

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2009 of 17.06.2009**

Page 1 of 1

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Test reports shall be signed by:

Ing. Václav Sklenička, CSc. - Director of EGU – HV Laboratory a.s.
Ing. Jan Bolech - Manager of High voltage testing laboratory
Ing. Marek Brosch - Quality manager

Tests:

Laboratoři je umožněn flexibilní rozsah akreditace upřesněný v dodatku.

The testing laboratory has a flexible scope of accreditation permitted as detailed in the Annex

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
1	DC voltage tests	IEC 60060-1, section 4 ČSN IEC 60-1/corr.1, section 4 GOST 1516.2, chap.8	Equipment with highest voltage for equipment above 1 kV
		IEC/EN 60077-1, cl. 9.3.3 ČSN EN 60077-1, cl 9.3.3	Railway equipment
		IEC/EN 60077-2, cl. 9.3.3 ČSN EN 60077-2, cl 9.3.3	Railway equipment
		IEC/EN 61180-1, section 4 ČSN EN 61180-1, section. 4	Low-voltage equipment
		ANSI C29.1, section 4	Insulators
		ANSI/IEEE 4/4a, clause 5	Equipment with highest voltage for equipment above 1 kV
		IEC/EN 61442, chap. 5 ČSN EN 61442, chap. 5	Cable accessories
		HD 629.1 S1/A1, chap. 6 ČSN 34 7006, chap. 7	Cable accessories
		HD 629.2 S1/A1, chap. 6 ČSN 34 7007, chap. 7	Cable accessories
		EN 50124-1, clause 5 ČSN EN 50124-1 /A1/A2, clause 5.5	Railway equipment
		ČSN EN 60243-2	Electroinsulating materials
2	AC voltage tests	IEC 60060-1, section 5 ČSN IEC 60-1/corr.1, section 5 GOST 1516.2, chap. 7	Equipment with highest voltage for equipment above 1 kV
		ČSN 35 1360, clause 111-114	Instrument transformers

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 2 of 2

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		EN 3-7+A1, clause 9, Annex C ČSN EN 3-7+A1, chap. 9, Annex C	Portable extinguishers
		IEC 60044-1, clause 7.4, 8.2 ČSN EN 60044-1/A1/A2, clause 7.4, 8.2	Instrument transformers
		IEC 60044-2, clause 8.4, 9 ČSN EN 60044-2/A1/A2, clause 8.4, chap. 9	Instrument transformers
		IEC/EN 60044-3, clause 6 ČSN EN 60044-3, chap. 6	Instrument transformers
		IEC/EN 60076-3, clause 12 ČSN EN 60076-3/Corrigendum 1, chap. 12	Power transformers
		IEC/EN 60077-1, cl. 9.3.3 ČSN EN 60077-1, cl 9.3.3	Railway equipment
		IEC/EN 60077-2, cl. 9.3.3 ČSN EN 60077-2, cl 9.3.3	Railway equipment
		IEC/EN 60099-1/A1, section 6 ČSN EN 60099-1/A1, section 6	Surge arresters
		IEC/EN 60099-4/A1,A2, cl. 8.2.8 ČSN EN 60099-4/A1,A2, čl. 8.2.8	Metal-oxide surge arresters
		IEC/EN 60137, cl. 8.1, 8.2, 9.3, 9.5 ČSN EN 60137, clause 8.1, 9.3, 9.5	Bushings
		IEC/EN 60168/A1, A2, section 4, clause 4.7, 4.8 ČSN EN 60168/A1, A2, section 4, clause 4.7, 4.8 GOST 8608, clause 6.8, 6.11, 6.12 GOST 52034, clause 6.1.1, 6.1.4	Station post insulators
		ČSN EN 60289/A1, clause 50.8	Reactors
		IEC /EN 60383-1, section 4, clause 14 ČSN IEC 383-1/Z1,Z2, sect.4,chap.14 GOST 12670, clause 6.4, 6.6 GOST 6490, clause 4.3, 4.8	Ceramic or glass insulators
		IEC/EN 60383-2, section 2, clause 10 ČSN EN 60383-2, sect. 2, chap.10	Insulator strings and insulator sets

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 3 of 3

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 60660, chap. 2, cl. 2.5, 3.4 ČSN EN 60660, chap.2, cl. 2.5, 3.4	Post insulators of organic materials
		IEC 61992-3, cl. 8.3.3	Railway equipment
		IEC/EN 62271-1, cl. 6, Annex F ČSN EN 60694, chap.6, Annex F, clause F.2	Switchgear and controlgear
		IEC/EN 61057, clause 8 ČSN EN 61057/corr.1,2, chap. 8	Insulating working platforms
		IEC EN 61109, clause 11, 11.1,Tab.3 ČSN EN 61109, clause 11, 11.1,Tab.3	Composite insulators
		IEC/EN 61180-1, section 5 ČSN EN 61180-1, chap. 5	Low-voltage equipment
		IEC/EN 61952, clause 11, Tab.3 ČSN EN 61952, clause 11, Tab.3	Composite line post insulators
		IEC EN 62231, clause 9.2.2 ČSN EN 62231, clause 9.2.2	Composite station post insulators
		IEC/EN 62271-100, cl. 6.2., 7.1, 7.2 ČSN EN 62271-100,cl.6.2, 7.1, 7.2	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, cl. 6.2, 7.1, 7.2 ČSN EN 62271-102, cl. 6.2, 7.1, 7.2	Disconnectors and earthing switches
		IEC/EN 62271-105, clause 6.2 ČSN EN 62271-105, clause 6.2	Alternating current switch-fuse combinations
		IEC/EN 62271-200, clause 6.2, 7.1 ČSN EN 62271-200, clause 6.2, 7.1	Metal-enclosed switchgear and controlgear
		IEC/EN 62271-203, clause 6.2, 7.1 ČSN EN 62271-203, clause 6.2, 7.1	Gas-insulated metal-enclosed switchgear
		ANSI C29.1, section 4	Insulators
		ANSI C29.2, clause 8.2.1, 8.2.2	Post insulators – ceramic or glass
		ANSI C29.4, clause 8.2.1, 8.2.2	Porcelain insulators
		ANSI C29.5 cl. 8.2.1, 8.2.2 ANSI C29.6 cl. 8.2.1, 8.2.2	Porcelain insulators (pin type)
		ANSI C29.9, clause 7.2.1	Ceramic insulators – apparatus and post-type
		ANSI C29.11, clause 8.2	Composite suspension insulators for overhead lines

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 4 of 4

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.13, clause 8.1, 8.2	Composite insulators of distribution deadend type
		ANSI C29.17, clause 8.1, 8.2 ANSI C29.18, clause 8.1, 8.2	Composite line post insulators
		ANSI/IEEE 4/4a, clause 6	Equipment with highest voltage for equipment above 1 kV
		CAN/CSA-C411.1, clause 6.3, 6.4	Suspension insulators
		ANSI C29.12, clause 7.2.1, 7.2.2 CAN/CSA-C411.4, clause 5.3	Composite suspension insulators
		IEC/EN 61442, section 4 ČSN EN 61442, chap. 4	Cable accessories
		HD 629.1 S1/A1, chap. 6 ČSN 34 7006, chap. 7	Cable accessories
		HD 629.2 S1/A1, chap. 6 ČSN 34 7007, chap. 7	Cable accessories
		ČSN EN 50123-1, clause 7.5.2	Railway applications - DC switchgear
		EN 50124-1, cl. 5 ČSN EN 50124-1 /A1/A2, clause 5.4	Railway equipment
		ČSN EN 50345, clause 6.1, 6.2.2	Railway equipment
		ČSN EN 60243-1	Electroinsulating materials
		ČSN EN 60265-1, clause 6.2	Switches
		ČSN EN 60265-2/A1/A2/Z1, cl. 6.1	Switches and isolating switches
		IEC/EN 61243-5, cl. 5.3, 5.6, 5.6.1, 5.6.2 ČSN EN 61243-5, čl. 5.3, 5.6, 5.6.1, 5.6.2	Voltage detecting systems (VDS)
3	Tests with lightning impulse voltage	IEC 60060-1, section 6 ČSN IEC 60-1/corr.1, section 6 GOST 1516.2, chap.5	Equipment with highest voltage for equipment above 1 kV
		IEC 60044-1, clause 7.3, 9.1 ČSN EN 60044-1/A1/A2, clause 7.3, 9.1	Instrument transformers
		IEC 60044-2, clause 8.3, 10.1 ČSN EN 60044-2/A1/A2, clause 8.3, 10.1	Instrument transformers

