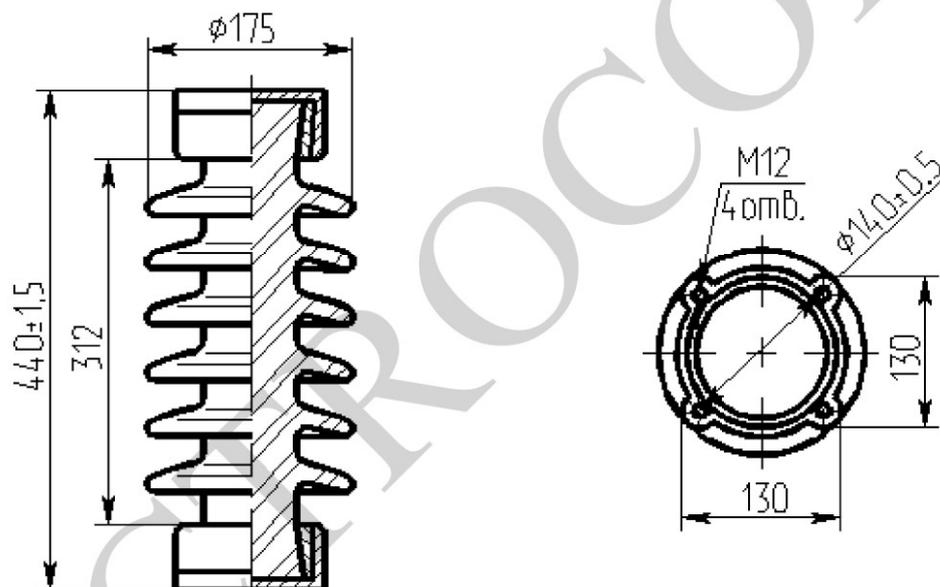
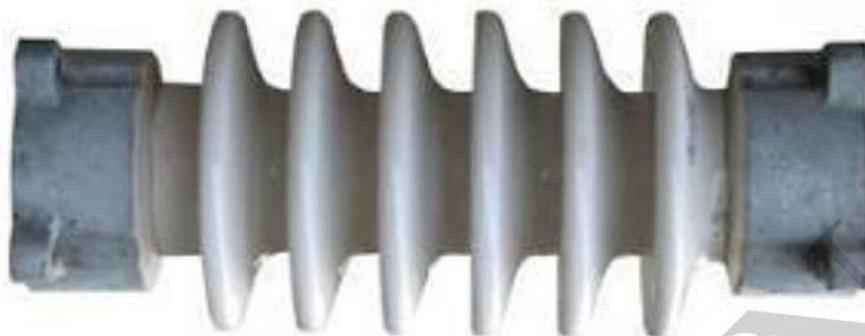


FIȘA TEHNICĂ IZOLATOR DE SUPORT 35 kV TIP 1 (pentru înlocuirea izolatoarelor de tip ИОС-35-500-01 У1)				
Nr crt.	Caracteristica	U.M	Date tehnice solicitate	Date tehnice garantate (oferta furnizor)
PRODUCĂTOR Dalian Hivolt Power System Co.,Ltd				
TIP Porcelain post insulator IOS-35-500-01				
ȚARA DE ORIGINE China				
1	CONDIȚII IMPUSE DE SISTEMUL ENERGETIC			
1.1	Tensiunea nominală a sistemului	kV	35	35
1.2	Tensiunea cea mai ridicată a rețelei	kV	40.5 (52)	40.5 (52)
1.3	Frecvența nominală	Hz	50	50
1.4	Modul de conectare a neutrului rețelei		izolat	izolat
1.5	Durata defectelor cu pământul	ore	minimum 2	minimum 2
1.6	Curentul de scurtcircuit a rețelei la locul de montaj	kA	20	20
2	CONDIȚII CLIMATERICE ȘI DE MEDIU			
2.1	Temperatura mediului ambiant	°C	-40 / +40	-40 / +40
2.2	Radiația solară maxima	kW/m ²	1,1	1,1
2.3	Locul de montaj		exterior	exterior
2.4	Altitudine	m	≤1000	≤1000
2.5	Umiditatea relativă a aerului	%	100	100
2.6	Grosimea stratului de gheață	mm	20	20
2.7	Clasa seismică conform MSK 64		8	8
3	CARACTERISTICI ELECTRICE			
3.1	Tensiunea nominală	kV	35	35
3.2	Nivelul de izolație			
3.2.1	la impuls de trăsnet (1,2/50)	kVmax	190	170 <i>izolator din porțelan IOS 35-500, conform standardului IEC 60273, 170kV fulgerul corespunde înălțimii de 445 mm, iar fulgerul de 195 kV poate fi atins doar cu 475 mm.</i> Vedeti: Clarification letter ИОС
3.2.2	la frecvența industrială (50Hz 1min)	kVef	95	70 Vedeti: Clarification letter ИОС
4	CARACTERISTICI CONSTRUCTIVE			
4.1	Tipul constructiv		de suport	de suport
4.2	Protecția anticorozivă părților metalice		Da	Da
4.3	Materialul izolatorului		Porțelan electrotehnic	Porțelan electrotehnic
4.4	Linia de fugă specifică	cm/kV	≥2,25	2,25
4.5	Rezistența mecanică la încovoiere	kN	≥5	5
4.6	Dimensiunile (conform desenului nr. 3)			
4.6.1	Flanșa de fixare		Rotundă	Rotundă
4.6.2	Dimensiunile flanșei	mm	170	170
4.6.3	Numărul găurilor în flanșa de fixare	buc	4	4
4.6.4	Diametrul găurii în flanșa de fixare	mm	M12	M12
4.6.5	Distanța între centrele găurilor în flanșa de fixare	mm	140±0,5	140±0,5
4.6.6	Înălțimea izolator	mm	440±1,5	440±1,5

Data: 10 martie 2026

SRL „ELECTROCON”
Director General
Nguyen Huu Thuy

Desenul nr. 3 Caracteristici constructive a izolatorului de suport 35 kV tip 1
(pentru înlocuirea izolatoarelor de tip ИОС-35-500-01 Y1) flanșa rotundă

