EESTI AKREDITEERIMISKESKUS
ESTONIAN ACCREDITATION CENTRE

INSTRUCTION FOR ASSESSMENT OF ELECTRICAL INSTALLATIONS` INSPECTION BODIES

ELEKTRIPAIGALDISTE TEHNILIST KONTROLLI TEOSTAVATE INSPEKTEERIMISASUTUSTE HINDAMISJUHIS

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Autorship and basic principles

This document has been produced by an EAK working group consisting of R. Rajamäe and H. Kamarik. The document is foreseen for use as a specific instruction together with guidance document EAK J17 in the course of assessment of inspection bodies carrying out technical inspection of electrical installations. The document has been harmonized with the EAK inspection committee.

Official language

The text may be translated into other languages as required. The Estonian language version remains the definitive one.

Further information

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Approval

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CONTENTS:

I Introduction

The purpose of this document is to provide specific instructions on assessment of electrical installations` inspection bodies according to the procedure specified in the guidance EAK J17. Observance of the instructions given in this document is obligatory for the EAK personnel and assessors/experts involved in assessment of inspection bodies in this particular field.

II Scope of accreditation

2.1 For planning an assessment the exact accreditation scope applied for has to be determined (cf. EAK J17, cl. 4). Pursuant to the „Guidance document for inspection of electrical installations, ver. 4.0“ issued by the Technical Supervision Department (TJA) the competence has to be assessed and specified by object groups which are defined in more detail. Five object groups are to be distinguished accompanied by the separate assessment for electromagnetic compatibility, which in this guidance is dealt with as an informative issue (cf. Annex 1, cl. F). An inspector carrying out technical inspection has to be capable to use the whole package of the technical norms (standards) specified for the object group.

2.2 When assessing an inspector's competence by object groups the additive principle of competence is applied. The basic competence level requires an inspector to be able to carry out technical inspection of the low-voltage installations. Competence for technical inspection of high-voltage and I class installations consists of base level competence accompanied by competence to perform inspection of some other group. This principle is illustrated by the following examples.

1) **technical inspection of low-voltage installations of class II and III**. Inspection body of type A, B and C.

A – competence scope: main standards used for technical inspection of low-voltage installations (60364, 4. and 5. series)	+	**A - supplement competence scope:** standards used for technical inspection of special low-voltage installations (60364, 7. series)

2) **technical inspection of high-voltage (from 1 kV up to 45 kV) installations of class II**. Inspection body of type A, B and C.

A – competence scope: main standards used for technical inspection of low-voltage installations (60364, 4. and 5. series)	+	**B – competence scope:** standards used for technical inspection of installations up to 45 kV including these of electricity producers and suppliers: 50423, EE JV ST etc.

3) **technical inspection of high-voltage (above 45 kV) installations of class II**. Inspection body of type A, B and C.

A – competence scope: main standards used for technical inspection of low-voltage installations: (60364, 4. and 5. series)	+	**B – competence scope:** standards used for technical inspection of installations up to 45 kV incl. those of electricity producers and suppliers: 50423, EE JV ST etc.	+	**C – competence scope:** standards used for technical inspection of installations above 45 kV incl. those of electricity producers and suppliers: 50341

4) **technical inspection of installations of class I <u>used in explosive environment</u>**. Inspection body of type A and B.

A –competence scope: main standards used for technical inspection of low-voltage installations: (60364, 4. and 5. series)	+	**E – competence scope:** standards used for technical inspection of installations of class I used in explosive environment and sites liable to be affected by major accidents: 60079, 61241, 1127

5) **technical inspection of installations of class I <u>used in medical environment</u>**. Inspection body of type A and B.

A –competence scope: main standards used for technical inspection of low-voltage installations: (60364, 4. and 5. series)	+	**F – competence scope:** standards used for technical inspection of installations of class I in medical locations: 7-710

III ASSESSMENT

Assessment is carried out in two sequential stages: 1) assessment of inspection activity on the basis of documentation, and 2) assessment of an inspector`s competence in practical inspection work.