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 5 of 5

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 60044-3, clause 6 ČSN EN 60044-3, chap. 6	Instrument transformers
		ČSN 35 1360/Z1, clause 110	Instrument transformers
		ČSN 35 3054	High-voltage and extra high-voltage switchgear
		IEC/EN 60076-3, clause 13, 14 ČSN EN 60076-3 /Corrigendum 1, chap.13,14	Power transformers
		IEC/EN 60076-4, clause 7, 9.1 ČSN EN 60076-4, chap. 7, clause 9.1	Power transformers
		IEC/EN 60077-1, cl. 9.3.3 ČSN EN 60077-1, cl 9.3.3	Railway equipment
		IEC/EN 60077-2, cl. 9.3.3 ČSN EN 60077-2, cl 9.3.3	Railway equipment
		IEC/EN 60099-1/A1, clause 8.3 ČSN EN 60099-1 /A1, clause 8.3	Surge arresters
		IEC/EN 60099-4/A1,A2, cl. 8.2.6 ČSN EN 60099-4/A1,A2, čl. 8.2.6	Metal-oxide surge arresters
		IEC/EN 60137, clause 8.3, 9.2 ČSN EN 60137, cl. 8.3, 9.2	Bushings
		IEC/EN 60168/A1, A2, section 4, clause 4.5 ČSN EN 60168/A1, A2, section 4, clause 4.5 GOST 8608, clause 6.13 GOST 52034, clause 6.1.1	Station post insulators
		ČSN EN 60289/A1, clause 50.8	Reactors
		IEC/EN 60383-1, section 4, chap. 13 ČSN IEC 383-1/Z1,Z2, sect.4,chap.13 GOST 12670, clause 6.5 GOST 6490, clause 4.4	Ceramic or glass insulators
		IEC/EN 60383-2, section 2, clause 9 ČSN EN 60383-2,section 2, chap. 9	Insulator strings and insulator sets
		IEC/EN 60660, chap. 2, 2.4, 3.3 ČSN EN 60660, chap. 2, cl. 2.4, 3.3	Post insulators of organic materials
		IEC/EN 62271-1, cl.6, Annex F ČSN EN 60694, chap.6, Annex F, clause F.4	Switchgear and controlgear

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 6 of 6

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 61109, clause 11, 11.1, Tab.3 ČSN EN 61109, clause 11, 11.1, Tab.3	Composite insulators
		IEC/EN 61180-1, section 6 ČSN EN 61180-1, chap. 6	Low-voltage equipment
		IEC/EN 61952, clause 11, Tab.3 ČSN EN 61952, clause 11, 11.1, Tab.3	Composite line post insulators
		IEC 61992-3, cl. 8.3.3	Railway equipment
		IEC/EN 61243-5, clause 5.3 ČSN EN 61243-5, clause 5.3	Voltage detecting systems (VDS)
		IEC EN 62231, clause 9.2.1 ČSN EN 62231, clause 9.2.1	Composite station post insulators
		IEC/EN 62271-100, clause 6.2 ČSN EN 62271-100, clause 6.2	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, clause 6.2 ČSN EN 62271-102, clause 6.2	Disconnectors and earthing switches
		IEC/EN 62271-105, clause 6.2 ČSN EN 62271-105, clause 6.2	Alternating current switch-fuse combinations
		IEC/EN 62271-200, clause 6.2 ČSN EN 62271-200, clause 6.2	Metal-enclosed switchgear and controlgear
		IEC/EN 62271-203, clause 6.2 ČSN EN 62271-203, clause 6.2	Gas-insulated metal-enclosed switchgear
		ANSI C29.1, section 4	Insulators
		ANSI C29.2, clause 8.2.3	Post insulators – ceramic or glass
		ANSI C29.5, clause 8.2.3 ANSI C29.6, clause 8.2.3	Porcelain insulators – high-voltage pin type
		ANSI C29.9, clause 7.2.2, 7.2.3	Ceramic insulators – apparatus and post-type
		ANSI C29.11, clause 8.1	Composite suspension insulators for overhead lines
		ANSI C29.13, clause 8.3	Composite insulators of distribution deadend type
		ANSI C29.17, clause 8.3 ANSI C29.18, clause 8.3	Composite line post insulators
		ANSI/IEEE 4/4a, clause 7	Equipment with highest voltage for equipment above 1 kV
		CAN/CSA-C411.1, clause 6.5	Suspension insulators

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 7 of 7

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.12, clause 7.2.3 CAN/CSA-C411.4, clause 5.2	Composite suspension insulators
		IEC/EN 61442, section 6 ČSN EN 61442, chap. 6	Cable accessories
		HD 629.1 S1/A1, chap. 6 ČSN 34 7006, chap. 5.8,7	Cable accessories
		HD 629.2 S1/A1, chap. 6 ČSN 34 7007, chap. 5.8, 7	Cable accessories
		ČSN EN 50123-1, clause 7.5.1	Railway applications - DC switchgear
		EN 50124-1, clause 5 ČSN EN 50124-1 /A1/A2, clause 5.3	Railway equipment
		ČSN EN 50345, clause 6.1, 6.2.1	Railway equipment
		ČSN EN 60243-3	Electroinsulating materials
		ČSN EN 60265-1, clause 6.2	Switches
		ČSN EN 60265-2/A1/A2/Z1, cl. 6.1	Switches and isolating switches
4	Tests with switching impulse voltage	IEC 60060-1, section 7 ČSN IEC 60-1/corr.1, section 7 GOST 1516.2, chap. 6	Equipment with highest voltage for equipment above 1 kV
		IEC 60044-1, clause 7.3 ČSN EN 60044-1/A1/A2, clause 7.3	Instrument transformers
		IEC 60044-2, clause 8.3 ČSN EN 60044-2 /A1/A2, clause 8.3	Instrument transformers
		IEC/EN 60044-3, chap. 6 ČSN EN 60044-3, chap. 6	Instrument transformers
		IEC/EN 60076-3, chap. 15 ČSN EN 60076-3 /Corrigendum 1, chap.15	Power transformers
		IEC/EN 60076-4, clause 8, 9.2 ČSN EN 60076-4, chap. 8, clause 9.2	Power transformers
		IEC/EN 60099-1/A1, clause 8.3 ČSN EN 60099-1/A1, clause 8.3	Surge arresters
		IEC/EN 60099-4/A1,A2, cl. 8.2.7 ČSN EN 60099-4/A1,A2, cl. 8.2.7	Metal-oxide surge arresters
		IEC/EN 60137, clause 8.4 ČSN EN 60137, clause 8.4	Bushings

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 8 of 8

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 60168/A1, A2, section 4, clause 4.6 ČSN EN 60168 A1, A2, section 4, clause 4.6 GOST 8608, clause 6.15 GOST 52034, clause 6.1.1	Station post insulators
		IEC/EN 60383-2, section 2, clause 11 ČSN EN 60383-2, section 2, chap. 11	Insulator strings and insulator sets
		IEC/EN 62271-1, cl. 6, Annex F ČSN EN 60694, chap.6, Annex F, clause F.3	Switchgear and controlgear
		IEC/EN 61057, clause 8 ČSN EN 61057/corr.1,2, chap. 8	Insulating working platforms
		IEC/EN 61109, chap. 11, 11.1, Tab.3 ČSN EN 61109, chap. 11, 11.1, Tab.3	Composite insulators
		IEC/EN 61952, chap. 11, Tab. 3 ČSN EN 61952, chap.11, Tab. 3	Composite line post insulators
		IEC/EN 62271-100, clause 6.2 ČSN EN 62271-100, cl. 6.2	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, clause 6.2 ČSN EN 62271-102, clause 6.2	Disconnectors and earthing switches
		IEC/EN 62271-105, clause 6.2 ČSN EN 62271-105, clause 6.2	Alternating current switch-fuse combinations
		IEC/EN 62271-200, clause 6.2 ČSN EN 62271-200, clause 6.2	Metal-enclosed switchgear and controlgear
		IEC/EN 62271-203, clause 6.2 ČSN EN 62271-203, clause 6.2	Gas-insulated metal-enclosed switchgear
		ANSI C29.1, section 4	Insulators
		ANSI C29.11, clause 8.3	Composite suspension insulators for overhead lines
		ANSI/IEEE 4/4a, clause 8	Equipment with highest voltage for equipment above 1 kV
5	Combined and composite tests	IEC 60060-1, section 9 ČSN IEC 60-1/corr.1, section 9	Equipment with highest voltage for equipment above 1 kV
		ANSI/IEEE 4/4a, clause 10	Equipment with highest voltage for equipment above 1 kV

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 9 of 9

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.1, section 4	Insulators
6	Artificial pollution tests of insulators and surge arresters	IEC 60507 ČSN 34 8031/A1	Insulators
		IEC/EN 61109, clause 5.3.3 ČSN EN 61109, clause 5.3.3	Composite insulators
		IEC 60060-1, clause 10 ČSN IEC 60-1/corr.1, chap. 10	Equipment with highest voltage for equipment above 1 kV
		IEC/EN 61243-5, clause 5.16, 5.16.2 ČSN EN 61243-5, clause 5.16, 5.16.2	Voltage detecting systems (VDS)
		IEC/EN 62217, cl. 9.3.3 ČSN EN 62217, cl. 9.3.3	Polymeric insulators for indoor and outdoor use
		IEC/EN 62271-100, clause 6.2.8 ČSN EN 62271-100, cl. 6.2.8	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, clause 6.2.8 ČSN EN 62271-102, clause 6.2.8	Disconnectors and earthing switches
		ČSN 34 8032 IEC 61245	Artificial pollution tests of insulators for DC voltage systems
		ČSN EN 60265-1, clause 6.2.8	Switches
7 *)	Measurement of electrical and magnetic field of 50 Hz	ČSN 33 2040	Equipment of overhead lines and substations with maximum voltage for equipment $U_m > 1\text{kV}$
8	Measurement of partial discharges and loss factor	IEC/EN 60270 ČSN EN 60270/corr. 1	Electrical equipment, components and systems tested with AC voltage
		IEC 60044-1, clause 8.2.2 ČSN EN 60044-1, clause 8.2.2	Instrument transformers
		IEC 60044-2 clause 9.2.4 ČSN EN 60044-2, clause 9.2.4	Instrument transformers
		IEC/EN 60044-3, clause 6 ČSN EN 60044-3, chap. 6	Instrument transformers
		IEC/EN 60076-3, Annex A ČSN EN 60076-3/ Corrigendum 1, Annex A	Power transformers
		IEC/EN 60099-4/A1,A2,clause 8.8 ČSN EN 60099-4/A1,A2, clause 8. 8	Metal-oxide surge arresters

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 10 of 10

Accredited entity:

EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 60137, clause 8.2,9.1,9.4 ČSN EN 60137, clause 8.2,9.1,9.4	Bushings
		IEC/EN 60660, clause 3.5, 5.4 ČSN EN 60660, clause 3.5, 5.4	Post insulators of organic materials
		IEC/EN 62271-100, clause 6.2.9 ČSN EN 62271-100, cl. 6.2.9	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, clause 6.2.9 ČSN EN 62271-102, clause 6.2.9	Disconnectors and earthing switches
		IEC/EN 62271-105, clause 6.2.9 ČSN EN 62271-105, clause 6.2.9	Alternating current switch-fuse combinations
		IEC/EN 62271-200, cl. 6.2.9, 7.101 ČSN EN 62271-200, cl. 6.2.9, 7.101	Gas-insulated metal-enclosed switchgear
		IEC/EN 62271-203, cl. 6.2.9, 7.1.2 ČSN EN 62271-203, cl. 6.2.9, 7.1.2	Gas-insulated metal-enclosed switchgear
		IEC/EN 61442, section 7 ČSN EN 61442, chap. 7	Cable accessories
		HD 629.1 S1/A1, chap. 6 ČSN 34 7006, chap. 5.8., 7	Cable accessories
		HD 629.2 S1/A1, chap. 6 ČSN 34 7007, chap. 5.8, 7	Cable accessories
		ČSN EN 60265-1, clause 6.2.9	Switches
		ČSN EN 60265-2/A1/A2/Z1, cl. 6.1.9	Switches and isolating switches
9	Electromagnetic interference measurement	CISPR 18-2/A1, A2 ČSN CISPR 18-2/Z1, Z2	Overhead power lines and high-voltage equipment
		IEC 60044-1, clause 8.2.2 ČSN EN 60044-1/A1, clause 8.2.2	Instrument transformers
		IEC/EN 60044-3, clause 6 ČSN EN 60044-3, chap. 6	Instrument transformers
		IEC/EN 60099-4/A1,A2, clause 8.12 ČSN EN 60099-4/A1,A2, clause 8.12	Metal-oxide surge arresters
		IEC/EN 60137, clause 8.6 ČSN EN 60137, cl. 8.6	Bushings
		IEC 60437 ČSN EN 60437	Insulators
		IEC/EN 62271-1, clause 6.3 ČSN EN 60694, clause 6.3	Switchgear and controlgear

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 11 of 11

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 61284, clause 14 ČSN EN 61284, chap. 14	Fittings for overhead lines
		IEC/EN 61854, clause 7.7 ČSN EN 61854, clause 7.7	Spacers
		IEC/EN 62271-1, clause 6.3 ČSN EN 60694, clause 6.3	Switchgear and controlgear
		IEC/EN 62271-100, clause 6.3 ČSN EN 62271-100, cl. 6.3	High-voltage alternating-current circuit breakers
		IEC/EN 62271-102, clause 6.3 ČSN EN 62271-102, clause 6.3	Disconnectors and earthing switches
		IEC/EN 62271-105, clause 6.3 ČSN EN 62271-105, clause 6.3	Alternating current switch-fuse combinations
		IEC/EN 62271-200, clause 6.3 ČSN EN 62271-200, clause 6.3	Metal-enclosed switchgear and controlgear
		IEC/EN 62271-203, clause 6.3 ČSN EN 62271-203, clause 6.3	Gas-insulated metal-enclosed switchgear
		ANSI C29.1, clause 4.9	Insulators
		ANSI C29.2, clause 8.2.4 GOST 12670, clause 6.3 GOST 6490, clause 4.5	Post insulators – ceramic or glass
		ANSI C29.5, clause 8.2.4 ANSI C29.6, clause 8.2.4	Porcelain insulators – high-voltage pin type
		ANSI C29.9, clause 7.2.4 GOST 8608, clause 6.15 GOST 52034, clause 6.1.3	Ceramic insulators – apparatus and post-type
		ANSI C29.13, clause 8.4	Composite insulators of distribution deadend type
		ANSI C29.17, clause 8.4 ANSI C29.18, clause 8.4	Composite line post insulators
		CAN/CSA-C411.1, clause 6.7	Suspension insulators
		ANSI C29.12, clause 7.2.4 CAN/CSA-C411.4, clause 5.4	Composite suspension insulators
		NEMA No. 107	High-voltage equipment
		ČSN EN 60265-1, clause 6.3	Switches
		ČSN EN 60265-2/A1/A2/Z1, cl. 6.2	Switches and isolating switches

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 12 of 12

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
10	Mechanical tests	IEC/EN 60168/A1, A2, section 5 ČSN EN 60168/A1, A2, section 5 GOST 8608, clause 6.7 GOST 52034, clause 6.2.1	Station post insulators
		IEC/EN 60383-1, section 5 ČSN IEC 383-1/Z1,Z2, section 5 GOST 12670, clause 6.9, 6.10, 6.12 GOST 6490, clause 4.9, 4.10, 4.11	Ceramic or glass insulators
		IEC/EN 60660, cl. 3.7, 3.8, 3.9, 5.3 ČSN EN 60660, cl. 3.7, 3.8, 3.9, 5.3	Post insulators of organic materials
		IEC/EN 61109, chap. 13 ČSN IEC 61109, chap. 13	Composite insulators
		IEC/EN 61243-5, clause 5.10 ČSN EN 61243-5, clause 5.10	Voltage detecting systems (VDS)
		IEC/EN 61284, clause 11 ČSN EN 61284, chap. 11	Fittings for overhead lines
		IEC/EN 61462, clause 10.4 ČSN EN 61462, clause 10.4	Composite hollow insulators
		IEC/EN 61952, clause 11.2, 12.4, 13 ČSN EN 61952, clause 11.2, 12.4, 13	Composite line post insulators for overhead lines
		IEC/EN 62155, clause 7, cl. 7.2, 8.3 ČSN EN 62155, chap. 7, cl. 7.2, 8.3	Ceramic or glass hollow insulators
		IEC EN 62231, clause 9.3 ČSN EN 62231, clause 9.3	Composite station post insulators
		CAN/CSA-C411.1, clause 6.9, 7.6, 8.4	Suspension insulators
		ANSI C.29.12, cl. 7.3.3, 7.4 CAN/CSA-C411.4, clause 4.6, 5.5	Composite suspension insulators
		ANSI C29.1, clause 5.1, 5.2, 5.3, 7.2	Insulators
		ANSI C29.2, clause 8.2.7, 8.3.4, 8.4.3	Post insulators – ceramic or glass
		ANSI C29.4, clause 8.3.4	Porcelain insulators
		ANSI C29.5, clause 8.2.5 ANSI C29.6, clause 8.3.3	Porcelain insulators pin type
ANSI C29.9, clause 7.2.6, 7.2.7, 7.4.2	Ceramic insulators – apparatus and post-type		

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 13 of 13

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.11, clause 9.4, 10	Composite suspension insulators for overhead lines
		ANSI C29.13, clause 7.7, 7.8	Composite insulators of distribution deadend type
		ANSI C29.17, clause 9.4, 10 ANSI C29.18, clause 7.7, 9.3	Composite line post insulators
11	Thermal - mechanical tests and temperature cycle tests	IEC/EN 60168/A1, A2, clause 5.4, 5.5 ČSN EN 60168/A1, A2, cl. 5.4, 5.5 GOST 8608, clause 6.6	Station post insulators
		IEC/EN 60383-1, clause 20 ČSN IEC 383-1/Z1,Z2, chap.20 GOST 12670, clause 6.13, 6.14 GOST 6490, clause 4.12, 4.13, 4.14	Ceramic or glass insulators
		IEC/EN 60660, clause 3.13 ČSN EN 60660, 3.13	Post insulators of organic materials
		IEC/EN 61109, chap. 10.3.2 ČSN EN 61109, chap. 10.3.2	Composite insulators
		IEC 61284, chap. 13 ČSN EN 61284, chap. 13	Fittings for overhead lines
		IEC/EN 61952, clause 10.3.1 ČSN EN 61952, clause 10.3.1	Composite line post insulators for overhead lines
		IEC/EN 62155, clause 7, 7.3 ČSN EN 62155, chap. 7, clause 7.3	Ceramic or glass hollow insulators
		IEC EN 62231, clause 8.2.4 ČSN EN 62231, clause 8.2.4	Composite station post insulators
		CAN/CSA-C411.1, cl. 6.10, 7.5, 8.3	Suspension insulators
		CAN/CSA-C411.4, clause 4.7	Composite suspension insulators
		ANSI C29.1, clause 5.5	Insulators
		ANSI C29.2, clause 8.2.5, 8.2.6, 8.4.2	Post insulators – ceramic or glass
		ANSI C29.5, clause 8.2.6 ANSI C29.6, clause 8.2.5	Porcelain insulators pin type
		ANSI C29.9, clause 7.2.5	Ceramic insulators – apparatus and post-type
		ANSI C29.11, clause 7.1.4	Composite suspension insulators for overhead lines

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 14 of 14

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.13, clause 7.9	Composite insulators of distribution deadend type
		ANSI C29.17, clause 7.1.2.1 ANSI C29.18, clause 7.8	Composite line post insulators
12	Test of interface and connection of end fittings	IEC/EN 61109, clause 10,10.2.1,10.3.1,10.3.2 ČSN EN 61109, clause 10,10.2.1,10.3.1,10.3.2	Composite insulators
		IEC/EN 61462, clause 7.2, 9.5 IEC EN 61462, clause 7.2, 9.5	Composite hollow insulators
		IEC/EN 61952, clause 10,10.2.1,10.3.1 ČSN EN 61952, clause 10,10.2.1,10.3.1	Composite line post insulators for overhead lines
		IEC/EN 62217, clause 9.2 ČSN EN 62217, clause 9.2	Polymeric insulators for indoor and outdoor use
		IEC EN 62231, clause 8.2 ČSN EN 62231, clause 8.2	Composite station post insulators
		ANSI C29.11, clause 7.1	Composite suspension insulators for overhead lines
		ANSI C29.17, clause 7.1 ANSI C29.18, clause 7.1	Composite line post insulators
		CAN/CSA-C411.4, clause 4.3	Composite suspension insulators
13	Test of sheds and material of housing	IEC/EN 60099-4/A1,A2, cl. 10.8.14.2.1 ČSN EN 60099-4/A1,A2,cl. 10.8.14.2.1	Metal-oxide surge arresters
		IEC/EN 61109, clause 10, 10.2.2 ČSN EN 61109, clause 10, 10.2.2	Composite insulators
		IEC/EN 61462, clause 7.3 ČSN EN 61462, clause 7.3	Composite hollow insulators
		IEC/EN 61952, clause 10, 10.2.2 ČSN EN 61952, clause 10, 10.2.2	Composite line post insulators for overhead lines
		IEC/EN 62217, clause 9.3 ČSN EN 62217, clause 9.3	Polymeric insulators for indoor and outdoor use
		IEC EN 62231, clause 8.4 ČSN EN 62231, clause 8.4	Composite station post insulators

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 15 of 15

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		ANSI C29.11, clause 7.3	Composite suspension insulators for overhead lines
		ANSI C29.13, clause 7.1,7.2,7.3	Composite insulators of distribution deadend type
		ANSI C29.17, clause 7.3 CAN/CSA-C411.4, clause 4.5	Composite suspension insulators
14	Test for the core material	IEC/EN 61109, clause 10, 10.2.3 ČSN EN 61109, clause 10, 10.2.3	Composite insulators
		IEC/EN 61952, clause 10, 10.2.3 ČSN EN 61952, clause 10, 10.2.3	Composite line post insulators for overhead lines
		IEC/EN 61462, clause 7.4 ČSN EN 61462, clause 7.4	Composite hollow insulators
		IEC/EN 62217, clause 9.4 ČSN EN 62217, clause 9.4	Polymeric insulators for indoor and outdoor use
		ANSI C29.11, clause 7.4	Composite suspension insulators for overhead lines
		ANSI C29.13, clause 7.1, 7.3,	Composite insulators of distribution deadend type
		ANSI C29.17, clause 7.4 ANSI C29.18, clause 7.3,7.4	Composite line post insulators
		CAN/CSA-C411.4, clause 4.2	Composite suspension insulators
15	Assembled core load test	IEC/EN 61109, clause 10.4,11.2,12.4 ČSN EN 61109, clause 10.4,11.2,12.4	Composite insulators
		IEC/EN 61952, clause 10.4 ČSN EN 61952, clause 10.4 ANSI C29.17, clause 7.2	Composite line post insulators
		IEC EN 62231, clause 8.3 ČSN EN 62231, clause 8.3	Composite station post insulators
		ANSI C29.11, clause 7.2	Composite suspension insulators for overhead lines
		CAN/CSA-C411.4, clause 4.8	Composite suspension insulators
16	Verification of dimensions, displacement and locking systems	ČSN EN 60137, p. 8.11 IEC/EN 60137, clause 8.13	Bushings

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 16 of 16

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		IEC/EN 60168/A1, A2, clause 5.1, 5.3 ČSN EN 60168/A1, A2, clause 5.1, 5.3, 5.11, 5.12 GOST 8608, clause 6.5 GOST 52034, clause 6.5.2	Station post insulators
		IEC/EN 60383-1, clause 17, 21, 22 ČSN IEC 383-1/Z1,Z2 chap.17, 21, 22 GOST 12670, clause 6.16	Ceramic or glass insulators
		IEC/EN 60660, clause 4.2, Annex A ČSN EN 60660, 4.2, Annex A	Post insulators of organic materials
		IEC/EN 61109, clause 12.2, 12.3 ČSN EN 61109, clause 12.2,12.3	Composite insulators
		IEC/EN 61462, clause 9.3 ČSN EN 61462, clause 9.3	Composite hollow insulators
		IEC/EN 61952, clause 12.2, 12.3 ČSN EN 61952, clause 12.2, 12.3	Composite line post insulators
		IEC/EN 62155, clause 7.1 ČSN EN 62155, clause 7.1	Ceramic or glass hollow insulators
		IEC EN 62231, clause 9.1 ČSN EN 62231, clause 9.1	Composite station post insulators
		ANSI C29.2, clause 8.3	Post insulators – ceramic or glass
		ANSI C29.9, clause 7.3.1	Ceramic insulators – apparatus and post-type
		ANSI C29.11, clause 9.2	Composite suspension insulators for overhead lines
		ANSI C29.13, clause 5	Composite insulators of distribution deadend type
		ANSI C29.17, chap. 4, 9.2	Composite line post insulators
		ANSI C29.12, chap. 5, 7.3.1 CAN/CSA-C 411.1, clause 7.4	Suspension insulators
		ČSN EN 50124-1/A1/A2 cl. 5.2, Annex C	Railway equipment
17	Tests of protective and working tools	PNE 35 9700, chap. 5	Dielectric protective and working tools
		ČSN 35 9701	Handling rods, fuse tongs, salvage hooks
		EN 61243-1, clause 6, 7 ČSN EN 61243-1, chap. 6, 7	Voltage detectors

**Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009**

Page 17 of 17

Accredited entity:

**EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice**

Ord. No.	Test procedure/method name	Test procedure/method identification	Tested item
		EN 61243-2/A1, A2, clause 5 ČSN EN 61243-2 /A1, A2, chap.5	Voltage detectors
		IEC/EN 61243-5, cl. 5.2, 5.4, 5.7, 5.11, 5.16, 5.16.2, 5.17, 5.18.2, 5.22 ČSN EN 61243-5, cl. 5.2, 5.4, 5.7, 5.11, 5.16, 5.16.2, 5.17, 5.18.2, 5.22	Voltage detecting systems (VDS)
		IEC/EN 60832-1, clause 5.7 ČSN EN 60832/N1, corr. 1, chap. 13	Insulating poles and heads
		IEC/EN 60855, clause 8 ČSN EN 60855, chap. 8	Foam-filled insulating tubes and solid bars
		ČSN EN 61229/A1, A2, corr. 1, cl. 6.4	Fixed protective covers
		IEC/EN 61235, clause 9 ČSN EN 61235, corr. 1,2,3, chap. 9	Insulating hollow tubes
		IEC/EN 61478/A1, clause 6.5 ČSN EN 61478/A1, clause 6.5	Insulating ladders
		IEC/EN 61479/A1, clause 7.4 ČSN EN 61479/A1, clause 7.4	Flexible conductor covers
		ČSN EN 62193, chap. 5, 6	Telescopic sticks
18	Circle test	IEC/EN 62217, Annex A ČSN/EN 62217, Annex A	Polymeric insulators for indoor and outdoor use
		ANSI C29.18, clause 7.6 method 2	Composite line post insulators
		CAN/CSA-C411.4, clause 4.2	Composite suspension insulators
19	Measurement of reference voltage	IEC/EN 60099-4/A1, A2, clause 7.2 ČSN EN 60099-4/A1, A2, clause 7.2	Metal-oxide surge arresters
20	Impulse voltage puncture test on insulators in air	IEC/EN 61211, chap. 5 ČSN EN 61211, chap. 5	Insulators

¹⁾ Asterisk at the ordinal number identifies the tests performed outside/also outside the laboratory premises

Appendix No. 1 of 2009
is an integral part of
Certificate of Accreditation No. 364/2008 of 17.06.2009

Page 18 of 18

Accredited entity:

EGU – HV Laboratory a.s.
High voltage testing laboratory
Podnikatelská 267, 190 11 Praha 9, Běchovice

Abbreviations:

IEC/EN	- standards issued by International Electrotechnical Commission/European standards
ANSI	- US standards
ANSI/IEEE	- US standards
AS	- Australian standards
CAN/CSA	- Canadian standards
CISPR	- IEC standards elaborated by special commission for radio interference
GOST	- Russian standards
HD	- CENELEC harmonization document
NEMA	- National Electrotechnical Manufacturers Association, USA
PNE	- Energetics company standard
CDV	- Commission Draft for Voting
LV	- low voltage
HV	- high voltage
EHV	- extra high voltage

Annex:

Flexibility type: pursuant to MPA 30-04-...	Ordinal numbers of tests
Type 1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19.
Type 2	-
Type 3	-

Type 1 – The laboratory can use up-to-date or technically equivalent methods in given field of accreditation.

Type 2 – Includes type 1. In addition, the laboratory can modify the methods in given area of accreditation.

Type 3 – Includes types 1 and 2. In addition, the laboratory can develop methods within the accredited tests.

For tests not specified in the Annex the laboratory must not make any changes (fixed scope of accreditation).