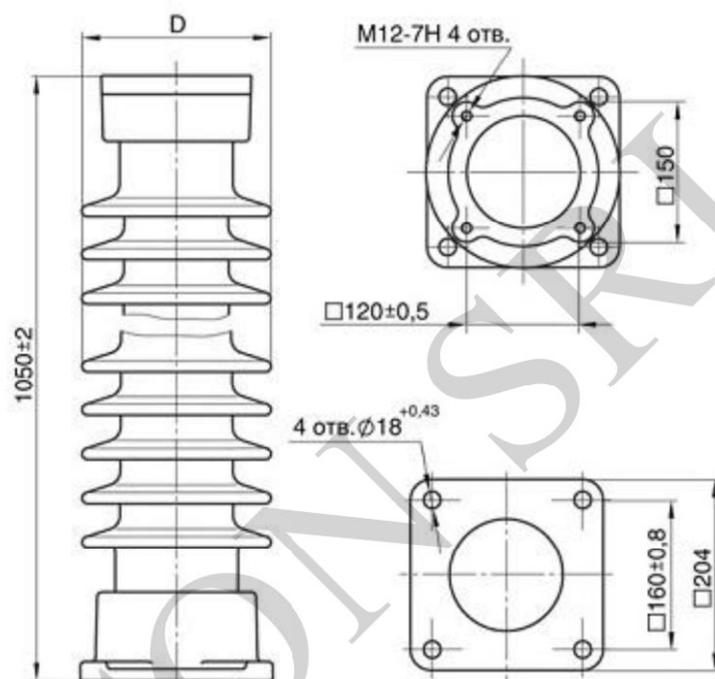


FIȘA TEHNICĂ IZOLATOR DE SUPORT 110 kV TIP 1 (pentru înlocuirea izolatoarelor de tip ИОС-110-400 УХЛ11)				
Nr crt.	Caracteristica	U.M	Date tehnice solicitate	Date tehnice garantate (oferta furnizor)
PRODUCĂTOR Dalian Hivolt Power System Co.,Ltd				
TIP Porcelain post insulator IOS-110-400				
ȚARA DE ORIGINE China				
1	CONDIȚII IMPUSE DE SISTEMUL ENERGETIC			
1.1	Tensiunea nominală a sistemului	kV	110	110
1.2	Tensiunea cea mai ridicată a rețelei	kV	123	123
1.3	Frecvența nominală	Hz	50	50
1.4	Modul de conectare a neutrului rețelei		izolat	izolat
1.5	Durata defectelor	s	3	3
1.6	Curentul de scurtcircuit a rețelei la locul de montaj	kA	63	63
2	CONDIȚII CLIMATERICE ȘI DE MEDIU			
2.1	Temperatura mediului ambiant	°C	-40 / +40	-40 / +40
2.2	Radiația solară maxima	kW/m ²	1,1	1,1
2.3	Locul de montaj		exterior	exterior
2.4	Altitudine	m	≤1000	≤1000
2.5	Umiditatea relativă a aerului	%	100	100
2.6	Grosimea stratului de gheață	mm	20	20
2.7	Clasa seismică conform MSK 64		8	8
3	CARACTERISTICI ELECTRICE			
3.1	Tensiunea nominală	kV	110	110
3.2	Nivelul de izolație			
3.2.1	la impuls de trăsnet (1,2/50)	kVmax	550	550
3.2.2	la frecvența industrială (50Hz 1min)	kVef	230	230
4	CARACTERISTICI CONSTRUCTIVE			
4.1	Tipul constructiv		de suport	de suport
4.2	Protecția anticorozivă părților metalice		Da	Da
4.3	Materialul izolatorului		Porțelan electrotehnic	Porțelan electrotehnic
4.4	Linia de fugă specifică	cm/kV	≥2,25	2,25
4.5	Rezistența mecanică la încovoiere	kN	≥8,0	8,0
4.6	Dimensiunile (conform desenului nr. 4)			
4.6.1	Flanșa de fixare partea de jos		pătrată	pătrată
4.6.1.1	Dimensiunile flanșei	mm	204x204	200x200
4.6.1.2	Numărul găurilor în flanșa de fixare	buc	4	4
4.6.1.3	Diametru găurii în flanșa de fixare	mm	18	18
4.6.1.4	Distanța între centrele găurilor în flanșa de fixare	mm	160±0,8	160±1
4.6.2	Flanșa de fixare partea de sus		rotundă	rotundă
4.6.2.1	Dimensiunile flanșei	mm	150	150
4.6.2.2	Numărul găurilor în flanșa de fixare	buc	4	4
4.6.2.3	Diametru găurii în flanșa de fixare	mm	M12	M12
4.6.2.4	Distanța între centrele găurilor în flanșa de fixare	mm	120±0,5	120±0,5
4.7	Înălțimea izolator	mm	1050±2,0	1050±2,0

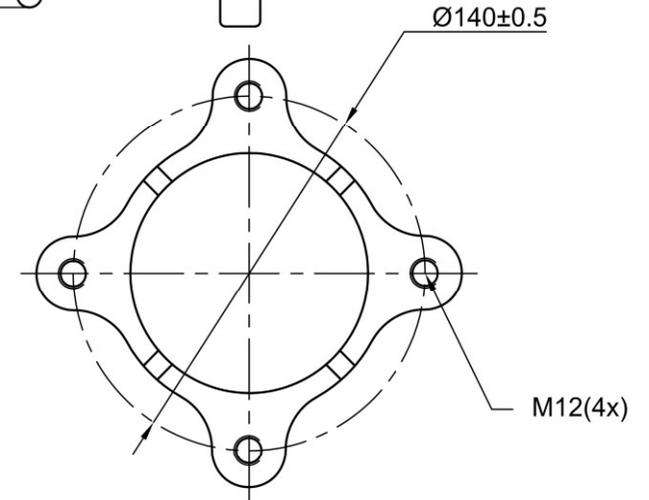
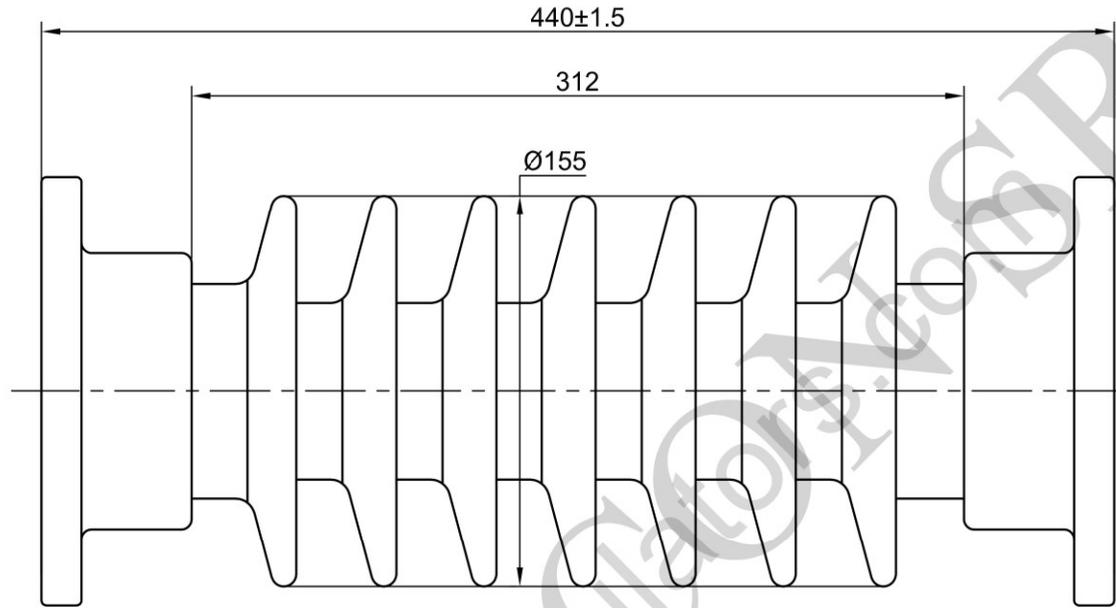
Data: 10 martie 2026

