

Quality Management
System Certification



TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



NANJING ELECTRIC (GROUP) CO., LTD.
NanJing Insulators

www.NanJing-Insulators.com



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TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



The glass insulators are operating on the 1000KV transmission line in Wuhan high voltage institute for China State Grid.



500KV Tian Guang I circuit transmission line



Gezhou Dam-Shanghai HVDC±500KV transmission line

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

Brief introduction

Nanjing Electric (Group) Co., Ltd was founded on 1936, Its former name were Nanjing Electro-Ceramic Factory. It is one the largest scale (first class) enterprise and also one of the bases in China for exploring insulators and electro-apparatus products. The company now is a high- tech enterprise in Nanjing City, and its quality management system has been certified in conformity with ISO ISO9001: 2000. The manufacturing scale, technology, equipments, products type, and quality as well as the company profits are in advanced position in this filed in China. The trade mark “Thunder-Lightning” on the products registered in the year of 1937 is famous in the country .

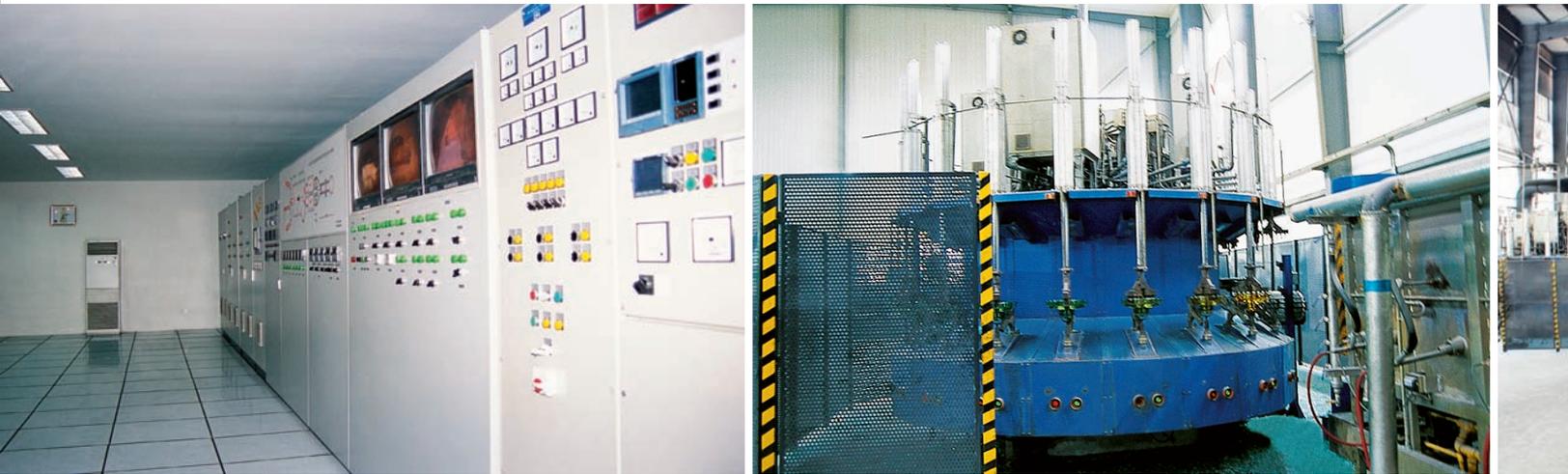
The company is located in Yanziji near Nanjing Yangtze river the second bridge and Nanjing Xingang development area, cover s an area 390,000 square meters, construction area of 170,000 square meters, consists of six professional systems and one joint venture. The market share of economic aggregates and the main products business is the number 1 in China. The total number of employees is over 2800 people, of them over 600 people are engineers. 5 senior experts enjoys State Council Government Apecial Allowance, 7 people become Jiangsu Province "333 Project" Training Potentials The company now manufactures 10 categories of products containing of more than thousands of

varieties, such as 40~550kN HVAC and 160~550KN HVDC toughened glass insulators.20~1000kV capacitor bushings, 110~220kV high voltage current transformers, 15~220kV high voltage disconnections and high voltage porcelain insulators, large-scale bushing insulator, spark plug and so forth. Product not only for domestic electric power construction, railway electrification, subway facilities and so on, but also has the considerable amount export, sells more than fifty countries and regions of the world, year export obtain foreign exchange more than ten million US dollars.

LD brand toughened glass insulator, capacitor bushing and spark plug are the domestic pioneer and maintain the leading edge of the market share which is the specialty products and a major export. Among them, toughened glass insulator product line , learned from the foreign advanced technology, relying on its own intellectual property rights of production, quality and technology, reaches the current international products premium level, and it is an excellent result of technological innovation of new products, at present have already been used in domestic and foreign 500kV and the 765kV more than 300 ultrahigh voltage transmission lines. Right now, there are five automatic production lines, and with 12 million production capacity of glass insulators .

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TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



Modern manufacturing facilities

To meet the domestic and overseas markets requirements, the company has imported foreign advanced manufacturing technology, equipment, products construction, formula, computer control system etc.. During the year of 2005-2006, the company operated manufacture line modified project on high strength glass insulator, and built up three new manufacture lines during the 2006-2007. After third times construction of the technology and manufacture lines, Nanjing had five manufacture lines in all, which could produce 12 million glass insulators annually, and being the first-class glass insulator manufacturer of the world.

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

Glass insulator product introduction

Toughened glass insulator is the main product of our company. In the year of 1958, the first piece of glass insulator was produced by Nanjing Electric (Group) Co., Ltd.

During the fifty years, LD Brand glass insulator are still operating on the 35-750kV transmission lines which quantity has been over 50 million pieces, part of them are produced by the imported manufacturing lines, the number has been over 40 million pieces. There are more than 10 million pieces glass insulators operating on the

overseas power system. At present, in the domestic market, the operating high strength glass insulators on the 750kV and 500kV transmission lines quantity are up to 10 million pieces, and supplied 3000 pieces of glass insulators to 1000kV ultra-high voltage base. 160kN-300kN DC glass insulators were first mass-used on the Three Gorges to Shanghai Longzheng transmission line, which filled the gap for the domestic high voltage direct current transmission line.

The company has a variety of

products from 70kN to 550kN standard profile, from 70kN to 550kN fog profile, from 160kN to 550kN Direct Current profile, 70kN and 240kN spherical profile and 120kN, 160kN and 300kN open profile, long-rod type insulators of electric railways etc., which can satisfy with the requirements of transmission lines .With all kinds of the voltage grades. All of them are complied with the IEC, BS, AS, ANSI standard.



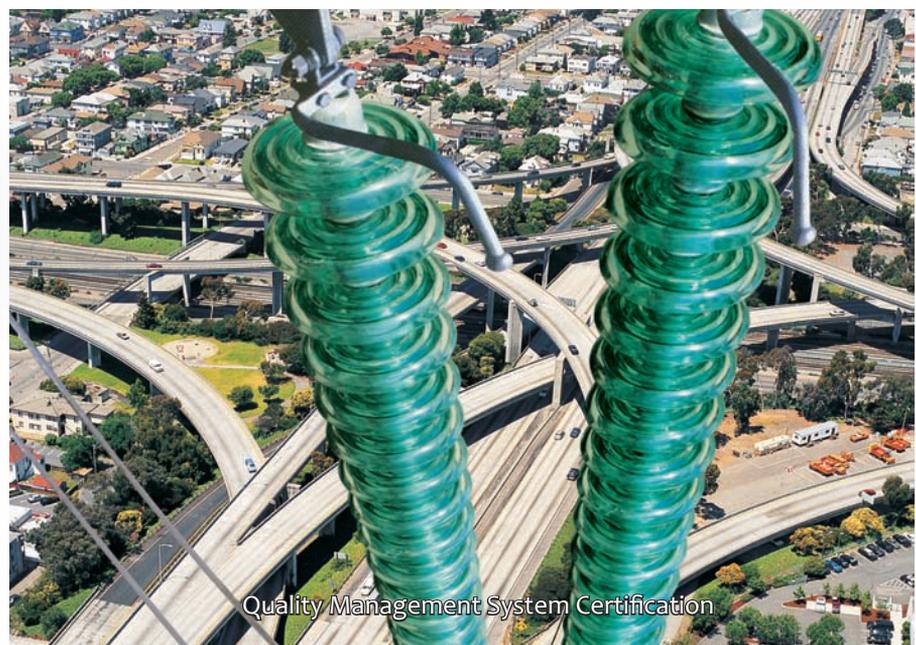
TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Glass insulator Structure and application

The product consists of cast-iron cap, toughened glass body and pin which are agglutinated together by cement into an integrated piece. Cylindrical head has been adopted for products, which is the most advanced structure in the world with superiorities such as less dimension, lighter weight, higher strength and longer creepage distance which can save metallic materials and reduce transmission line cost. In order to adapt hot line operation, the traditional structure shape has been adopted for on the edge of cap. The products with the cylindrical head are most widely used in the world. We have accumulated a wealth of practical experiences for their operations.

The products applied on the high voltage, ultra-high voltage and DC for insulation and suspension.



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TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



After operating 30 years, the glass insulators have not presented ageing phenomenon

Operations

Zero spontaneous breakage and easy inspection

One of features of glass insulator is zero-spontaneous breakage. A cursory visual inspection from the ground or from a helicopter can be made, but need not climb towers as a result ease off labor the intensity of operators. The yearly spontaneous breakage rate of products made on new manufacture line is only 0.02%, therefore reduce the maintenance expense.

Excellent arc-resistance and Vibration-Proof performance

The surface of glass insulator lightning in operation remain still smooth with the aid of a protection layer of internal stress produced by toughening, therefore electric-mechanical strength remains high enough.

In heavily iced 500kV transmission line, there is a common occurrence for glass insulator due to waving .We made measurements of electromechanical properties on the insulator samples taken from the line which showed the electric-mechanical strength is high enough.

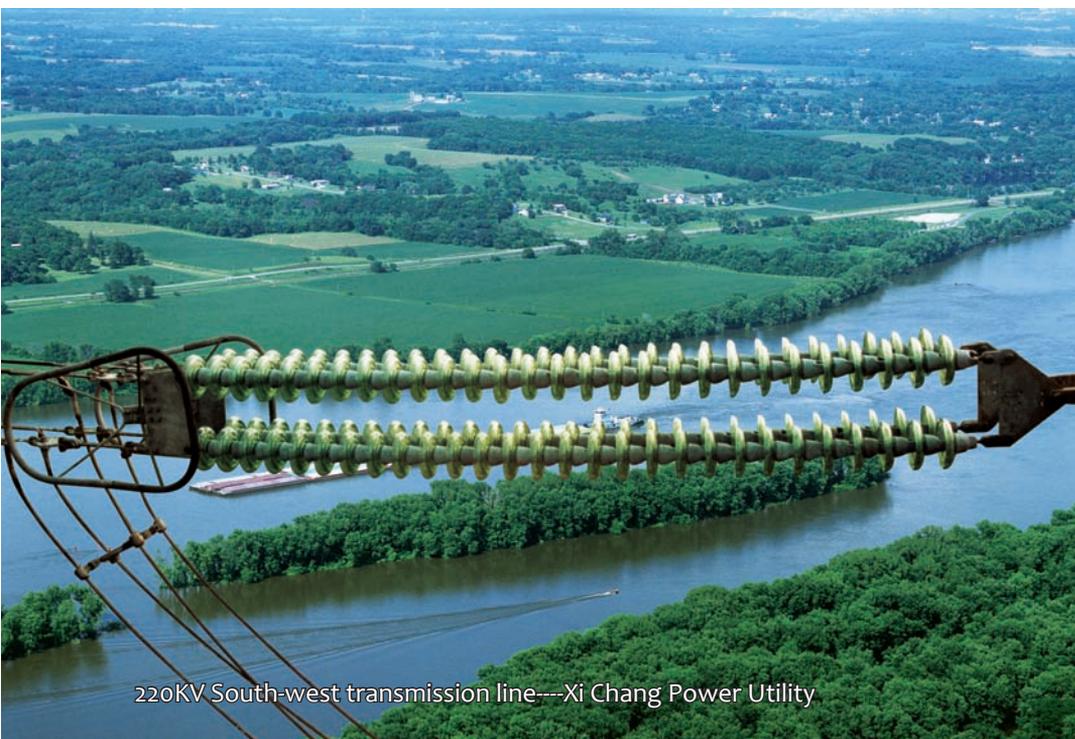
Good self cleaning and less age

It's often reported by the Electric Power Departments that the glass insulators accumulate less dirt and easy clean and those serving in the South-China transmission line can be washed out stains by heavy rain. From thousands of date accumulated shows that the electromechanical properties of some samples taken and measured at regular intervals from the lines after operated 25 years in the severity district is nearly as the same as those of original ones without any ages.