1) In document-based assessment assessors are seeking confidence that all standards belonging to certain group are available at inspection body and that inspectors are capable to choose and use them. A concession on the availability can be made in terms of standards for low-voltage specific installations, which by the content serve just to specify the requirements of main standards. The minimum list of standards is given in the above mentioned Guidance of TJA which is regularly updated. The EAK lead assessors and technical assessors have to observe the relevant updates in the course of preparation for an assessment. Standards by object groups valid at the moment of approval of this instruction are listed in Annex 1.

Extent of activity of an inspection body can cover the inspection before putting in use as well as the regular and extraordinary technical inspections. The aim of the assessment is to find out whether the inspection body has procured and employers can use both the currently valid standards and those which were valid at the time of construction of installations. Since an extraordinary technical inspection is carried out as a full regular inspection or part of it, this is not described in the accreditation scope as a special type of technical inspection.

2) In planning witnessing of practical inspection assessors have to consider that at least one witness in each object group belonging to the accreditation scope or applied extension has to be performed.

In surveillance assessments witnessing is carried out according to the plan drafted for an accreditation cycle which provides that at least one technical inspection is witnessed in each object group. In practice electrical installations often represent several groups, e.g. an object can embrace both a low-voltage as well a high-voltage installation up to 45 kV which can be covered by one witness. When summarizing the assessment fee in case where the scope consists of several object groups, an increase of assessor's work load due to the enhanced number of witnesses has to be considered.

When drafting a witness plan, documentation compiled for each inspector before getting permission for unassisted work has to be checked. Requirements on an inspector's competence, training, skills and examining of knowledges have to be at least on the level specified in Annex 2.

IV FORMULATION OF THE ACCREDITATION SCOPE

4.1 When describing the accreditation scope in an annex to the accreditation certificate, cf. EAK J17, cl.13.5 and annex 6, the following has to be considered:

- the inspection type has to be specified - technical inspection before use or regular technical inspection;
- the object groups embraced with the competence area of the inspection body have to be listed;
- reference to the relevant legislation;
- reference, e.g. note, to the document of inspection body in which all standards used for technical inspection are listed.

4.2 It is recommended to follow the next example:

1. **Akrediteerimisulatus on toodud järgnevas tabelis**:
   Accreditation scope is given in the following table:

nr *No.*	Objekt ja tegevus *Object and activity*	Normdokument *Normative document*
Kasutuselevõtule eelnev (korraline) tehniline kontroll …*technical inspection before use (regular technical inspection)*		
1	II ja III liigi kuni 1000 V nimipingega elektripaigaldised *electrical installations with nominal voltage up to 1000 V of II and III class*	Elektriohutuse seadus. Ptk. 6. Tehniline kontroll *Electrical Safety Act, Chapter 6. Technical inspection* Majandus- ja kommunikatsiooniministri 12.07.07 määrus nr 62 „Elektripaigaldise tehnilise kontrolli kord, mahud ning korralise kontrolli juhud ja sagedus“ *Regulation of the Minister of Economic Affairs and Communications No 62 of 12.07.2007. „The procedure for and extent of technical inspection, and the cases for and frequency of regular technical inspection of electrical installations”*
2	II liigi üle 1 kV kuni 45 kV nimipingega elektripaigaldised *electrical installations of class II with nominal voltage exceeding 1 kV up to 45 kV*	
2a, erisus *option*	II liigi üle 1 kV kuni 45 kV nimipingega elektripaigaldised, välja arvatud elektrienergia tootja paigaldised *electrical installations of class II with nominal voltage exceeding 1 kV up to 45 kV, except installations for production of electricity*	
3	II liigi üle 45 kV nimipingega elektripaigaldised *electrical installations of class II with nominal voltage exceeding 45 kV*	
4	I liigi plahvatusohu tsooni ja suurõnnetusohuga objekti elektripaigaldised *electrical installations of class I used in explosive environment and sites liable to be affected by major accidents*	
5	I liigi ravipaikade elektripaigaldised *electrical installations of class I used in medical locations*	

