доставка на изолатори подпорни композитни 20kV, за монтиране на открито

ДЕКЛАРИРАМ, ЧЕ:

1. Приемам условията в проекта на рамково споразумение, приложен в документацията за участие.

2. Приемам условията в проекта на конкретен договор, неразделна част от рамковото споразумение, приложен в документацията за участие.

На основание чл.2 от ЗЗЛД

Дата 10.01.2018 г.

Деклар[illegible]иева
[illegible]име, подпис и печат
Управител

Забележка:
Декларацията се подписва от законния представител на участника или от надлежно упълномощено лице, което подава офертата.
Когато участник подава оферта за повече от една обособена позиция, може да бъде изготвена, подписана и подадена само една декларация (според настоящия образец), но на съответното място в декларацията задължително се отбелязват номерата на всички обособени позиции, за които участникът участва. Възможно е по преценка на участника, когато същият участва за повече от една обособена позиция, да изготви и подпише отделни декларации (съобразно настоящия образец) за всяка отделна обособена позиция, за която участва.

Приложение № 5
поставя се в комплекта на техническото предложение
ОБРАЗЕЦ!

ДЕКЛАРАЦИЯ
за срока на валидност на офертата

Долуподписаната инж.Мария Николава Георгиева,
(собствено, бащино, фамилно име)
притежаващ/а лична карта № 646458291, издадена на 26.04.2016г. от МВР гр. София, адрес: гр.София, ул.„Кумата“ 75Д, вх.В, ет.2, ап.5
(постоянен адрес)
в качеството ми на Управител
(посочва се длъжността)
на Никдим ООД,
(посочете наименованието на участника)
участник в процедура за възлагане на обществена поръчка с реф. № PPD 17-134 и предмет: „Доставка на керамични и композитни изолатори“,по обособени позиции:

Обособена позиция 3- Доставка на изолатори подпорни композитни 20kV, за монтиране на открито
(наименование на поръчката)

ДЕКЛАРИРАМ, ЧЕ:

С подаване на настоящата оферта, направените от нас предложения и поети ангажименти за обособени позиции:

Обособена позиция 3- Доставка на изолатори подпорни композитни 20kV, за монтиране на открито

са валидни за срока, посочен в обявлението, считано от крайния с ертите.

На основание чл.2 от ЗЗЛД

Дата 10.01.2018 г.

Декл ргиева
печат/
Управител

Забележка:
Декларацията се подписва от законния представител на участника или от надлежно упълномощено лице, което подава офертата.
Когато участник подава оферта за повече от една обособена позиция, може да бъде изготвена, подписана и подадена само една декларация (според настоящия образец), но на съответното място в декларацията задължително се отбелязват номерата на всички обособени позиции, за които участникът участва. Възможно е по преценка на участника, когато същият участва за повече от една обособена позиция, да изготви и подпише отделни декларации (съобразно настоящия образец) за всяка отделна обособена позиция, за която участва.