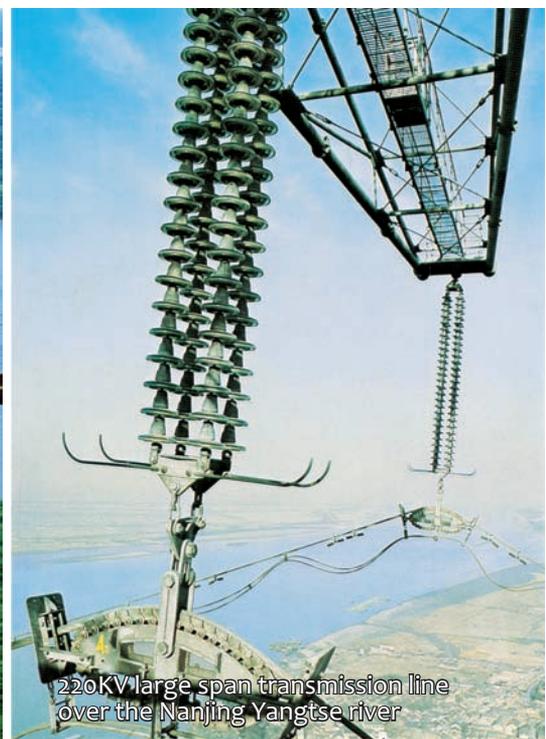
Large main electric capacitance, homogenous distribution of voltage on single string insulators

Due to dielectric constant 7-8 of glass, it gives insulator large main electric capacitance and homogenous distribution of voltage on single string insulator. It effectively decreases voltage acted on glass insulator near conducting line and ground so that can weaken radio interference and reduce corona extinction loss so as to extend glass insulator's life. The service practices have been proved that.

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



220KV South-west transmission line---Xi Chang Power Utility



220KV large span transmission line over the Nanjing Yangtse river



Three Gorges 500KV power transmission

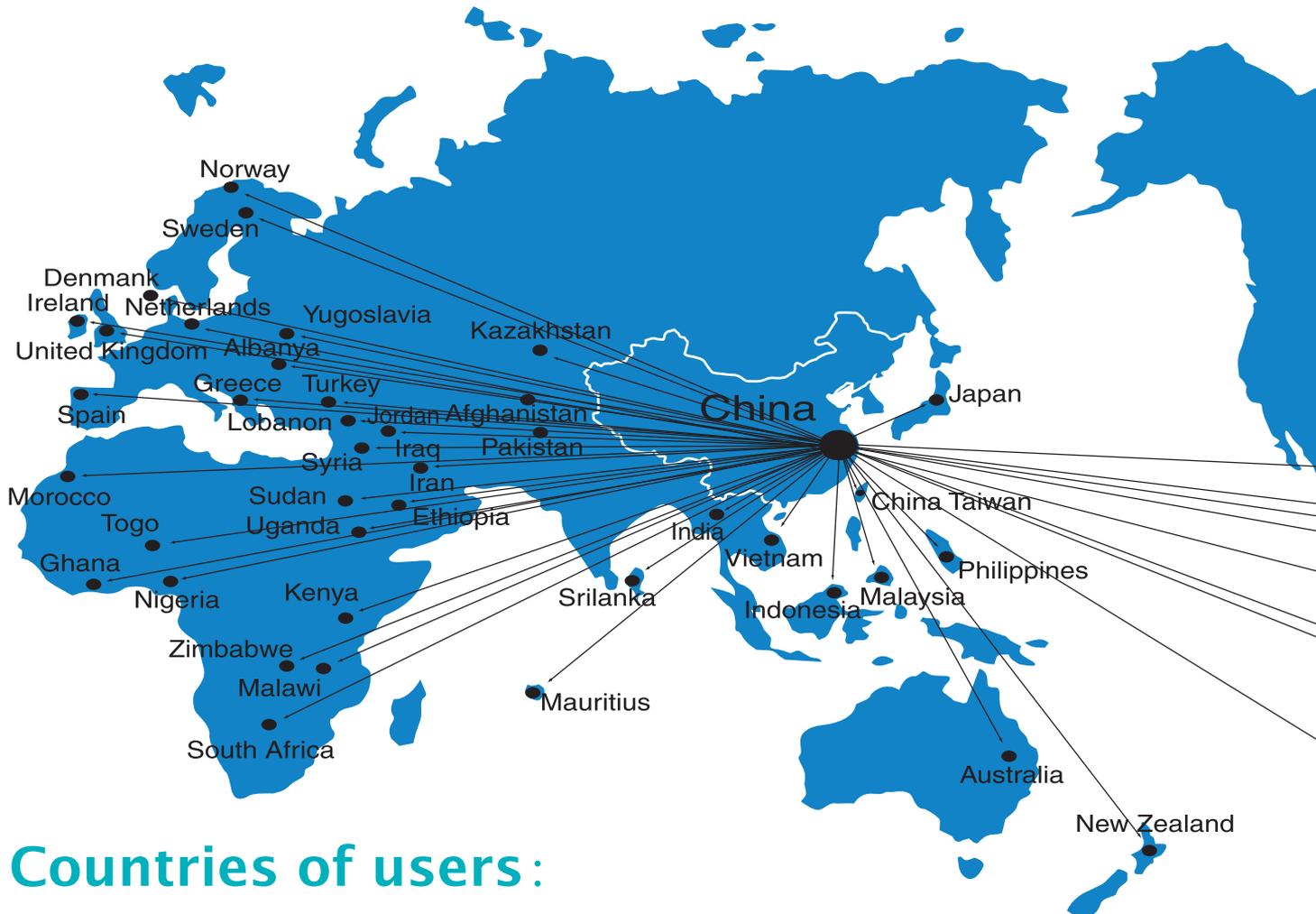


1000KV Electrical test in the Wuhan high voltage institute

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

Until now, our glass insulators have been exported to more than 50 countries.

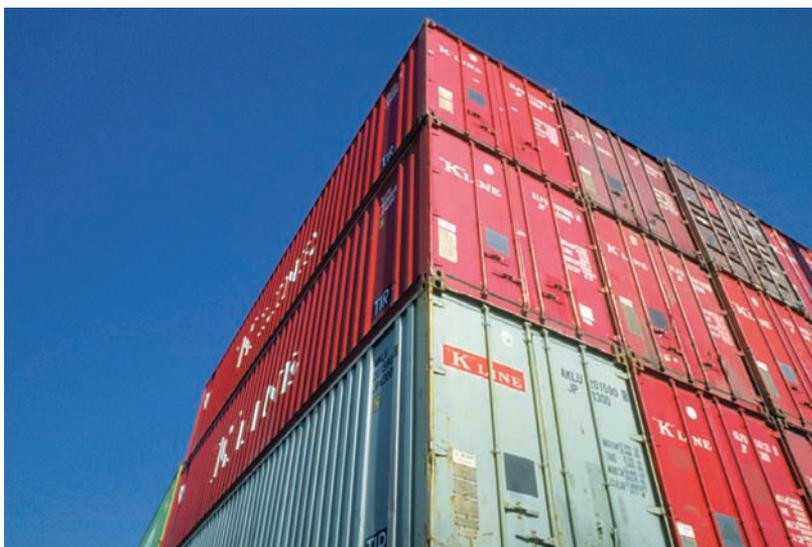


Countries of users:

- | | | | |
|------------------|-----------------|-----------------|------------------------|
| (1) Overseas | (18) Lebanon | (34) Ukraine | (50) Kenya |
| (2) market | (19) Jordan | (35) Georgia | (51) Egypt |
| (3) India | (20) Israel | (36) Ireland | (52) South Africa |
| (4) Vietnam | (21) Srilanka | (37) Denmark | |
| (5) Kazakhstan | | (38) Norway | (53) Zimbabwe |
| (6) Syria | (22) German | | (54) Cuba |
| (7) Malaysia | (23) England | (39) Mauritius | (55) Trinidad & Tobago |
| (8) Indonesia | (24) Holland | (40) Morocco | (56) Venezuela |
| (9) Sudan | (25) Russia | (41) Uganda | (57) Colombia |
| (10) Pakistan | (26) Switerland | (42) Ghana | (58) Brazil |
| (11) Laos | (27) Tunisia | (43) Nigeria | (59) Uruguay |
| (12) Afghanistan | (28) Turkey | (44) Kenya | (60) Argentina |
| (13) Tailand | (29) Finland | (45) Malawi | (61) Togo |
| (14) Philippines | (30) Sweden | (46) Ethiopia | (62) Chile |
| (15) Japan | (31) Greece | (47) Mali | |
| (16) Korea | (32) Spain | (48) Malawi | (63) Australia |
| (17) Iraq | (33) Albania | (49) Madagascar | (64) New Zealand |

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



The LXZY-550 toughened glass insulators are operating on the ± 660 kV HVDC transmission line from Ning Dong to Shang Dong.



TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

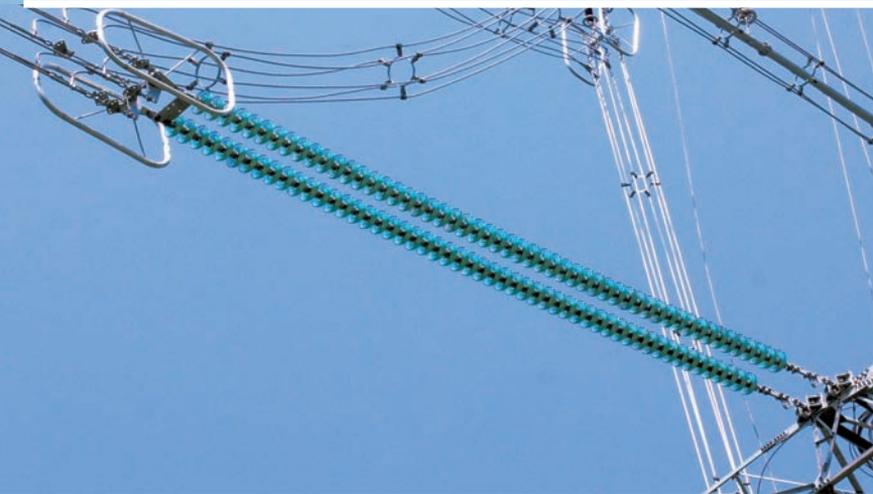


TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

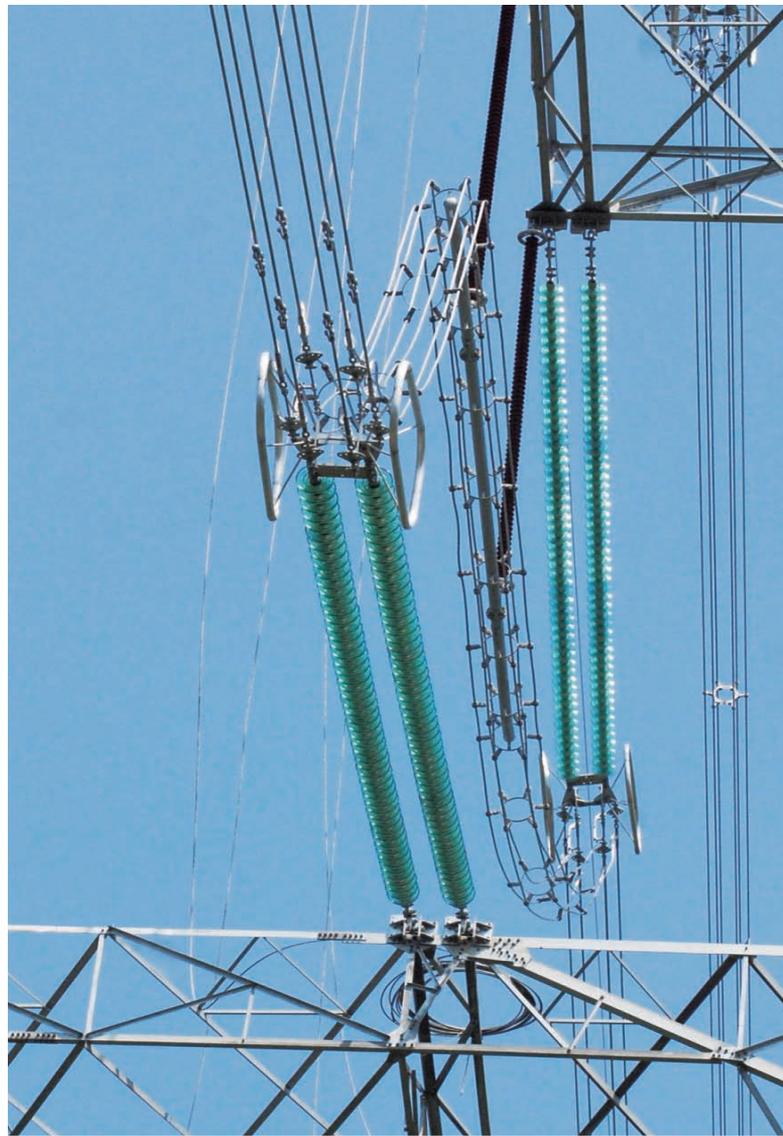


The LXY-550 toughened glass insulators are operating on the 750kV HVAC transmission line from Wei Nan to Yan An.



TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



ANSI

Suspension insulators

Ball and socket type

standard type

High strength

M & E Strength	KN	89	111	133	178	178	240
	IBS	20000	25000	30000	40000	40000	50000
ANSI CLASS		52-3	52-5	52-5	52-8	52-8	52-11
Ball & socket size		B type	J type	J type	K type	K type	K type
Diameter D	mm	255	255	255	280	280	280
	inch	10	10	10	11	11	11
Spacing P	mm	146	146	146	146	146	155
	inches	5.75	5.75	5.75	5.75	5.75	6 1/8
Creepage Distance	mm	320	320	320	330	400	400
	inches	12.625	12.625	12.625	13.00	15.66	15.66
Catalogue No		LXY-100M	LXY-120M	LXY-140M	LXY-180M	LXY-180M	LXY-240M
Mechanical values	N.m	10	10	10	11.3	11.3	11.3
Impact strength	inch-pounds	400	400	400	400	400	400
Tension proof	kN	44.5	55.5	67	89	89	111
	lbs	10000	12500	15000	20000	20000	25000
Maximum Working Load	lbs	10000	12500	15000	20000	20000	25000
Time load	kN	53.4	67	80	107	107	133
	lbs	12000	15000	18000	24000	24000	30000
Electric values							
Power frequency dry flashover	kV	80	80	80	80	80	80
Power frequency wet flashover	kV	50	50	50	50	50	50
Critical impulse flashover	kV	125	125	125	130	130	130
Power frequency puncture voltage	kV	130	130	130	130	130	130
Power frequency test voltage	kV	10	10	10	10	10	10
at Max RIV at 1 MHz	Uv	50	50	50	50	50	50
Approx net weight	kg	4.2	4.3	4.4	6.2	6.5	7.5

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

ANSI

Standard type

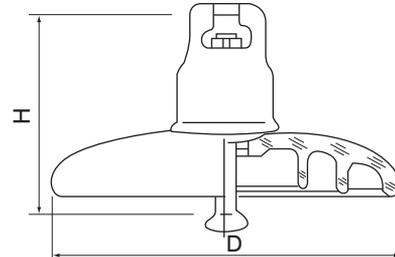


Fig.1

Suspension insulators Ball and socket type

M & E Strength	KN	70	100	120	160	220
	IBS	15000	22000	25000	36000	50000
ANSI CLASS		52-3		52-5	52-8	52-11
Ball & socket size		B type	B type	J type	K type	K type
Fig.No		1	1	1	1	1
Diameter D	mm	255	255	255	280	280
	inch	10	10	10	11	11
Spacing P	mm	146	146	146	146	155
	inches	5 3/4	5 3/4	5 3/4	5 3/4	6 1/8
Creepage Distance	mm	320	320	320	380	380
	inches	12 5/8	12 5/8	12 5/8	15	15
Catalogue No		LXY-70M	LXY-100M	LXY-120M	LXY-160M	LXY-210M
Mechanical values	m.N	45	45	45	45	45
Impact strength	inch-pounds	400	400	400	400	400
Tension proof	kN	35	50	60	80	110
	lbs	7500	11000	12500	18000	25000
Time load	kN	45	70	70	110	135
	lbs	10000	15000	15000	24000	30000
Electric values						
Power frequency dry flashover	kV	80	80	80	85	85
Power frequency wet flashover	kV	50	50	50	55	55
Critical impulse flashover	kV	125	125	125	130	140
	kV	130	130	130	135	140
Power frequency puncture volt.	kV	130	130	130	130	130
Power frequency test voltage	kV	10	10	10	10	10
at Max RIV at 1 MHz	Uv	50	50	50	50	50
Approx net weight	kg	4	4.1	4.2	6	7.3

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

ANSI

Clevis type Standard type

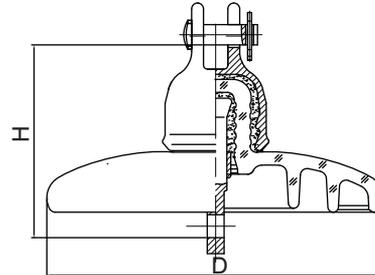


Fig.2

Suspension insulators

M & E Strength	KN	70	120	160
	LBS	15000	25000	36000
ANSI CLASS		52-4	52-6	52-10
Fig.No	2	2	2	2
Diameter D	mm	255	255	280
	inch	10	10	11
Spacing P	mm	146	146	165
	inches	5 3/4	5 3/4	6 1/2
Creepage Distance	mm	320	320	380
	inches	12 5/8	12 5/8	15
Catalogue No		LXY-70C	LXY-120C	LXY-160C
Mechanical values	m.N	45	45	45
Impact strength	inch-pounds	400	400	400
Tension proof	kN	35	60	80
	lbs	7500	12500	18000
Time load	kN	45	70	110
	lbs	10000	15000	24000
Electric values				
Power frequency dry flashover	kV	80	80	85
Power frequency wet flashover	kV	50	50	55
Critical impulse flashover	kV	125	125	130
	kV	130	130	135
Power frequency puncture volt	kV	130	130	130
Power frequency test voltage	kV	10	10	10
at Max RIV at 1 MHz	Uv	50	50	50
Approx net weight	kg	4	4.5	6.1

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE

ANSI

Fog type

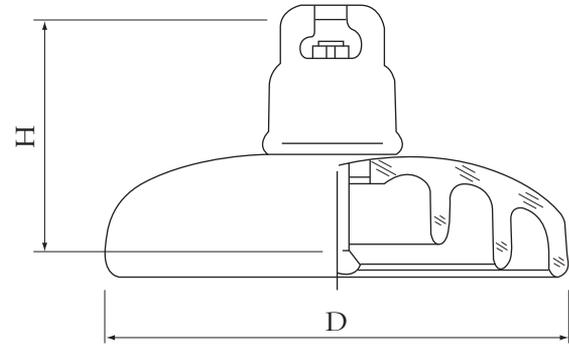


Fig.3

Suspension insulators Ball & Socket

M & E Strength	KN	120	160
	LBS	25000	36000
ANSI CLASS		52-5	52-8
Fig.No	3	3	3
Diameter D	mm	280	330
	inch	11	13
Spacing P	mm	146	171
	inches	5 3/4	6 3/4
Creepage Distance	mm	450	550
	inches	17 1/2	21 1/2
Catalogue No		LXHY-120P	LXHY-160P
Mechanical values	m.N	45	45
Impact strength	inch-pounds	400	400
Tension proof	kN	60	80
	lbs	12500	18000
Time load	kN	70	110
	lbs	15000	24000
Electric values			
Power frequency dry flashover	kV	100	105
Power frequency wet flashover	kV	60	65
Critical impulse flashover	kV	140	170
	kV	140	160
Power frequency puncture voltage	kV	130	130
Power frequency test voltage	kV	10	10
at Max RIV at 1 MHz	Uv	50	50
Approx net weight	kg	5.8	8.5