Märkus: tehniliste normdokumentide nimekiri on toodud inspekteerimisasutuse nr Ixxx juhtimissüsteemi dokumendis YYY

Note: technical normative documents are listed in the document YYY of the inspection body No Ixxx

ANNEX 1

Normative documents (standards) for technical inspection of electrical installations

A. Technical inspection of low-voltage installations of I and II class

MINIMUM LIST *(NB! HEREAFTER NAMES OF ESTONIAN STANDARDS ARE NOT TRANSLATED)*

1. EVS-EN 50110-1 “Elektripaigaldiste käit”
2. EVS-HD 60364-1 “Madalpingelised elektripaigaldised. Osa 1: Põhialused, üldiseloomustus, määratlused”
3. EVS-HD 60364-4-41“Madalpingelised elektripaigaldised. Osa 4-41: Kaitseviisid. Kaitse elektrilöögi eest”
4. EVS-IEC 60364-4-42“Ehitiste elektripaigaldised. Osa 4-42: Kaitseviisid. Kaitse kuumustoime eest”
5. EVS-HD 60364-4-43 “Ehitiste elektripaigaldised. Osa 4-43: Kaitseviisid. Liigvoolukaitse”
6. EVS-IEC 60364-4-44 “Ehitiste elektripaigaldised. Osa 4-44: Kaitseviisid. Kaitse pingehäirete ja elektromagnetiliste häirete eest”
7. EVS-HD 60364-4-443 “Ehitiste elektripaigaldised. Osa 4-44: Kaitseviisid. Kaitse pingehäirete ja elektromagnetiliste häirete eest. Jaotis 443: Kaitse pikse- ja lülitusliigpingete eest”
8. EVS-HD 60364-4-444 “ Low-voltage electrical installations - Part 4-444: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances“
9. EVS-HD 60364-5-51 “Ehitiste elektripaigaldised. Osa 5-51: Elektriseadmete valik ja paigaldamine. Üldjuhised”
10. EVS-HD 60364-5-534 „Madalpingelised elektripaigaldised. Osa 5-53: Elektriseadmete valik ja paigaldamine. Kaitselahutamine, lülitamine ja juhtimine. Jaotis 534: Liigpingekaitsevahendid.”
11. EVS-HD 60364-5-54 “ Madalpingelised elektripaigaldised. Osa 5-54: Elektriseadmete valik ja paigaldamine. Maandamine, kaitsejuhid ja kaitse-potentsiaaliühtlustusjuhid”
12. EVS-HD 60364-5-551 „Madalpingelised elektripaigaldised. Osa 5-55: Elektriseadmete valik ja paigaldamine. Muud seadmed. Jaotis 551: Madalpingelised generaatoragregaadid“
13. EVS-HD 60364-5-559 “Ehitiste elektripaigaldised. Osa 5-55: Elektriseadmete valik ja paigaldamine. Jagu 559: Valgustid ja valgustuspaigaldised”
14. EVS-HD 60364-5-56 „Low-voltage electrical installations -- Part 5-56: Selection and erection of electrical equipment - Safety services“
15. EVS-HD 60364-6 “ Madalpingelised elektripaigaldised. Osa 6: Kontrolltoimingud”
16. EVS-HD 60364-7-701 “Madalpingelised elektripaigaldised. Osa 7-701: Nõuded eripaigaldistele ja –paikadele. Vanne ja dušše sisaldavad ruumid”
17. EVS-HD 60364-7-702 “Madalpingelised elektripaigaldised. Osa 7-702: Nõuded eripaigaldistele ja –paikadele. Ujumisbasseinid ja purskkaevud”
18. EVS-HD 60364-7-703 “Ehitiste elektripaigaldised. Osa 7-703: Nõuded eripaigaldistele ja –paikadele. Saunakeriseid sisaldavad ruumid ja kabiinid”
19. EVS-HD 60364-7-704 “Madalpingelised elektripaigaldised. Osa 7-704: Nõuded eripaigaldistele ja –paikadele. Ehituspaikade paigaldised”
20. EVS-HD 60364-7-705 “Madalpingelised elektripaigaldised. Osa 7-705: Nõuded eripaigaldistele ja –paikadele. Põllundus- ja aiandusehitised”
21. EVS-HD 60364-7-706 “Madalpingelised elektripaigaldised. Osa 7-706: Nõuded eripaigaldistele ja –paikadele. Ahtad juhtivad paigad”
22. EVS-HD 60364-7-708 “ Madalpingelised elektripaigaldised. Osa 7-708: Nõuded eripaigaldistele ja –paikadele. Sõidukelamute, kämpinguväljakud ja muud taolised paigad”
23. EVS-HD 60364-7-709 “ Madalpingelised elektripaigaldised. Osa 7-709: Nõuded eripaigaldistele ja –paikadele. Huvisõidusadamad ja muud taolised paigad“

