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RG 4

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Accreditation for the inspection of local exhaust ventilation (LEV) plant

Contents

Changes since last edition

This publication has been revised to reflect updates to referenced standards and documents.

1. Introduction

1.1 This publication has been produced by the United Kingdom Accreditation Service (UKAS) in conjunction with the UKAS Technical Advisory Committee for Engineering Inspection. It provides guidance to those requirements in ISO/IEC 17020, which need interpretation when applied by Inspection Bodies carrying out in-service inspection of LEV equipment. ISO/IEC 17020, as applied by UKAS in accordance with ILAC P15, remains the authoritative publication in cases of dispute or differences in interpretation.

1.2 The field of inspection covered by this publication is local exhaust ventilation plant (LEV); The type of inspection covered is commissioning, retrospective commissioning and thorough examination and test.

1.3 The selection of an inspection body accredited against the requirements of ISO/IEC 17020 using the specific guidance in this publication is intended to assist owners/operators of LEV plant in the selection of competent persons and/or competent inspection companies to perform inspections, i.e. examinations such as required by the Control of Substances Hazardous to Health Regulations 2002 (as amended). Further guidance is given in the HSE guidance document HSG258 “Controlling airborne contaminants at work - A Guide to Local Exhaust Ventilation (LEV)”.

1.4 For the purposes of this publication the term Inspection Body shall be taken to mean an accredited Inspection Body.

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2. Scope - Inspection services covered by RG 4

2.1 This publication covers the accreditation of in-service inspection (commissioning, retrospective commissioning and thorough examination and test) of local exhaust ventilation plant (LEV).

2.2 The electrical inspection of devices, e.g. motors, control devices, etc, is excluded except insofar as their performance affects the correct functioning of the LEV plant. Accreditation for the examination of electrical plant and equipment is covered in the RG 100 series of documents.

2.3 The sampling of air exhausted from a recirculating exhaust should be measured to ensure that this is being controlled suitably. However, inspection reports should indicate where this is necessary for none recirculated exhaust air.

2.4 Inspections of LEV plant are generally carried out in pursuance of Regulation 9 - (2)(a) of the Control of Substances Hazardous to Health Regulations 2002 (as amended) and similar requirements in other Regulations (see references). This publication may, however, be used when inspections are carried out for other purposes.

2.5 When an Inspection Body accredited under this publication provides an inspection service, the service may include the following:

- Commissioning or retrospective commissioning of the system should be in correspondence with system design, where no design is present then the following should apply - recognised national or international standards, Codes of Practice and other similar documents
- In-service inspection (thorough examination and testing) of LEV plant to determine if it can continue to perform as intended by design and will contribute to the adequate control of exposure; this *can* include simple adjustments that restore the required performance to adequately control exposure (see HSG258, 272, 341 and 349)
- Reporting to the owner/operator of the LEV Plant details as required by COSHH ACOP para 186
- Reporting to the owner defects which are or may become a cause of danger to persons or which do not allow the provision of adequate control and protection

3. Personnel (ISO/IEC 17020 clause 6.1)

3.1 The Inspection Body shall be able to demonstrate that it has identified the competencies required to undertake the range of inspection activities covered by its scope of accreditation and that it has processes in place to train, assess and monitor staff against those competencies. The UKAS RG 0 *Guidelines on the Competence of Personnel Undertaking Engineering Inspections* provides a framework for a competence management system for inspection bodies. The qualification categories in Appendix 1 of this publication may also be used to develop competence criteria for inspection and supervision of inspection of LEV systems.

3.2 Inspection staff shall only undertake work according to their competence, experience, training and appropriate authorisation according to RG 0 and guidance is also given in Appendix 1.

3.3 Inspectors and trainers should be able to demonstrate a thorough understanding of the design parameters and technology used in LEV systems and be able to satisfy fully the requirements of Clause 6.1.3 of ISO/IEC 17020:2012.

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4. Supervision (ISO/IEC 17020 clauses 6.1.6 & 6.1.9)

4.1 Effective supervision shall include the witnessing of inspections, particularly where multi-discipline inspectors are used and shall include provision to include the on-site witnessing of inspections in accordance with the requirements of ISO/IEC 17020.

5. Reporting (ISO/IEC 17020 clauses 7.3 & 7.4)

5.1 Where maintenance work is undertaken concurrently with inspection work, particularly with Type C inspection bodies, the examination reports shall clearly define the maintenance work associated with each inspection activity in a manner of sufficient accuracy for meaningful audit trails.

5.2 The report of examination shall include a clear unambiguous statement of the effectiveness of control of the substance(s) being controlled by the LEV plant.

Note: a competent inspector should be able to make a professional judgement as to the effectiveness of the control of LEV systems (reference clause 6.1.2 ISO/IEC 17020:2012).

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References

This section is not exhaustive but lists selected legislation, standards and other publications pertinent to this document:

ISO/IEC 17020:2012 Conformity assessment - Requirements for the operation of various types of bodies performing inspection

ILAC P15:05/2020 Application of ISO/IEC 17020:2012 for the Accreditation of Inspection Bodies

ILAC P10:07/2020 ILAC Policy on Metrological Traceability of Measurement Results

ILAC G27:07/2019 Guidance on measurements performed as part of an inspection process

GEN 6 Reference to Accreditation and MLA Signatory Status

TR40 – A Guide to Good Practice for Local Exhaust Ventilation (LEV)

Legislation

SI 1974 No 1439, Health and Safety at Work etc, Act 1974

SI 2002 No 2677, The Control of Substances Hazardous to Health Regulations 2002

SI 2003 No 978, The Control of Substances Hazardous to Health (Amendment) Regulations 2003

SI 2004 No 3386, The Control of Substances Hazardous to Health (Amendment) Regulations 2004

SI 2005 No 165, The Control of Substances Hazardous to Health (Amendment) Regulations (Northern Ireland) 2005

SI 2002 No 2675, The Control of Asbestos at Work Regulations 2002

SI 2003 No 33 Control of Asbestos at Work Regulations (Northern Ireland) 2003

SI 2002 No 2676, The Control of Lead at Work Regulations 2002

SI 2003 No 35 Control of Lead at Work Regulations (Northern Ireland) 2003

SI 1998 No 2306, The Provision and Use of Work Equipment Regulations 1998

SI 1999 No 305, Provision and Use of Work Equipment Regulations (Northern Ireland) 1999

SI 1997 No 1713, Confined Spaces Regulations 1997

SI 1999 No 13, Confined Spaces Regulations (Northern Ireland) 1999

HSE Guidance

Up to date information on the COSHH regulations, LEV and associated HSE guidance may be found here:

http://www.hse.gov.uk/coshh/

http://www.hse.gov.uk/lev/index.htm

COSHH Essentials - COSHH e-tool (hse.gov.uk)

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Examples of individual documents are given below but it is advisable to check for the latest information:

HSG258 “Controlling airborne contaminants at work - A Guide to Local Exhaust Ventilation (LEV)”

INDG 408 “Cleaning the air - A simple guide to buying and using local exhaust ventilation (LEV)”

INDG 409 “Time to clear the air! A workers’ pocket guide to local exhaust ventilation (LEV)”

OC 282/28 FIT TESTING OF RESPIRATORY PROTECTIVE EQUIPMENT FACEPIECES

EH40/2005 Workplace exposure limits

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Appendix 1 - Personnel guidelines

The levels of competence, experience and training required for their inspectors shall be defined by the inspection body based on the following guidelines:

1. **Category 1** - Technical management shall only be undertaken by a Chartered Engineer in a related field or persons with Professional Occupational Hygienist qualifications of CoC Control. They will have at least five years relevant experience and able to make proper judgements on the full range of topics likely to arise. This level of competence must be maintained by keeping up to date with the latest developments in the industry and by a defined programme to ensure maintenance of competence which could be included, or subsumed, in a professional Continuing Professional Development (CPD) scheme.
2. **Category 2** - Supervision, training, commissioning and retrospective commissioning shall only be provided by persons with at least equivalent competency to that defined in the BOHS P601, P602, P604 and W201 courses with at least Incorporated Engineer status and five years' experience in a relevant inspection activity. This level must be maintained by a defined program of competency maintenance.
3. **Category 3** - Unsupervised inspections shall only be undertaken by persons training in a relevant discipline with a recognised and documented apprenticeship or equivalent formal training with a minimum 3 years' experience working in a relevant inspection activity. The LEV inspector, carrying out Thorough Examination and Test (TExT), will have will have completed a training course, either internal or external, provided by someone with Cat 1 o3 2 competency or the BOHS P601, P602 and W201 courses and a minimum of 2 years' experience and the appropriate supervised training in LEV inspection to enable them to make professional judgements in Thorough Examination and Test inspections. This level must be maintained by a defined program of competency maintenance.
4. **Category 4/5** - Supervised inspections shall only be undertaken by persons trained in a relevant discipline with a recognised and documented apprenticeship or equivalent formal training with a minimum of two years' experience working in a relevant engineering inspection activity. The inspector will be undergoing training which includes supervised training in LEV inspection with the aim to enable them to make professional judgements in their defined areas of competency. Persons should hold BOHS P601 and W201, or equivalent, within the first year of their training with a BOHS P602 course, or equivalent, in the second year to aid in their progression.

The levels of supervision required for their inspectors shall be defined by the inspection body based on the following guidelines:

- **Occasional**: Formal, direct contact to review work with Supervisor at least annually. More frequent direct contact with Supervisor may be necessary. Authoritative technical support from competent personnel qualified to Category 1 or 2 to be readily available.
- **Infrequent**: Direct contact with Supervisor at least every 3 months. Access to supervision and technically authoritative support to be available as needed.
- **Frequent**: Direct contact with Supervisor at least weekly. Authoritative technical support from personnel qualified to Category 1 or 2.

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- **Constant**: Direct daily contact with Supervisor at site of operation. Authoritative technical support from personnel qualified to Category 1, 2, to be readily available.

In addition, the inspection body shall employ or have defined access to personnel who are trained and experienced in relevant specialist areas such as the sampling and examination of exhaust air in the working environment.

Work shall be undertaken according to Table 1 below.

Table 1 - Requirements for qualifications and supervision of inspectors performing inspection of LEV Systems

LEV system	Qualification category	Supervision	Constraints
Complex LEV systems (as defined in HSG258)	1	Occasional	Inspection or associated activities in technology outside the field of competence is prohibited except by formally documented consultation.
	2	Occasional	The above constraint plus prohibition on any non-routine repairs, modifications, changes to operating parameters, changes to inspection methods, calculations not defined in recognised standards except with specific approval by an appropriately qualified person. *Metallurgist, Designer, Process Engineer, Occupational Hygienist)*
	3	Frequent	Permitted only for testing and examination to identify defects, within the limits specified by Category 1 or 2 persons. Any decisions involving limits of acceptability, repairs or modifications shall be approved by authorised persons qualified to Category 1 or 2.
Simple LEV Systems (as defined in HSG258)	1, 2	Occasional	Same constraints as for major systems stated above for respective categories.
	3	Infrequent	Same constraints as for major systems stated above for respective categories.
	4, 5	Constant	Permitted only for carrying out routine, repetitive and well-defined examinations on a specific range of storage installations.

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