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE

ANSI

Direct Current

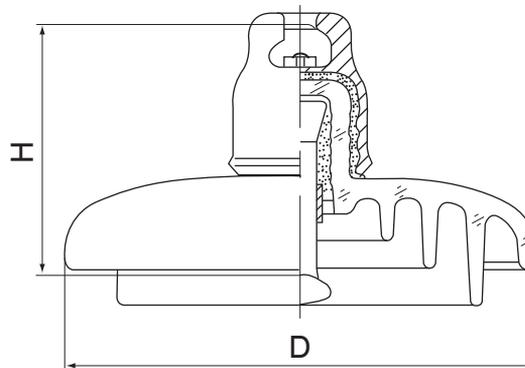


Fig.4

Suspension insulators

M & E Strength	KN	160	160	220
	IBS	36000	36000	50000
ANSI CLASS				
Ball & socket size		K type	K type	K type
Fig.No	4	4	4	4
Diameter D	mm	330	330	330
	inch	13	13	13
Spacing P	mm	146	171	171
	inches	5 3/4	6 3/4	6 3/4
Creepage Distance	mm	550	550	550
	inches	21 5/8	21 5/8	21 5/8
Catalogue No		LXZY-160M	LXZY-160M	LXZY-210M
Electric values				
DC withstand voltage				
Dry one min	kV	150	150	150
Wet one min	kV	65	65	65
Dry Lightning impulse withstand volt	kV	140	140	140
Approx net weight	kg	9.2	9.7	10.2



TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Direct Current

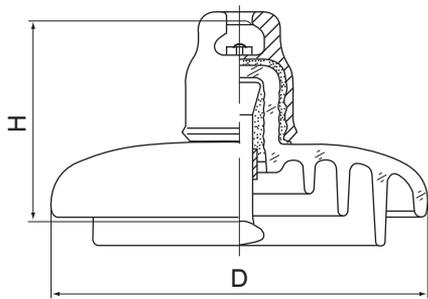


Fig.5

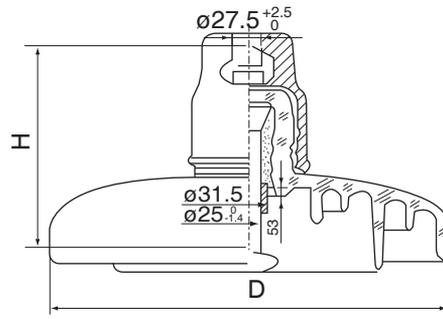


Fig.6

Suspension insulators

Min Mechanical Failing Load	KN	160	210	240	300	300	300
Fig.No		5	5	5	6	6	6
Diameter D	mm	330	330	330	360	390	390
Spacing P	mm	170	170	170	195	195	195
Creepage Distance	mm	550	550	550	650	635	710
Dimension metal fittings		20	20	24	24	24	24
Catalogue No		LXZY-160	LXZY-210	LXZY-240	LXZY1-300	LXZY2-300	LXZY3-300
Electric values							
DC withstand voltage							
Dry one min	kV	150	150	150	150	150	170
Wet one min	kV	65	65	65	65	65	70
Dry Lightning impulse withstand volt	kV	140	140	140	140	140	150
SF6 withstand test		210	210	210	210	225	255
Approx net weight	kg	9.6	10	10.2	13.4	13.8	14.1

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Direct Current

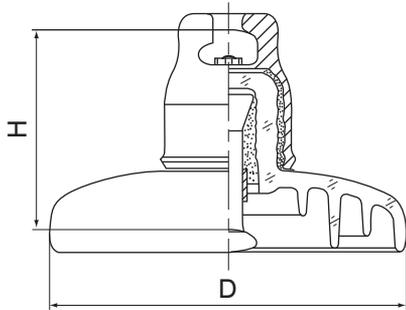


Fig.7

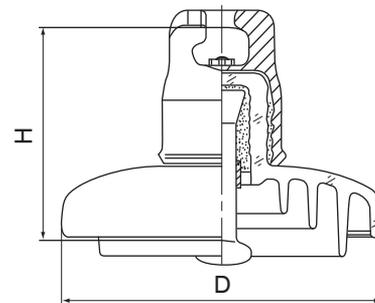


Fig.8

Suspension insulators

Min Mechanical Failing Load	KN	420	420	420	420	550	550	550	550
Fig.No		7	7	7	7	8	8	8	8
Diameter D	mm	360	380	390	390	380	390	390	390
Spacing P	mm	205	205	205	205	240	240	240	240
Creepage Distance	mm	550	620	650	690	620	650	710	670
Dimension metal fittings		28	28	28	28	32	32	32	32
Catalogue No		LXZY2-420	LXZY2-420	LXZY3-420	LXZY4-420	LXZY1-550	LXZY2-550	LXZY3-550	LXZY4-550
Electric values									
DC withstand voltage									
Dry one min	kV	150	150	150	150	160	160	160	160
Wet one min	kV	65	65	65	65	70	70	70	70
Dry Lightning impulse withstand volt	kV	140	140	140	140	145	150	150	150
SF6 withstand test		225	225	225	225	240	240	240	240
Approx net weight	kg	14.6	14.8	14.9	15.2	17.5	17.8	18.1	18.3

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Standard type

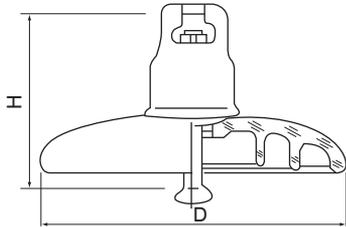


Fig.9

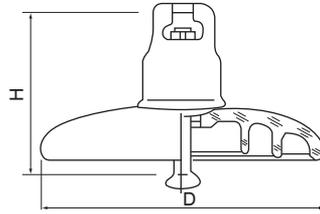


Fig.10

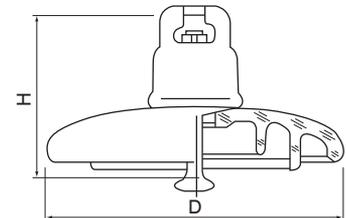


Fig.11

Suspension insulators Ball and socket type

Mechanical Strength	KN	70	70	100	120	160	160
		U70BS	U70BL	U100BL	U120BL	U160BS	U160BL
	W-Clip	132231	132224	133201	134205	135026	135027
	R-Clip	132230	132229	133205	134019	135020	135021
Ball & socket size		16A/16B	16A/16B	16A/16B	16A/16B	20	20
Fig.No	9	9	9	9	9	9	9
Diameter D	mm	255	255	255	255	280	280
Spacing P	mm	127	146	146	146	146	170
Creepage Distance	mm	320	320	320	320	400	400
Catalogue No		LXY-70	LXY1-70	LXY-100	LXY-120	LXY4-160	LXY-160
Mechanical values	m.N	70	70	100	120	160	160
Tension proof	kN	35	35	50	60	80	80
Electric values							
Power frequency dry withstand	kV	70	70	70	70	75	75
Power frequency wet withstand	kV	40	40	40	40	45	45
Dry lightning impulse withstand	kV	100	100	100	100	110	110
Power frequency puncture voltage	kV	130	130	130	130	130	130
Approx net weight	kg	4	4	4.1	4.2	6.5	6.5