24. EVS-HD 384.7.711 S1 “Ehitiste elektripaigaldised. Osa 7-711 Nõuded eripaigaldistele ja –paikadele. Messide, näituste, väljapanekute ja lõbustuspaikade elektripaigaldised”
25. EVS-HD 60364-7-712 “Ehitiste elektripaigaldised. Osa 7-712: Nõuded eripaigaldistele ja –paikadele. Solaar-fotoelektrilised toiteallikad”
26. EVS-HD 384.7.714 S1 “Ehitiste elektripaigaldised. Osa 7 Nõuded eripaigaldistele ja –paikadele. Jagu 714: Välisvalgustuspaigaldised”
27. EVS-HD 60364-7-715 “Ehitiste elektripaigaldised. Osa 7-715: Nõuded eripaigaldistele ja –paikadele. Väikepingelised valgustuspaigaldised”
28. EVS-HD 60364-7-717 “Ehitiste elektripaigaldised. Osa 7-717: Nõuded eripaigaldistele ja –paikadele. Liikuvad ja veetavad üksused”
29. EVS-HD 60364-7-721 “Madalpingelised elektripaigaldised. Osa 7-721: Nõuded eripaigaldistele ja –paikadele. Sõidukelamute elektripaigaldised ”
30. EVS-HD 60364-7-729 “Ehitiste elektripaigaldised. Osa 7-717: Nõuded eripaigaldistele ja –paikadele. Teenindus- ja hoolduskäigud”
31. EVS-HD 60364-7-740 “Ehitiste elektripaigaldised. Osa 7-740: Nõuded eripaigaldistele ja –paikadele. Peoplatside, meelelahutusparkide ja tsirkuste tarindite, meelelahutusseadmete ja kioskite ajutised elektripaigaldised”
32. EVS-HD 384.7.753 S1 “Ehitiste elektripaigaldised. Osa 7: Nõuded eripaigaldistele ja –paikadele. Jagu 753: Põranda- ja laeküte”
33. IEC 60364-5-52* „Electrical installations of buildings – Part 5-52: Selection and erection of electrical equipment- Wiring systems“
34. IEC 60364-5-53* “Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control“
35. IEC 60364-5-55 „Electrical installations of buildings - Part 5-55: Selection and erection of electrical equipment – Other equipment“ osad 550 ja 556
36. IEC 60364-5-56 „Low-voltage electrical installations - Part 5-56: Selection and erection of electrical equipment - Safety services“
37. IEC 60364-7-713 „Electrical installations of buildings - Part 7: Requirements for special installations and locations - Section 713: Furniture“
38. EEI 3-8:1994 “Ehitiste madalpinge-elektripaigaldised. 8.osa: Eripaigaldised 2”
39. EVS-EN 50191 „Elektriliste katsetuspaigaldiste ehitamine ja käit“
40. Elektriseadmete Ehituse Eeskirjad EEE (kuni 1985.a ilmunud väljaanded)
41. Tarbijate elektriseadmete ja –aparaatide katsetamise normid
42. EEI 3:1994 „Madalpingelised-elektripaigaldised“ eeskirjade seeria
43. EVS-HD 384 standardiseeria
44. EVS-HD(IEC) 60364 standardiseeria