SRL „ELECTROCON”
Director General
Nguyen Huu Thuy

Desenul nr. 4 Caracteristici constructive a izolatorului de suport 110 kV tip 1
(pentru înlocuirea izolatoarelor de tip ИОС-110-400 УХЛ11)



HP308181



Top & Bottom View

ELECTRICAL PROPERTIES

- 1.Lightning Impulse Withstand Voltage 170kV
- 2.Power Frequency Withstand Voltage (Wet) 70kV

PHYSICAL PROPERTIES

- 1.Nominal Creepage Distance 700mm
- 2.Metal Material Galv.cast iron
- 3.Color Brown / Gray

MECHANICAL PROPERTIES

- 1.Cantilever Failing Load 5kN

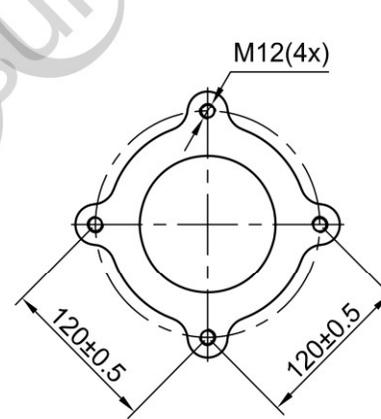
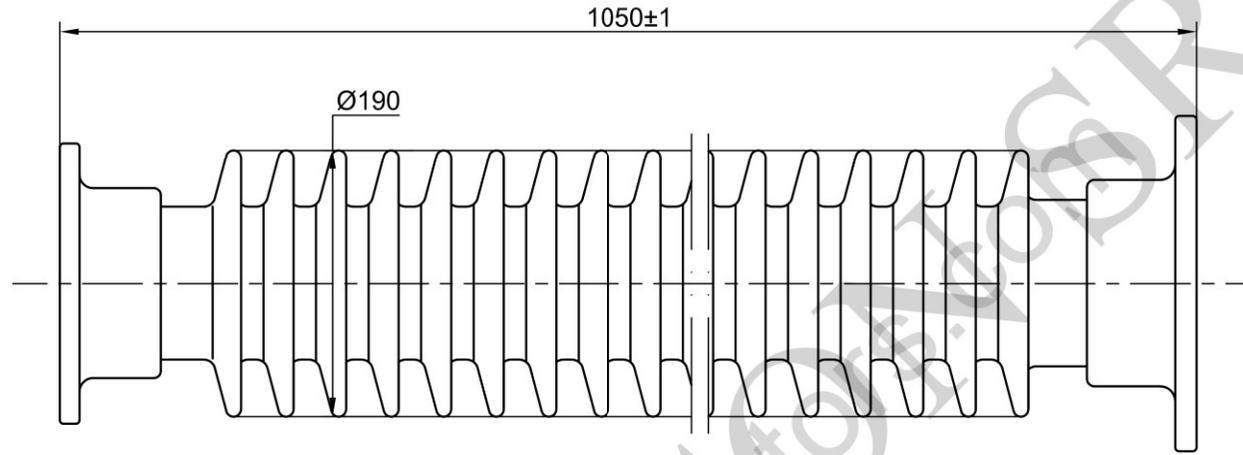
According to Standard:IEC 60168 & KDOP757522.001

Material	Weight	
Porcelain	12kg	
	Date	Name
Drawn	2025-08-18	Wang
Checked		
Approved		

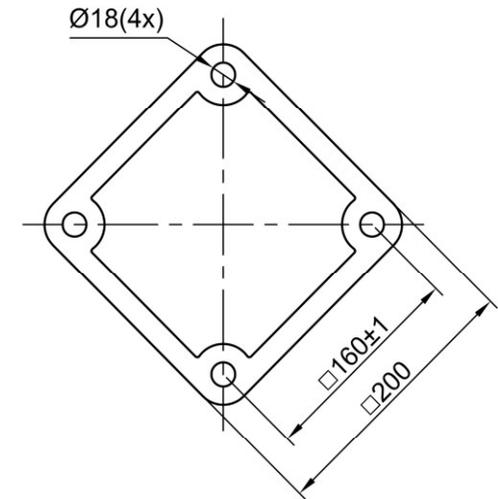
Title WOC-35-500-01 Post insulator	Drawing No. HP308181		
	UNIT mm	SCALE NTS	COLOUR

Hivolt DALIAN HIVOLT POWER SYSTEM CO.,LTD.

HP308182



Top View



Bottom View

ELECTRICAL PROPERTIES

- 1.Lightning Impulse Withstand Voltage 450kV
- 2.Power Frequency Withstand Voltage (Wet) 185kV

PHYSICAL PROPERTIES

- 1.Nom. Creepage Distance 2050mm
- 2.Metal Material Galv.cast iron
- 3.Color Brown / Gray

MECHANICAL PROPERTIES

- 1.Cantilever Failing Load 8kN

According to Standard:IEC 60168 & KDOP757522.001

Material	Weight		Title	Drawing No.		
Porcelain	50kg			HP308182		
	Date	Name	NOC-110-400 Post insulator	UNIT	SCALE	COLOUR
Drawn	2025-08-18	Wang		mm	NTS	
Checked			DALIAN HIVOLT POWER SYSTEM CO.,LTD.			
Approved						



China National Accreditation Service for Conformity Assessment
LABORATORY ACCREDITATION CERTIFICATE
(Registration No. CNAS L0223)

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

(Legal Entity: Xi'an High Voltage Apparatus Research Institute Co., Ltd.)

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

is accredited in accordance with ISO/IEC 17025: 2017 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 to undertake the service described in the schedule attached to this certificate.

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

Effective Date: 2024-07-27

Expiry Date: 2030-07-26

Signed on behalf of China National Accreditation Service for Conformity Assessment

张朝华

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 a signatory of the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA) and the Asia Pacific Accreditation Cooperation Mutual Recognition Arrangement (APAC MRA).

The validity of the certificate can be checked on CNAS website at <http://www.cnas.org.cn/english/findanaccreditedbody/index.shtml>.



Quality Management System Certificate

Certificate No.: 05324Q30540R2S

we hereby certify that

DALIAN HIVOLT POWER SYSTEM CO.,LTD.

Registered/Production/Business/Office Address: No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Quality Management System complies with Standard requirement

GB/T 19001-2016/ISO 9001:2015

The certificate is valid for the following scope:

Manufacture, R&D and marketing of Porcelain insulators, composite insulators & glass insulators

Certificate Date: 15-10-2024

Certificate Valid Date: 15-10-2024~14-10-2027

Date of initial Certification: 25-10-2018

Unified Social Credit Code of the Certified Organization: 91210211588065306E



The validity of this certificate is maintained through regular supervision;
The status of the certificate can be inquired by scanning the QR code,
or it can be found on the official website of the Certification and Accreditation
Administration of the P.R.C(www.cnca.gov.cn).



中国认可
国际互认
管理体系

MANAGEMENT SYSTEM
CNAS C053-M

Zhaotang



Beijing NGV Certification Center Co.,Ltd.

Address: Unit 1101,Unit 2,10/F,Block 2-1,No. 82,East 4th Ring Middle Road,Chaoyang District,Beijing.