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Standard type

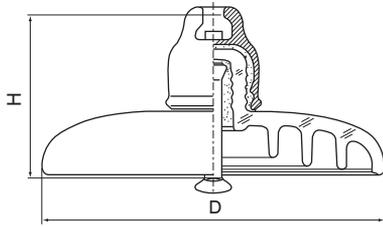


Fig.12

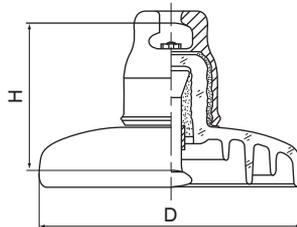


Fig.13

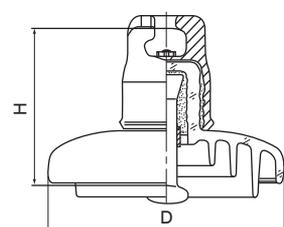


Fig.14

Suspension insulators Ball and socket type

Mechanical Strength	KN	210	210	240	240	300	420	550
R-Clip		136202	136214	136205	136215	137201	138201	139201
Ball & socket size		20	20	24	24	24	28	32
Fig.No		10	11	10	11	12	13	14
Diameter D	mm	280	280	280	280	320	360	380
Spacing P	mm	170	170	170	170	195	205	240
Creepage Distance	mm	400	450	400	450	485	550	620
Catalogue No		LXY3-210	LXY4-210	LXY-240	LXY2-240	LXY3-300	LXY-420	LXY-550
Tension proof	kN	105	105	120	120	150	210	275
Electric values								
Power frequency dry withstand	kV	75	75	75	75	85	90	95
Power frequency wet withstand	kV	45	45	45	45	50	55	60
Dry lightning impulse withstand	kV	110	110	110	110	130	140	145
Power frequency puncture voltage	kV	130	130	130	130	130	130	130
Approx net weight	kg	6.7	8	6.8	8.4	10.7	14.6	18.1

TOUGHENED GLASS

INSULATORS OF CAP AND PIN TYPE



Standard type (large diameter)

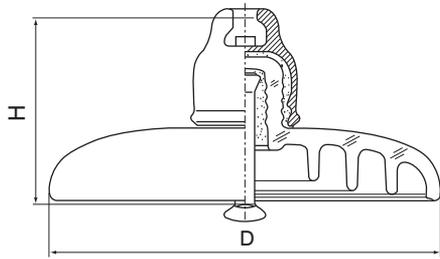


Fig.15

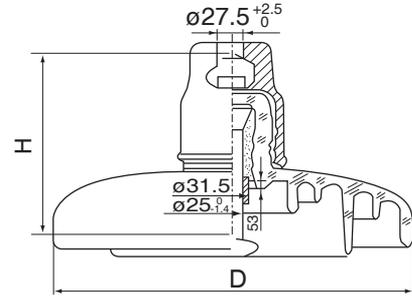


Fig.16

Suspension insulators Ball and socket type

Mechanical Strength	KN	70	100	120	160	160	160	240	300	300
R-Clip		132639		134216	135616	135617	136217	136218	137210	137213
W-Clip			133621							
Ball & socket size		16	16	16	20	20	20	24	24	24
Fig.No	15	15	15	15	15	15	15	15	15	16
Diameter D	mm	320	320	320	320	320	320	320	390	390
Spacing P	mm	146	146	146	155	170	170	170	195	195
Creepage Distance	mm	500	500	500	500	500	485	485	635	710
Catalogue No		LXY-70D	LXY-100D	LXY-120D	LXY-160D	LXY1-160D	LXY-210D	LXY-240D	LXY-300D	LXY1-300D
Tension proof	kN	35	50	60	80	80	105	120	150	150
Electric values										
Power frequency dry withstand	kV	85	85	85	85	85	85	85	90	90
Power frequency wet withstand	kV	50	50	50	50	50	50	50	55	55
Dry lightning impulse withstand	kV	125	125	125	125	125	130	130	130	130
Power frequency puncture voltage	kV	130	130	130	130	130	130	130	130	130
Approx net weight	kg	6.2	6.3	6.4	7.5	7.5	9.2	9.5	13.4	14.1

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Fog type

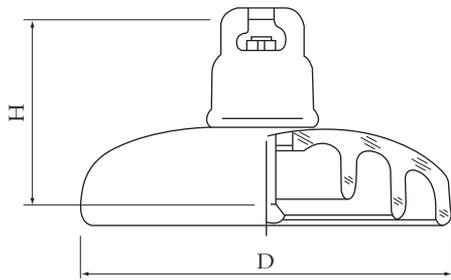


Fig.17

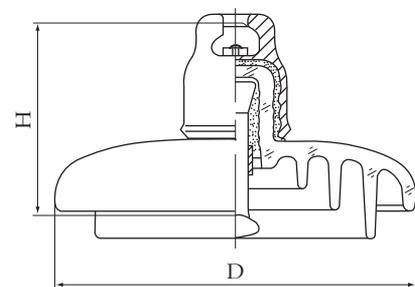


Fig.18

Suspension insulators Ball and socket type

Mechanical Strength	KN	70	70	70	100	100	100	120	120	120
W-Clip		132619	132624	***	133612	133616	***	134212	134609	***
R-CLIP		132623	132626	132638	133613	133618	133626	134214	134607	134220
Ball & socket size		16	16	16	16	16	16	16	16	16
Fig.No		17	17	18	17	17	18	17	17	18
Diameter D	mm	255	280	320	255	280	320	255	280	320
Spacing P	mm	146	146	146	146	146	146	146	146	146
Creepage Distance	mm	400	450	550	400	450	550	400	450	550
Catalogue No		LXHY4-70	LXHY5-70	LXHY6-70	LXHY-100	LXHY4-100	LXHY5-100	LXHY-120	LXHY4-120	LXHY5-120
Tension proof	kN	35	35	35	50	50	50	60	60	60
Electric values										
Power frequency dry withstand	kV	80	85	90	80	85	90	80	85	90
Power frequency wet withstand	kV	45	50	55	45	50	55	45	50	55
Dry lightning impulse withstand	kV	110	125	140	110	125	140	110	125	140
Power frequency puncture voltage	kV	130	130	130	130	130	130	130	130	130
Approx net weight	kg	5.2	5.8	8.1	5.2	5.9	8.2	5.3	6	8.3

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Fog type

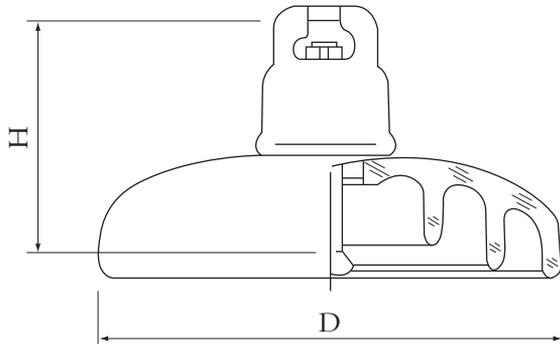


Fig.19

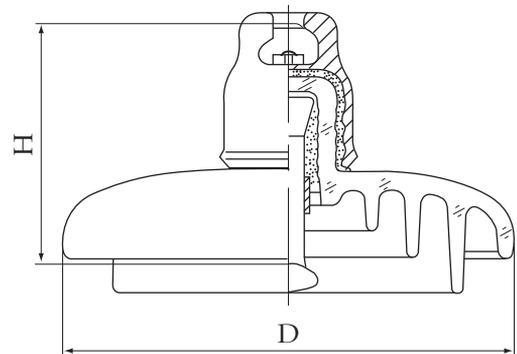


Fig.20

Suspension insulators Ball and socket type

Mechanical Strength	KN	160	160	160	210	240	300
W-Clip		135605	135606	135625	***	***	***
R-CLIP		135612	135622	135630	136225	136227	137208
Ball & socket size		20	20	20	20	24	24
Fig.No		19	19	20	20	20	20
Diameter D	mm	280	280	320	320	320	320
Spacing P	mm	155	170	170	170	170	195
Creepage Distance	mm	450	450	550	550	550	550
Catalogue No		LXHY3-160	LXHY4-160	LXHY5-160	LXHY3-210	LXHY3-240	LXHY4-300
Tension proof	kN	80	80	80	105	120	150
Electric values							
Power frequency dry withstand	kV	85	85	90	90	90	100
Power frequency wet withstand	kV	50	50	55	55	55	60
Dry lightning impulse withstand	kV	125	125	140	140	140	155
Power frequency puncture voltage	kV	130	130	130	130	130	130
Approx net weight	kg	7	7.1	9.1	9.6	9.9	11.3

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Spherical profile type

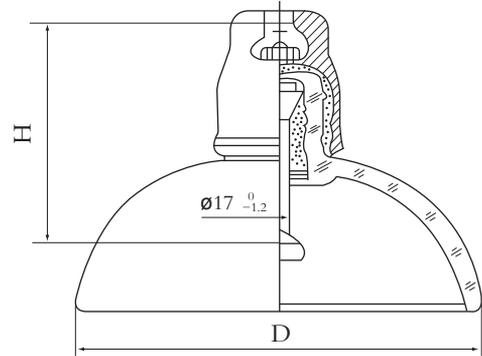


Fig.21

Suspension insulators

Mechanical Strength	KN	70	100	120	120
		132234	133610	134014	134015
Ball & socket size		16A	16A	16A	16A
Fig.No		21	21	21	21
Diameter D	mm	255	255	255	255
Spacing P	mm	146	146	127	146
Creepage Distance	mm	320	320	320	320
Catalogue No		LXQY-70	LXQY-100	LXQY-120	LXQY1-120
Tension proof	kN	35	50	60	60
Electric values					
Power frequency dry withstand	kV	60	60	60	60
Power frequency wet withstand	kV	40	40	40	40
Dry lightning impulse withstand	kV	95	95	95	95
Power frequency puncture voltage	kV	130	130	130	130
Approx net weight	kg	4.6	4.6	4.7	4.7

TOUGHENED GLASS INSULATORS OF CAP AND PIN TYPE



Open profile type

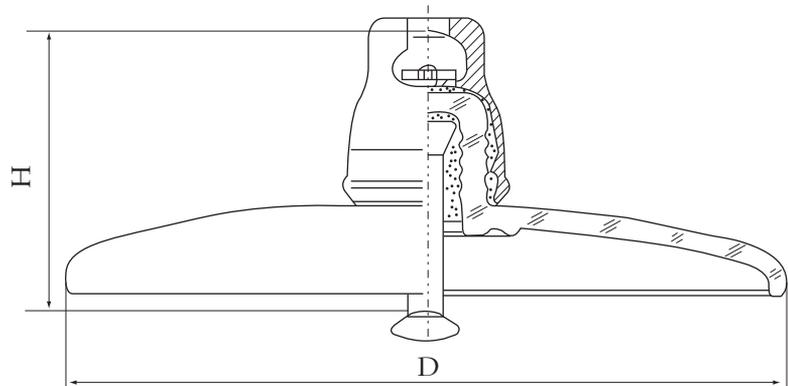


Fig.22

Suspension insulators

Mechanical Strength	KN	70	100	120	160	210	240	300
		132252	***	***	135035	***	***	***
		132253	133625	134021	135037	136219	136221	137211
Ball & socket size		16A	16A	16A	20	20	24	24
Fig.No		22	22	22	22	22	22	22
Diameter D	mm	390	390	390	420	420	420	450
Spacing P	mm	127	146	146	146/155	170	170	195
Creepage Distance	mm	365	365	365	390	390	390	450
Catalogue No		LXAY-70	LXAY-100	LXAY-120	LXAY-160	LXAY-210	LXAY-240	LXAY-300
Tension proof	kN	35	50	60	80	105	120	150
Electric values								
Power frequency dry withstand	kV	55	55	55	60	60	60	65
Power frequency wet withstand	kV	45	45	45	50	50	50	55
Dry lightning impulse withstand	kV	90	90	90	95	95	95	100
Power frequency puncture voltage	kV	130	130	130	130	130	130	130
Approx net weight	kg	6	6.2	6.3	7.9	8.6	8.9	12.1



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