ADDITIONAL STANDARDS ON ELECTRICAL EQUIPMENT

1. EVS-EN 61140 “Kaitse elektrilöögi eest. Ühisnõuded paigaldistele ja seadmetele.”
2. EVS-EN 61439-1 „Madalpingelised aparaadikoosted. Osa 1: Üldreeglid“
3. EVS-EN 61439-2 „Madalpingelised aparaadikoosted. Osa 2: Jõuaparaadikoosted“
4. EVS-EN 60439-1 “Madalpingelised aparaadikoosted. Osa 1: Täielikult või osaliselt tüüpkatsetatud koosted”
5. EVS-EN 60439-2 “Madalpingelised aparaadikoosted. Osa 1: Erinõuded lattliinidele”
6. EVS-EN 60439-3 “Madalpingelised aparaadikoosted. Osa 3: Erinõuded madalpingelistele lülitusaparaadikoostetele, millele pääsevad kasutamiseks juurde tavaisikud. Jaotuskilbid **”**
7. EVS-EN 60439-4 “Madalpingelised aparaadikoosted. Osa 4: Erinõuded ehituspaikade koostetele”
8. EVS-EN 60529 “Ümbrisega tagatavad kaitseastmed (IP-kood)”

9. EVS-EN 62262:2008 **„**Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)“
10. EVS 873:2007 „Kodumajapidamises ja muudes taolistes oludes kasutatavad pistikühendused“
11. EVS-EN 50272-1:2010 „Safety requirements for secondary batteries and battery installations - Part 1: General safety information“

B: Technical inspection of high-voltage, up to 45 kV installations of II class

MINIMUM LIST

1. EVS-EN 50110-1 “Elektripaigaldiste käit”
2. EVS-EN 50522:2010 „Tugevvoolupaigaldised nimivahelduvpingega üle 1 kV“
3. EVS-EN 61936-1:2010 Power installations exceeding 1 kV a.c. - Part 1: Common rules“
4. EVS-EN 50423-1 „Elektriõhuliinid vahelduvpingega üle 1 kV kuni 45 kV. Osa 1: Üldnõuded – ühised eeskirjad“
5. 0,4–20 kV võrgustandard EE 10421629-JV ST
6. EVS-HD 637 S1 "Tugevvoolupaigaldised vahelduvvoolupingele üle 1kV"
7. Elektriseadmete Ehituse Eeskirjad EEE (kuni 1985.a ilmunud väljaanded)
8. Tarbijate elektriseadmete ja –aparaatide katsetamise normid

ADDITIONAL STANDARDS ON ELECTRICAL EQUIPMENT

1. EVS-EN 62271-1„Kõrgepingelised lülitusaparaadid. Osa 1: Üldliigitus“
2. EVS-EN 62271-202:2007 „Kõrgepingejaotla ja juhtimisaparatuur. Osa 202: Tehasetooteline kõrgepinge/madalpingealajaam“
3. EVS-EN 60076-1 „Jõutrafod. Osa 1: Üldist“
4. EVS-EN 60076-6 „Jõutrafod. Osa 6: Reaktorid“
5. EVS-EN 61400-1:2005 „Tuuleturbiin-generaatorsüsteemid. Osa 1: Ohutusnõuded“