Tel: 010-87531300 P.C.:100124 Website: <http://www.ngv.org.cn>



ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00125E32863R3M/3600

We hereby certify that
Dalian Hivolt Power System Co., Ltd

Business Registration Number: 91210211588065306E

No, 75, Huili Street, Ganjingzi District, Dalian, Liaoning Porvince, P.R.China

by reason of its
Environmental Management System
has been awarded this certificate for compliance with the standard
ISO 14001:2015

The Environmental Management System Applies in the following area:
Design,Production,Sales of Insulators for High-voltage Transmission and Transformation and Related Management Activities

Valid from: June 04, 2025

Valid until: June 13, 2028

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.

Please access www.cqc.com.cn for checking validity of the certificate.

This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).



谢肇煦
Signed by: Xie ZhaoXu

MEMBER OF



中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

Section 9, No. 188, Nansihuan Xilu, Beijing 100070 P. R. China

<http://www.cqc.com.cn>



OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00125S32261R3M/3600

We hereby certify that
Dalian Hivolt Power System Co., Ltd

Business Registration Number: 91210211588065306E

No.75,Huili Street,Ganjingzi District,Dalian,Liaoning Province,P.R.China

by reason of its

Occupational Health and Safety Management

has been awarded this certificate for compliance with the standard

ISO 45001:2018

The Occupational Health and Safety Management Applies in the following area:

Design,Production,Sales of Insulators for High-voltage Transmission and Transformation and Related
Management Activities

Valid from: March 25, 2025

Valid until: April 01, 2028

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.

Please access www.cqc.com.cn for checking validity of the certificate.

This certificate and its relevant information can query in the website of Certification and Accreditation Administration of
the People's Republic of China (www.cnca.gov.cn).



谢肇煦
Signed by: Xie ZhaoXu



中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

Section 9, No. 188, Nansihuan Xilu, Beijing 100070 P. R. China

<http://www.cqc.com.cn>



No. WJ-189-2008(E)

国家绝缘子避雷器质量监督检验中心

CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION
AND TEST OF INSULATORS AND SURGE ARRESTERS

检验报告 TEST REPORT

C10-550

Object **Outdoor antipollution-type solid-core**
 产品名称 **post insulators of ceramic material**

Client **Dalian Hivolt Power System Co., Ltd.**
 客户名称

Classification **Prototype tests**
 检验类别

国西安
XIAN P.R CHINA

2008 年 08 月 25 日

25 Aug. 2008



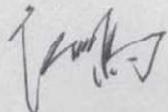
**CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION AND
TEST OF INSULATORS AND SURGE ARRESTERS**

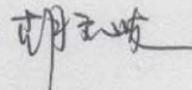
No.WJ-189-2008(E)

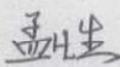
TEST REPORT

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Test object	Outdoor antipollution-type solid-core post insulators of ceramic material
Type	C10-550
Trade mark	Hivolt
Manufacturer	Dalian Hivolt Power System Co.,Ltd.
Client	
Address	No.137-139,Changxing Str. Shahekou District, Dalian, China
Telephone	+86 411 62655875
Fax	+86 411 39858800
Test classification	Prototype tests
Test items	All test items see Page 2 of this report
Reception date	26 Jul., 2008
Sample number	6
Series	No.1~No.6
Test date	26 ~ 30 Jul., 2008
Test basis	<ol style="list-style-type: none"> 1. IEC 60168:1994 Tests on indoor and outdoor post insulators of ceramic material or glass for systems with nominal voltage greater than 1000V 2. IEC 60273:1990 Characteristics of indoor and outdoor post insulators for systems with nominal voltages greater than 1000V 3. The drawing of sample
Test conclusion	<p>The insulator passed all prototype test items and is deemed to meet the test basis satisfactory.</p> <p align="right">Confirmed on 25 Aug. 2008</p>
Remarks	The drawing number is C10-550

Approved: 

Checked: 

Reported: 



**CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION AND TEST
OF INSULATORS AND SURGE ARRESTERS**

WJ-189-2008(E)

TEST REPORT

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Test items

Routine tests	1	Visual inspection
	2	Bending withstand load test in four directions
Sample tests	3	Verification of the dimensions and tolerance verification of form and assembly position
	4	Temperature cycle test
	5	Mechanical failing load test
	6	Porosity Test
	7	Galvanizing test
Type tests	8	Dry lightning impulse withstand voltage tests
	9	Wet power frequency withstand voltage test
	10	Mechanical failing load test
Special tests	11	Test for deflection under load
	12	Radio interference test

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Routine tests

1 Visual inspection

Specimens No.1 ~ No.6 had fair appearance. All specimens were covered by a smooth and shining hard glaze free from crazes. No defects exceeding standard permission were observed. Met the standards satisfactory.

2 Bending withstand load test in four directions

Specimen No.	Load applied kN	Duration s	Result
1	5	3	No damage
2	5	3	No damage
3	5	3	No damage
4	5	3	No damage
5	5	3	No damage
6	5	3	No damage
Specifications	5.0, (50%×10)	≥3	No damage

The result met the test basis.

The results of routine tests met the test basis.

Sample tests

2 Verification of the dimensions and tolerance verification of form and assembly position

2.1 Individual units

Unit: mm

Specimen No.	Height	Creepage distance
1	1220.2	3199
2	1221.0	3209
3	1220.1	3214
4	1220.6	3196
5	1220.4	3203
6	1220.8	3208
Specifications	1220±1.5	≥3150

The result met the test basis.

2.2 Form and assembly position

Unit: mm

Specimen No.	Linearity	Parallelism between the flanges	Coaxiality between flanges	Angle deviation of fixing holes (°)	Distance between against fixing hole center (top/bottom)
1	1.5	0.2	1.2	0.35	127.1/127.1
2	1.0	0.2	1.1	0.25	127.1/127.1
3	1.5	0.1	1.2	0.30	127.1/127.1
4	1.0	0.2	1.3	0.25	127.1/127.1
5	1.0	0.2	1.1	0.30	127.1/127.1
6	1.5	0.1	1.2	0.30	127.1/127.1
Specifications	≤11.3	≤0.61	≤4.4	≤1	127/127

The result met the test basis.

**CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION AND
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4 Temperature cycle test

Specimens No.1 ~ No.6 passed the temperature cycle test satisfactory, the temperature of hot water at 76°C was 50K higher than that of the cold water, specimens withstood 3 cycles of hot and cold bathing for 60min each.

5 Mechanical failing load test

5.1 Bending load test

5.1.1 Bending load test

Specimen No.	Load applied kN	Result
2	10	No damage
3	10	No damage
Specifications	10	No damage

The result met the test basis.

5.1.2 Bending failing load test

Specimen No.	Load applied kN	Failing status
2	16.78	Ceramic breakage near bottom flange
3	19.38	Ceramic breakage near bottom flange
Specifications	≥10	/

Provide datum only.

5.2 Torsion load test

5.2.1 Torsion load test

Specimen No.	Load applied kN·m	Result
4	4	No damage
5	4	No damage
Specifications	4	No damage

The result met the test basis.

5.2.2 Torsion failing load test

Specimen No.	Load applied kN·m	Result
4	9.42	slippage of top unit
5	8.82	slippage of top unit
Specifications	≥4	/

Provide datum only.

6 Porosity Test

Ceramic fragments from the specimens after item 5 and item 10 were immersed in a 3% alcohol solution of fuchsin. Under a pressure of 20MPa for 9h, No fragments had revealed any dye penetration, All specimens were successfully passed.

**CHINA NATIONAL CENTRE FOR QUALITY SUPERVISION AND
TEST OF INSULATORS AND SURGE ARRESTERS**

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7 Galvanizing test

Unit: μm

Specimen No.	The min. value of single specimen		The average value of single specimen		The average value of all specimens	
	Top fittings	Bottom fittings	Top fittings	Bottom fittings	Top fittings	Bottom fittings
1	106	105	127	132	121	129
2	72	95	111	125		
3	87	92	122	130		
Specifications	/		≥ 70		≥ 85	

The result met the test basis.

The results of sample tests met the test basis.

Type tests

8 Dry lightning impulse withstand voltage test

$t_d=28.0^\circ\text{C}$, $t_w=24.5^\circ\text{C}$, $P=96.2\text{kPa}$, the arc distance $L=1092\text{mm}$

Specifications: 550kV , correction coefficient $K_f=1.028$, corrected voltage: 565.4kV

Specimen No.	Times	Voltage applied kV	Result
1	Positive polarity 15 times	569~572	No flashover
	Negative polarity 15 times	568~573	No flashover
Specifications	15	≥ 565.4	Flashover less than 2 times

The result met the test basis.

9 Wet power frequency withstand voltage test

$t_d=28.0^\circ\text{C}$, $t_w=24.5^\circ\text{C}$, $t_{\text{water}}=26.0^\circ\text{C}$, $P=96.3\text{kPa}$, the arc distance $L=1092\text{mm}$

Resistivity of water $\rho_{26.0}=89.5\Omega\cdot\text{m}$, corrected resistivity $\rho_{20}=101.1\Omega\cdot\text{m}$

Precipitation rate: horizontal component is $1.44\text{mm}/\text{min}$, vertical component is $1.34\text{mm}/\text{min}$.

Specified voltage: 230kV , correction coefficient $K=0.974$, corrected voltage: 224.0kV

Specimen No.	Voltage applied kV	Duration s	Result
1	230	60	No flashover
Specifications	≥ 224.0	60	No flashover

The result met the test basis.

10 Mechanical failing load test

10.1 Bending load test

10.1.1 Bending load test

Specimen No.	Load applied kN	Result
1	10	No damage
Specifications	10	No damage

The result met the test basis.

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10.1.2 Bending failing load test

Specimen No.	Load applied kN	Failing status
1	17.74	Ceramic breakage near bottom flange
Specifications	≥10	/

Provide datum only.

10.2 Torsion load test

10.2.1 Torsion load test

Specimen No.	Load applied kN·m	Result
6	4	No damage
Specifications	4	No damage

The result met the test basis.

10.2.2 Torsion failing load test

Specimen No.	Load applied kN·m	Result
6	8.84	slippage of top unit
Specifications	≥4	/

Provide datum only.

The results of type tests meet the test basis.

Special tests

11 Test for deflection under load

Specimen No.	deflection at the top surface mm		
	2kN, (20%×10)	5 kN, (50%×10)	7 kN, (70%×10)
1	4	7	9
2	3	7	9
3	3	8	8

Provide datum only.

12 Radio interference test

$t_d=29.0^{\circ}\text{C}$, RH=67%, P=96.0kPa

Measured frequency: 1.0MHz, back ground noise:6dB, sample mounted: vertical

Specimen No.	Voltage applied kV	Result	
		dB	μV
2	81	42	125.9
Specifications	81, (1.1×U _p)	/	≤500

The result met the test basis.

Test Performed:
ZHONG yan dong
MENG fan sheng
LIU zhi qiang
ZHAO lei



Routine & Sample test report

Report No. : HV24072HU03-2

Product Name: Porcelain post insulator

ИОС-35-500 – 01 УХЛ1

Date of Report: 02.09.2024

Tested by:

杨桂荣

Approved by :

李勇

Inspection Department of Dalian Hivolt Power System Co.,Ltd.



CONTENT

Brief information

Test Object: Porcelain post insulator

Type: ИОС-35-500 – 01 УХЛ1(brown0

Quantity: 200pcs

Sample quantity : 2pcs

Test Standard: IEC 60168 & IEC 60273 standard and the requirements of the drawing.

Test items

Routine tests:

1. Routine visual Inspection;

Sample Test:

2.1 Verification of the dimensions;

2.2 Temperature cycle test

2.3 Mechanical failing load test

2.4 Porosity test

2.5 Galvanizing test.



TEST RESULTS

1. ROUTINE TESTS

1.1 ROUTINE VISUAL INSPECTION

The insulators were tested one by one, Glazed surface is smooth, no defect exceeding the requirements. Marking under glaze is legible. The results showed the insulators were passed the visual inspection.

2. SAMPLE TESTS

2 samples were selected at random after the routine test, the samples were tested as following item:

2.1 VERIFICATION OF THE DIMENSIONS

2 samples were tested, the results showed as following:

Sample No.		Required value	1	2
Height	mm	440±1	440.3	440.0
Creepage distance	mm	≥750	847	847

2 top units were tested, the results showed as following:

Sample No.		Required value	1-1	2-1
Eccentricity	mm	≤2.9	1.0	0.4
Parallelism of the end faces	mm	≤0.5	0.2	0.4
Camber	mm	≤5.02	1.2	0.6
Angular deviation of fixing holes	°	≤1	0.2	0.8
Pitch circle diameter	top	mm	Φ99±1	99.0
	bottom	mm	Φ99±1	99.0
N/diameter of fixing holes	top	mm	4-M12	OK
	bottom	mm	4-M12	OK

2.2 TEMPERATURE CYCLE TEST

Sample No.	Hot pool		Cool pool		Temp. difference ≥50K	Recycle Times	Remark
	Temp.	Time	Temp.	Time			
1~2	73℃	30min	22℃	30min	51K	3	Passed



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2.3 MECHANICAL FAILING LOAD TEST

2.3.1 CANTILEVER FAILING LOAD TEST

Sample No.	Required value kN	Actual Value kN	Breakage condition	Results
1	≥5	23.5	Porcelain	Passed
2	≥5	22.0	Porcelain	Passed

2.4 POROSITY TESTS

Sample No.	Pressure requirement	Actual Product of pressure and time	Test results
(1)~(4)	Not less than 15MPa	Not less than 180MPa·h	No penetration appeared, this item of test has been passed.

2.5 GALVANIZING TEST

The top units have two flanges, top flange and bottom flange were tested, the results were given as follows:

Unit: μm

Sample No.	Average thickness of individual samples ≥ 70		Average thickness of all samples ≥ 85	Results
	1-1	2-1		
Top flange	138	140	139.0	Passed
Bottom flange	136	152	144.0	Passed

Conclusion

The insulators passed all the test items and deemed satisfactory to meet the test basis.

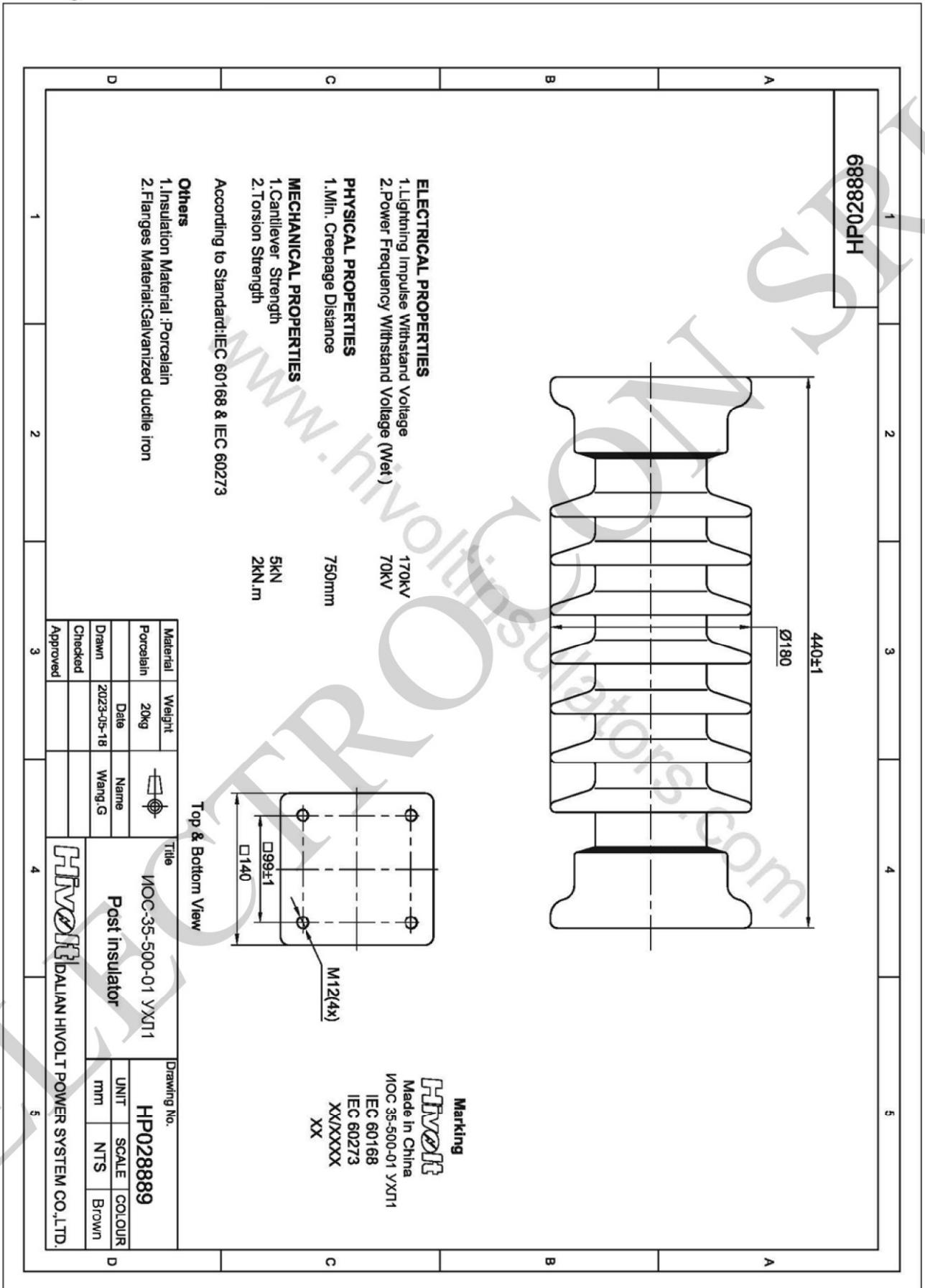




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Drawing:





Clarification letter

About porcelain post insulator IOC 35-500, according to IEC 60273 standard, 170kV lightning corresponds to the height of 445mm, and 195kV lightning can be reached only with 475mm.

273 © IEC

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TABLEAU IV

*Supports isolants cylindriques d'extérieur,
en matière céramique ou en verre,
à armatures métalliques externes*

TABLE IV

*Outdoor cylindrical post insulators
of ceramic material or glass
and with external metal fittings*

1 Designation du support isolant Post insulator designation	2 Tension de tenue aux chocs de foudre Lightning impulse withstand voltage	3 Tension de tenue aux chocs de manœuvre, sous pluie Switching impulse withstand voltage, wet	4 Tension de tenue à fréquence industrielle, sous pluie Power-fre- quency with- stand voltage, wet	5 Hauteur du support isolant Height of post insulator	6 Longueur minimale nominale de la ligne de fuite Minimum nominal creepage distance		8 Diamètre nominal maximal de la partie isolante Maxi- mum nominal diameter of insu- lating part	9 Charge de rupture Faiting load A la flexion Bending A la torsion Torsion		11 Diamètre du cercle de fixation de l'armature métallique du sommet Top metal fitting pitch circle diameter	12 Diamètre du cercle de fixation de l'armature métallique de la base Bottom metal fitting pitch circle diameter
					7 Classe Class I	7 Classe Class II		9 F (N)	9 M (Nm)		
C4-60 C6-60 C8-60 C10-60	60	—	20	190 ± 1	120	190	175	4 000	600	76	76
175							6 000	600			
185							8 000	800			
185							10 000	1 000			
C4-75 C6-75 C8-75 C10-75	75	—	28	215 ± 1	190	280	180	4 000	600	76	76
180							6 000	600			
190							8 000	800			
190							10 000	1 000			
C4-95 C6-95 C8-95 C10-95 C12,5-95	95	—	38	255 ± 1	280	380	190	4 000	800	76	76
190							6 000	800			
190							8 000	1 200			
210							10 000	1 200			
210							12 500	1 800			
C4-125 C6-125 C8-125 C10-125 C12,5-125	125	—	50	305 ± 1	380	500	195	4 000	800	76	76
195							6 000	800			
195							8 000	1 200			
230							10 000	1 200			
230							12 500	2 000			
C4-150 C6-150 C8-150 C10-150 C12,5-150	150	—	50	355 ± 1	450	660	195	4 000	1 000	76	76
195							6 000	1 200			
195							8 000	1 500			
235							10 000	1 800			
235							12 500	2 500			
C4-170 C6-170 C8-170 C10-170 C12,5-170	170	—	70	445 ± 1	580	850	205	4 000	1 200	76	76
205							6 000	1 500			
205							8 000	2 000			
245							10 000	2 500			
245							12 500	3 000			
C4-200 C6-200 C8-200 C10-200 C12,5-200	200	—	70	475 ± 1	680	950	210	4 000	1 200	76	76
210							6 000	1 800			
210							8 000	2 000			
245							10 000	2 500			
245							12 500	3 000			
C4-250 C6-250 C8-250 C10-250 C12,5-250	250	—	95	560 ± 1	835	1 200	215	4 000	1 800	76 ou/or 127	76 ou/or 127
215							6 000	2 000			
215							8 000	2 500			
255							10 000	3 000			
255							12 500	4 000			

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Dalian Hivolt Power System Co., Ltd.

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ELECTROCON SRL

Add. : No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Tel : +86 411-8495 0806 Web. : www.hivoltinsulators.com E-mail: canning@hivoltinsulators.com

TABLEAU IV

Supports isolants cylindriques d'extérieur,
en matière céramique ou en verre,
à armatures métalliques externes

TABLE IV

Outdoor cylindrical post insulators
of ceramic material or glas
and with external metal fittings

1	2	3	4	5	6		8	9		11	12
					Longueur minimale nominale de la ligne de fuite			Charge de rupture			
Désignation du support isolant Post insulator designation	Tension de tenue aux chocs de foudre Lightning impulse withstand voltage	Tension de tenue aux chocs de manœuvre, sous pluie Switching impulse withstand voltage, wet	Tension de tenue à fréquence industrielle, sous pluie Power-frequency withstand voltage, wet	Hauteur du support isolant Height of post insulator	Minimum nominal distance		Diamètre nominal maximal de la partie isolante Maximum nominal diameter of insulating part	A la rupture		Diamètre du cercle de fixation de l'armature métallique du sommet Top metal fitting pitch circle diameter	Diamètre du cercle de fixation de l'armature métallique de la base Bottom metal fitting pitch circle diameter
					Classe Class I	Classe Class II		A la flexion Bending	A la torsion Torsion		
	(kV)	(kV)	(kV)	h (mm)	(mm)	(mm)	D (mm)	P_b (N)	(Nm)	(mm)	(mm)
C4-60	60	—	20	190 ± 1	120	190	175	4 000	600	76	76
C6-60							175	6 000	600	76	76
C8-60							185	8 000	800	76	76
C10-60							185	10 000	1 000	76	76
C4-75	75	—	28	215 ± 1	190	280	180	4 000	600	76	76
C6-75							180	6 000	600	76	76
C8-75							190	8 000	800	76	76
C10-75							190	10 000	1 000	76	76
C4-95	95	—	38	255 ± 1	280	380	190	4 000	800	76	76
C6-95							190	6 000	800	76	76
C8-95							190	8 000	1 200	76	76
C10-95							210	10 000	1 200	76	76
C12,5-95							210	12 500	1 800	76	76
C4-125	125	—	50	305 ± 1	380	500	195	4 000	800	76	76
C6-125							195	6 000	800	76	76
C8-125							195	8 000	1 200	76	76
C10-125							230	10 000	1 200	76	76
C12,5-125							230	12 500	2 000	76	76
C4-150	150	—	50	355 ± 1	450	660	195	4 000	1 000	76	76
C6-150							195	6 000	1 200	76	76
C8-150							195	8 000	1 500	76	76
C10-150							235	10 000	1 800	76	76
C12,5-150							235	12 500	2 500	76	76
C4-170	170	—	70	445 ± 1	580	850	205	4 000	1 200	76	76
C6-170							205	6 000	1 500	76	76
C8-170							205	8 000	2 000	76	76
C10-170							245	10 000	2 500	76	76
C12,5-170							245	12 500	3 000	127	127
C4-200	200	—	70	475 ± 1	680	950	210	4 000	1 200	76	76
C6-200							210	6 000	1 800	76	76
C8-200							210	8 000	2 000	76	76
C10-200							245	10 000	2 500	76	76
C12,5-200							245	12 500	3 000	127	127
C4-250	250	—	95	560 ± 1	835	1 200	215	4 000	1 800	76 ou/or 127	76 ou/or 127
C6-250							215	6 000	2 000	76 ou/or 127	76 ou/or 127
C8-250							215	8 000	2 500	127	127
C10-250							255	10 000	3 000	127	127
C12,5-250							255	12 500	4 000	127	127

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(Continued on page 34)



OVERSEAS SALES REFERENCE LIST—2020 to 2025

Country	Company	Type	Qty(pcs)	Year
Russia	JSC	C8-1050-7595	3600	2020.1
Russia	JSC	032	1352	2020.2
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C6-550-3150	2363	2020.2
Vietnam	PETROLEUM OFFSHORE TRADING & SERVICES JSC	C10-550-3150	115	2020.4
		C10-1050-6125	406	
Malaysia	Shamawar Sdn Bhd/Shamawar ElektriKa Sdn Bhd	C4-125-430	150	2020.5
Vietnam	PETROLEUM OFFSHORE TRADING & SERVICES JSC	C6-450	198	2020.6
Panama	Celmecc S.A.	TR287	503	2020.6
		TR205	786	
		TR286	144	
Latavia	Firm "Pieci PA"	C8-550	253	2020.8
		C10-1050	563	
		C8-1950	323	
Serbia	UNIPROM	FSAR30	2003	2020.10
Panama	Celmecc S.A.	TR304	422	2020.11
		TR210	392	
		TR286	127	
Indonesia	PT. CG Power Systems Indonesia	C4-150-744	8780	2020.11
USA	Vanguard Electric, LLC	TR205	3789	2021.1
		TR208	4563	
		TR210	3333	
Russia	JSC	036	2121	2021. 2
		037	500	
USA	Vanguard Electric, LLC	TR202	120	2021.6
		TR205	510	
		TR208	900	
		TR210	285	
Vietnam	VIET NAM ELECTRICAL EQUIPMENT TRADING AND DISTRIBUTION CO.LTD.	C10-550-3150	844	2021.7
USA	Vanguard Electric, LLC	TR208	1800	2021.7
		TR210	1140	
Russia	JSC	032	704	2021.8
Panama	Celmecc S.A	TR304	110	2021.8
		TR295	10	
		TR286	18	
		TR210	42	
USA	Vanguard Electric, LLC	TR205	740	2021.9
		TR210	680	
		TR202	120	
Vietnam	VIET NAM ELECTRICAL EQUIPMENT TRADING AND DISTRIBUTION CO.LTD.	C10-550-3150	232	2021.10
USA	Primetals Technologies USA LLC	TR-368XL	49	2021.10
USA	Vanguard Electric, LLC	TR210	540	2021.10
		TR208	900	
Latavia	Firm "Pieci PA"	C8-1050	120	2021.11
Russia	JSC	032	832	2022.3
USA	Vanguard Electric, LLC	TR210	8400	2022.3
		TR208	5400	
		TR205	360	
Indonesia	PT. TRI KARYA TESLATAMA	C4-125-430	1680	2022.4
USA	Vanguard Electric, LLC	TR210	720	2022.4
		TR208	540	
		TR205	600	



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USA	Vanguard Electric, LLC	TR210	1800	2022.7
		TR208	900	
		TR205	600	
		TR202	120	
Indonesia	PT. TRI KARYA TESLATAMA	C4-150-355	8927	2022.9
USA	Vanguard Electric, LLC	TR210	1540	2022.9
		TR208	1990	
		TR205	1360	
Russia	JSC	032	1640	2022.10
		022	10056	
USA	Vanguard Electric, LLC	TR210	360	2022.11
		TR208	990	
		TR205	720	
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C10-550-3813	3499	2022.11
USA	Vanguard Electric, LLC	TR210	1320	2022.11
		TR208	1800	
		TR205	480	
		TR202	120	
Ukraine	«ELIZ» Ltd.,	P1380-420-3900	72	2022.12
USA	Vanguard Electric, LLC	TR210	2100	2023.1
		TR208	1620	
		TR205	1800	
		TR202	120	
Latavia	Firm "Pieci PA"	C8-1050	9320	2023.3
Indonesia	PT. TRI KARYA TESLATAMA	C4-150-355	7927	2023.2
Russia	JSC	032	7704	2023.4
USA	Vanguard Electric, LLC	TR202	4120	2023.5
		TR205	7720	
		TR207	4208	
Latavia	Firm "Pieci PA"	C6-450	9500	2023.5
Russia	JSC	C8-550-3150	1705	2023.5
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C10-550-3813	2560	2023.7
Panama	Celmecc S.A.	TR287	3694	2023.6
		TR205	14781	
		TR286	9874	
Ukraine	«ELIZ» Ltd.,	IOS-110-600M	2396	2023.8
Ukraine	«ELIZ» Ltd.,	P870-420-1400	356	2023.9
Ukraine	«ELIZ» Ltd.,	P1330-450-3900	789	2023.11
Indonesia	PT. TRI KARYA TESLATAMA	C4-150-355	1170	2023.9
Latavia	Firm "Pieci PA"	C8-1050	6320	2023.7
Italy	ISOLEX	C12.5-750	9800	2023.8
USA	Vanguard Electric, LLC	TR202	2563	2023.12
		TR205	17822	
		TR208	24536	
		TR210	13559	
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C6-550-3150	7363	2024.2
Latavia	Firm "Pieci PA"	C6-450	3422	2024.3
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C10-550-3813	3560	2024.5
Ukraine	«ELIZ» Ltd.,	P1330-450-3900	789	2024.5
		P1900-590	880	
Latavia	Firm "Pieci PA"	C8-1050	8120	2024.5
Italy	ISOLEX	C8-200	5800	2024.6
Panama	Celmecc S.A.	TR287	3601	2024.8
		TR214	4201	

Add. : No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Tel : +86 411-8495 0806 / 3956 5889 Web. : www.hivoltinsulators.com E-mail: canning@hivoltinsulators.com



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		TR316	3256	
Russia	ENSONS	C10-1050	2365	2024.8
USA	Vanguard Electric, LLC	TR202	42563	2024.9
		TR205	57822	
		TR208	34536	
		TR210	43559	
USA	Primetals Technologies USA LLC	TR-368XL	2492	2024.10
Latavia	Firm "Pieci PA"	C8-1050	9320	2024.11
Ukraine	«ELIZ» Ltd.,	IOS-110-600M	6942	2024.11
Peru	INGELMEC S.A	C8-170-1116	118	2024.12
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C10-550-3813	4521	2025.1
USA	Vanguard Electric, LLC	TR202	42563	2025.3
		TR205	57822	
		TR208	34536	
		TR210	43559	
Ukraine	«ELIZ» Ltd.,	IOS-110-600M	1230	2025.3
Peru	EQUIPOS ELECTROINDUSTRIALES S.A.	TR210 brown	1000	2025.3
Panama	Celmec S.A.	TR287	2978	2025.4
		TR214	5412	
		TR316	5256	
Latavia	Firm "Pieci PA"	C6-450	24130	2025.5
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C10-550-3813	3478	2025.6
Ukraine	«ELIZ» Ltd.,	P1330-450-3900	5400	2025.6
		P1900-590	1256	
Peru	TREVIM SAC	C20-450-2500	3	2025.1
Ukraine	«ELIZ» Ltd.,	IOS-110-600M	6890	2025.5
USA	Vanguard Electric, LLC	TR202	32145	2025.7
		TR205	25890	
		TR208	31450	
		TR210	20145	
		TR214	1100	
Russia	JSC	032	6352	2025.8
Vietnam	VIET POWER CONSTRUCTION – SERVICE – TRADING CO.LTD.	C6-550-3150	3363	2025.8
Vietnam	PETROLEUM OFFSHORE TRADING & SERVICES JSC	C10-550-3150	5115	2025.10
		C10-1050-6125	5406	
Malaysia	Shamawar Sdn Bhd/Shamawar ElektriKa Sdn Bhd	C4-125-430	1550	2025.9
Italy	ISOLEX S.R.L.	C8-200-1275	4500	2025.9
Vietnam	PETROLEUM OFFSHORE TRADING & SERVICES JSC	C6-450	3198	2025.11
Latavia	Firm "Pieci PA"	C8-1050	1156	2025.11
Italy	ISOLEX S.R.L.	C4-125-445	200	2025.11
Russia	ENSONS	C10-1050	4890	2025.12
Italy	ISOLEX	C12.5-750	4526	2025.12
Peru	INGELMEC S.A	C8-170-1116	18	2025.12
USA	Vanguard Electric, LLC	TR210	20145	2025.12
		TR216	540	2025.12
		TR278	600	2025.12



Add. : No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Tel : +86 411-8495 0806 / 3956 5889 Web. : www.hivoltinsulators.com E-mail: canning@hivoltinsulators.com



Dalian Hivolt Power System Co., Ltd.

FOR A SAFE POWER LINE !

February 27, 2026

ELECTROCON Ltd
MD-2052, 19, Maria Dragan str.,
Chisinau,
Republic of Moldova

LETTER OF AUTHORIZATION

We, Dalian Hivolt Power System Co.,Ltd., No.2804, 75 Huili Street Ganjingzi District, Dalian Liaoning, China, as a reputable manufacturer of porcelain insulators), do hereby duly authorize

ELECTROCON Ltd
MD-2052, 19, Maria Dragan str.,
Chisinau, Republic of Moldova
IDNO-1003600025379

to represent our products for the tender:

ÎS „Moldelectrica”

Procurement procedure number: ID 21568893 din 18 febr 2026, 44110000-4

Tender name: T-54/02-26: Izolatoare în asortiment

Name: Canning Zhao
Position: Sales Manager



Add. : No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Tel : +86 411-8495 0806 Web. : www.hivoltinsulators.com E-mail: canning@hivoltinsulators.com



Dalian Hivolt Power System Co., Ltd.

FOR A SAFE POWER LINE !

Februarie 27, 2026

ELECTROCON Ltd
MD-2052, 19, Maria Dragan str.,
Chisinau,
Republic of Moldova

DECLARATION OF CONFORMITY

We, Dalian Hivolt Power System Co.,Ltd., No.2804, 75 Huili Street Ganjingzi District, Dalian Liaoning, China, as a reputable manufacturer of porcelain insulators), do hereby declare that :

Porcelain post insulator IOS-35-500-01 - Drawing HP308181;

Porcelain post insulator IOS-110-400 - Drawing HP308182;

Are designed, manufactured and tested according to following standards:

IEC 60383,

IEC 60168,

IEC 60273.

Name: Canning Zhao
Position: Sales Manager



Add. : No.2804, 75 Huili Street , Ganjingzi District, Dalian China

Tel : +86 411-8495 0806 Web. : www.hivoltinsulators.com E-mail: canning@hivoltinsulators.com