C: Technical inspection of high-voltage, above 45 kV installations of II class

MINIMUM LIST

1. EVS-EN 50341-1 „Elektriõhuliinid vahelduvpingega üle 45 kV. Osa 1: Üldnõuded - ühised eeskirjad“
2. EVS-EN 50341-3-20 „Elektriõhuliinid vahelduvpingega üle 45 kV. Osa 3-20: Eesti siseriiklikud erinõuded“

D. Technical inspection of installations used in in explosive environment

MINIMUM LIST

1. EVS-EN 60079-0 „Plahvatusohtlikud gaaskeskkonnad. Osa 0: Seadmed. Üldnõuded“
2. EVS-EN 60079-10-1 „Plahvatusohtlikud keskkonnad. Osa 10-1: Tsoonide liigitus – gaasplahvatusohtlik keskkond“
3. EVS-EN 60079-10-2 „Plahvatusohtlikud keskkonnad. Osa 10-2: Tsoonide liigitus – põlevtolmuohtlik keskkond“
4. EVS-EN 60079-14 „Plahvatusohtlikud keskkonnad. Osa 14: Elektripaigaldiste kavandamine, seadmete valik ja paigaldamine“
5. EVS-EN 60079-17 „Explosive atmospheres - Part 17: Electrical installations inspection and maintenance“

6. EVS-EN 60079-19 „Explosive atmospheres -- Part 19: Equipment repair, overhaul and reclamation“
7. EVS-EN 61241-0 „Elektriseadmed, mis on ette nähtud kasutamiseks põlevtolmu olemasolul. Osa 0: Üldnõuded“
8. EVS-EN 61241-14 „Electrical apparatus for use in the presence of combustible dust - Part 14: Selection and installation“
9. EVS-EN 61241-17 „Elektriseadmed, mis on ette nähtud kasutamiseks põlevtolmu olemasolul. Osa 17: Elektripaigaldiste kontroll ja hooldus ohtlikus keskkonnas (mitte kaevandused)“
10. EVS-EN 1127-1 „Plahvatusohtlik keskkond. Plahvatuse vältimine ja kaitse. Osa 1: Põhimõisted ja metoodika“
11. Elektriseadmete Ehituse Eeskirjad EEE (kuni 1985.a ilmunud väljaanded)
12. Tarbijate elektriseadmete ja –aparaatide katsetamise normid

E. Technical inspection of installations used in in medical environment

MINIMUM LIST

1. EVS-IEC 60364-7-710 “Ehitiste elektripaigaldised. Osa 7-710: Nõuded eripaigaldistele ja –paikadele. Ravipaigad”
2. EEI 3-710:1994 “Ehitiste madalpinge-elektripaigaldised. Jaotis 710: Ravi- ja muud meditsiiniruumid”

ADDITIONAL STANDARDS ON ELECTRICAL EQUIPMENT

1. EVS-EN 60601-1: 2006 „Elektrilised meditsiiniseadmed. Osa 1. Üldised nõuded esmasele ohutusele ja olulistele toimimisnäitajatele“

F. Assessment of electromagnetic compatibility (informative)

MINIMUM LIST:

1. EVS-IEC/TR 61000-1-1 “Elektromagnetiline ühilduvus. Osa 1: Üldist. Peatükk 1: Põhimääratluste ja –terminite kasutamine ja tõlgendamine”
2. EVS-EN 61000-2-2:2003 „Electromagnetic compatibility (EMC) - Part 2-2: Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems”
3. EVS-EN 61000-2-4:2002 “Electromagnetic compatibility (EMC) - Part 2-4: Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances”
4. EVS-EN 61000-2-12:2003 “Electromagnetic compatibility (EMC) - Part 2-12: Environment - Compatibility levels for low-frequency conducted disturbances and signalling in public medium-voltage power supply systems”
5. EVS-EN 61000-3-2:2006 „Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)”
6. EVS-EN 61000-3-3:2008 „Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection“
7. EVS-EN 61000-3-11:2001 „Electromagnetic compatibility (EMC) - Part 3-11: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 75 A and subjet to conditional connection”

8. EVS-EN 61000-3-12:2005 „Electromagnetic compatibility (EMC) Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase“

ADDITIONAL STANDARDS ON ELECTRICAL EQUIPMENT

1. EVS-EN 61000-6-1 „Elektromagnetline ühilduvus. Osa 6-1: Erialased põhistandardid. Häiringukindlus olme-, kaubandus- ja väiketööstuskeskkondades“
2. EVS-EN 61000-6-2 „Elektromagnetiline ühilduvus. Osa 6-2: Erialased põhistandardid. Häiringukindlus tööstuskeskkondades“
3. EVS-EN 61000-6-3 „Elektromagnetiline ühilduvus. Osa 6-3: Erialased põhistandardid. Olme-, kaubandus- ja väiketööstuskeskkondade emissioonistandard“
4. EVS-EN 61000-6-4 „Elektromagnetiline ühilduvus. Osa 6-4: Erialased põhistandardid. Tööstuskeskkondade emissioonistandard“

ANNEX 2

Requirements for inspector`s competence in the electrical safety area

An accredited inspection body shall define and document the qualifications, training, experience and the level of knowledge required for the inspections to be carried out (see clause 6.6 of ISO/IEC 17020). Accreditation body shall assess the appropriateness of such qualifications, training, experience and the level of knowledge for the scope of inspections to be accredited.

Group of installations	Qualifica-tion	Training	Experience	Check of knowledge to grant permission for unassisted work
II class, low-voltage	**Competence certificate of A or B class**	1. A new employee has to be trained during 1+2 months by the senior inspector having at least 3-years experience according to the documented training programme. The programme shall comprise all standards used in the course of technical inspection of the given group of installations. 2. Training of an employee with prior experience for inspection can be limited to elucidation the management system of the inspection body. This training shall be documented.	1. Two years of documented experience for electrical work (design, maintenance, construction) in the given group of installations 2. Complaints or precepts of the TJA (if occured) connected with previous work have been settled successfully.	Capability to performe practical technical inspection of installations belonging to the given group is assessed by the inspector who has at least 3-years practical experience at the accredited inspection body, or by the technical assessor of EAK. Assessment results have to be documented as specified in the form AsWInsp-2010 (cf. ANNEX 3), at least.
II class, high-voltage up to 45 kV	**Competence certificate of A class**			
II class, high-voltage above 45 kV	**Competence certificate of A class**			
I class used in explosive environment	**Competence certificate of A or B class**			
I class used in medical environment	**Competence certificate of A or B class**			

Note: Adopted from EA IAF/ILAC-A4:2004 „Guidance on the application of ISO/IEC 17020:1998

ANNEX 3
Form AsWInsp-2010

Report on witnessed inspection of electrical installation		
Date(s) of witnessing		
Witnessing EAK assessor		
Inspection body		
Inspection criteria		
Object inspected and its class		
Type of inspection		
Person performing inspection		
		Comments/Findings
1. Preparation by the inspection body		
1.1	Registration and handling of application (according to the established procedure). Selection of standards depending on object.	
1.2	Competence of inspector to carry out and to achieve the aim of technical inspection.	
1.3	Review of documentation. Availability of standards for making decision on conformity.	
1.4	Specifying the scope and criteria for inspection.	
1.5	Coordination of inspection plan (schedule, practical arrangements) with the client.	

2. Conducting the inspection		
2.1	Treating the object inspected. Following the working procedure for inspection.	
2.2	Recording of findings. Documentation of nonconformities.	
3. Informing the client, documenting		
3.1	Informing the client or superviser. Explanation of inspection findings and nonconformities.	
3.2	Drafting the inspection report.	
4. Conclusions		
4.1	Performing the technical inspection. Making the decision on inspection. Drafting the documentation.	

Remarks and overall impression:

Signature of the assessor: