A Guide to LEV Testing

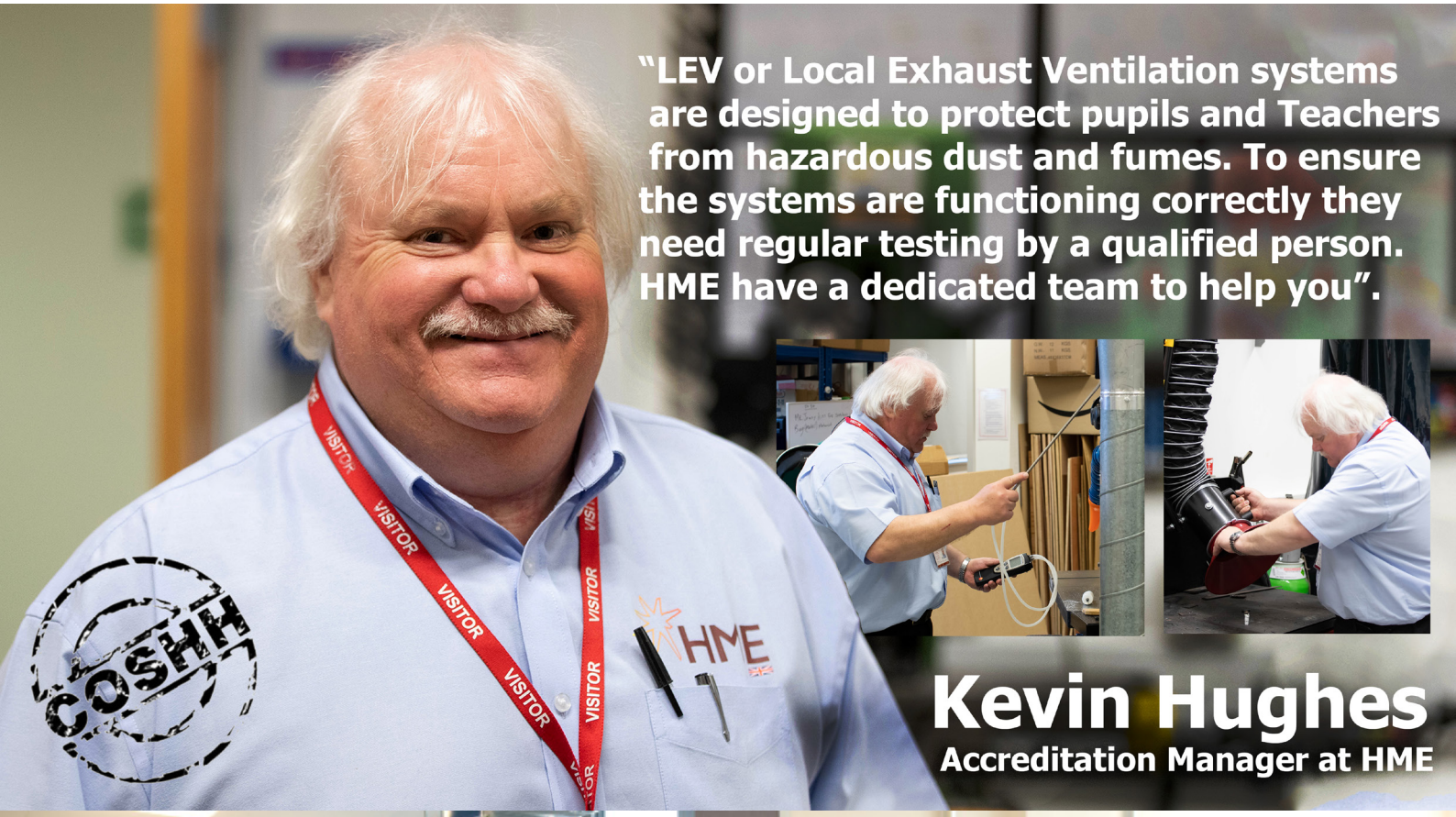
And what HME can do for you...

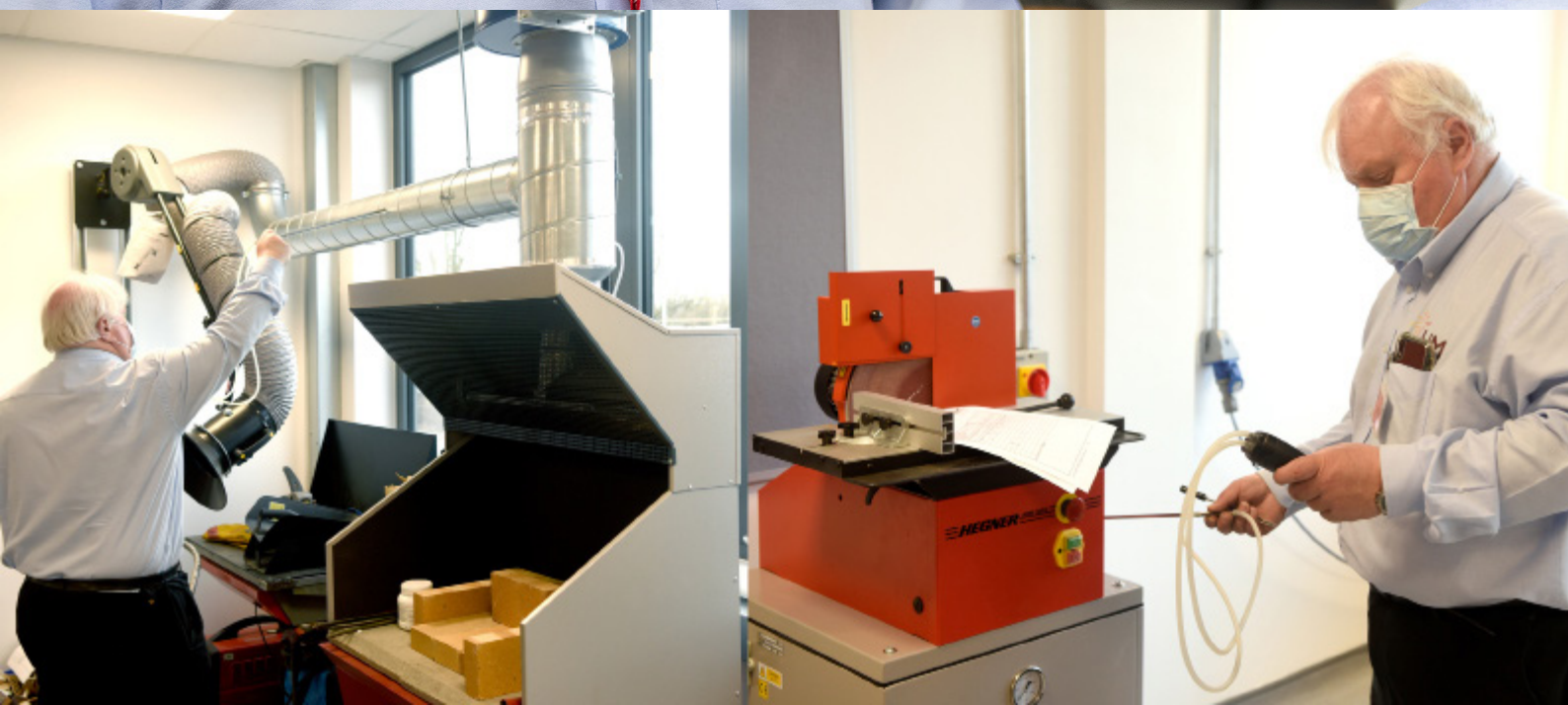
"We can save you time and money!"

HME

UNLEASHING INNOVATIVE TECHNOLOGY

visit our website at www.hme-edutech.com





Welcome to this guide on LEV testing....

HME have put together this comprehensive guide to LEV testing services in the form of an FAQ to assist you, in both understanding the ins and outs of the subject and to help you choose your preferred supplier. Not only for LEV testing but for training, remedial works and of couse, new equipment. We hope you'll find this a useful 'go to' resouce and answer important questions you may have.

So, what is **L**ocal **E**xhaust **V**entilation?

"Local exhaust ventilation is an engineering system that captures dust, vapours, and fumes at their source, minimising the risk of workers breathing in contaminated air."

When should I use local exhaust ventilation?

- Change your method of work so exposure to hazardous substances can no longer occur.
- Substitute the material being used to something safer.
- Reduce the amount of the contaminant released.
- Modify the process to reduce the duration or frequency that the contaminant is released.

What is the difference between General Ventilation and Local Exhaust Ventilation **LEV**?

General (dilution) ventilation systems supply clean air that mixes with the air in the workplace, diluting the concentration of the contaminant. ... Local exhaust ventilation systems remove the contaminant before it spreads through the workplace.

Sourcing a suitable local exhaust ventilation system

An employer is responsible for selecting a supplier that is competent to define, design and install a suitable LEV system. To help with this, employers may wish to:

- Invite more than one tender
- Provide a drawing of the area and the processes to be controlled
- Ask potential contractors to visit the site to see the processes
- Ask what are their professional qualifications, experience, memberships and whether they can provide case studies and references
- Review tenders and quotes against the Health and Safety Executive's (HSE) guidance, HSG258 Controlling Airborne Contaminates at Work

A key part in ensuring that the LEV system is designed correctly is for the employer to draw up a specification for the supplier. In the first instance an employer should establish the following as part of the LEV specification:

- The process (the way airborne contaminants are generated, for example in woodworking, processes may include cutting, shaping and sanding)
- The contaminants (the airborne material that is trying to be captured i.e. dust, mist, fume, vapour, aerosol) and their hazards (i.e. how are they dangerous, e.g. isocyanate containing paints can cause asthma and welding fumes can cause lung cancer)

Where the contaminant to be controlled is generated by a process, this is called the source. It is crucial that the LEV system designer understands how the source behaves in its location at the specific workplace. Depending on the process there could be single or multiple sources.

The specification should also require the supplier to:

- Fit indicators, such as pressure differential guages, that show that the system is working properly
- Ensure the LEV is easy to use, check, maintain and clean
- Provide training in how to use, check and maintain the LEV system
- Provide a user manual that describes and explains the LEV system, how to use, check, maintain and test it, along with performance benchmarks and schedules for replacement of parts
- provide a logbook for the system to record the results of checks and maintenance

What needs to be done once an LEV system is installed?

Once an LEV system has been installed at your premises there are a number of steps that need to be undertaken to ensure the ongoing effectiveness of control.....

1. Commissioning

After installation the system must be commissioned to prove it is working correctly and capable of providing protection to your employees. The results of the commissioning should be used as a benchmark against the future performance of the system and a copy kept with the system until it is decommissioned and removed.

2. Training

Staff should be trained in how to use the system, how to check it is operating correctly, any limitations of the system and how they should carry out the work activity to ensure maximum control of the contaminants. Our LEV testing team are highly qualified to undertake Health and Safety Training in your School, Academy, College or University.

3. Maintenance and servicing

The LEV system should be maintained in line with the manufacturer's recommendations. The user manual should specify daily, weekly or monthly checks on the performance and condition of the system to help ensure its effective control. These may include checks on the following:

- Hoods - including airflow indicators, physical damage and blockages
- Ducts - including damage, wear and partial blockage
- Dampers - position
- Filters - including damage, static pressure across the cleaner, and failure alarms

All user checks, maintenance and servicing should be recorded in the system's log book.

Thorough examination and test

Every LEV system requires a statutory thorough examination and test by a competent person, at least every **14** months. A thorough examination and test is a detailed and systematic examination to make sure that the LEV can continue to perform as intended and will contribute to the adequate control of exposure. As an employer, you should keep a copy of the report for at least five years.

> "A detailed breakdown of what a thorough examination and test consists of can be found in HSG258 Controlling Airborne Contaminants at Work: A guide to local exhaust ventilation and Regulation 9 of the Control of Substances Hazardous to Health Regulations (Northern Ireland) 2003."

Do I have to fit Air Flow Monitors?

It is not a specific legal requirement, but you should have some way of checking that adequate airflow is being maintained. If you decide to get airflow indicators, you should identify which LEV systems or parts of systems need to be addressed first.

Factors to consider in your decision include:

- The risk of exposure
- Whether the operator has to set the hood airflow
- Whether other checks are practical
- The cost

LEV suppliers can fit airflow indicators if requested. HME can provide this service if required.

Common errors in applying extraction are:

- the effectiveness of small hoods is usually overestimated – be realistic
- the hood is usually too far away from the process
- the hood doesn't surround the process enough
- inadequate airflow
- failure to check that the extraction continues to work
- workers are not consulted, so they don't understand the importance of extraction and do not use it properly

What is the purpose of a thorough examination and test?

It is a check that your LEV is still working as effectively as originally intended and is helping to protect your employees' health. To be able to tell if it is still working as it should, you should be able to provide the examiner with information about the intended or designed performance of your system eg hood type and position relative to the process, airflow and other measurements.

This information might be in the form of an initial appraisal or commissioning report, if one was carried out, or for simple 'stand alone' systems it could have been provided as standard operating data by the suppliers of extraction equipment. Alternatively, it might be found in recognised guidance (including that from HSE) on simple processes/systems (For examples see **COSHH** Essentials). If none of this is available, you could consider getting someone competent to advise you.

Who can undertake the thorough examination and test and what responsibility does that person have?

Carrying out a thorough examination and test of LEV equipment requires specialist skills and although it is possible to undertake this on your own, most businesses engage someone with specialist knowledge, experience and skills (See LEV Competence FAQs - what is competence?). It is important that the person who undertakes the thorough examination and test is competent to do so.

The examiner will use information about your equipment's intended performance to undertake the necessary examinations, tests and measurements to verify whether it is still meeting this level of performance. The report that they provide for you should clearly show whether this is the case and if it isn't, the report should clearly show what is wrong and what needs to be done to correct it.

HME employ a team of qualified examiners that can competently undertake all LEV testing in Design Technology workshops, Science Department's fume cupboards and if you have an on site kitchen used for the preparation of school meals, test in that environment too.

ASK ABOUT OUR FIXED PRICE 3 YEAR PLANS!

It is important that you:

- Read and understand your thorough examination and test report
- Ask the examiner questions if you don't understand anything that it says
- Make sure you act on the recommendations in the report.

What information does the examiner need?

To assess if the LEV is still working properly, the examiner ideally needs to know what it was originally intended to do. When you obtained the LEV equipment, the supplier should have tested it on installation (or 'commissioned' it) to check it was working effectively and providing the necessary protection, as specified. If this did not happen then other sources of information may be available. See 'What is the purpose of a thorough examination and test?'.

The person doing the examination should let you know whether the information you provide is adequate for assessing whether the LEV is working as intended. Many examiners can help you identify intended performance information.

Why do I need to employ or use competent people?

You have a legal responsibility to ensure that employee exposure to dust/fumes etc. is minimised and well controlled. LEV is an excellent way of doing this. People who supply, examine and maintain LEV need to be competent otherwise your LEV may not work properly, putting people's health at risk.

How do I know someone is competent?

Competent people have the right mix of skills, knowledge and experience to do a good job. Ask about relevant qualifications and training, experience and previous work. A competent supplier will be able to supply references or testimonials - ask for them. If the cost is high, it might be worth visiting other sites and viewing other LEV installed by the supplier. A good supplier should also be able to train your staff to maintain the LEV. HME can provide refernces, case studies and appropriate training. Our team of LEV specialists are among the best in the UK

How do I find a competent person?

Some trade associations keep lists of members who claim LEV competence. HME are corporate members of the leading industry associations . Prepare a simple description of the work you want the company to do and give it to them. Ask them what qualifications, experience and types of LEV system they have designed or supplied before. Always get more than one quote.

HME are both **DATA** and **CLEAPPS** Corporate members.

D&T the design and technology association

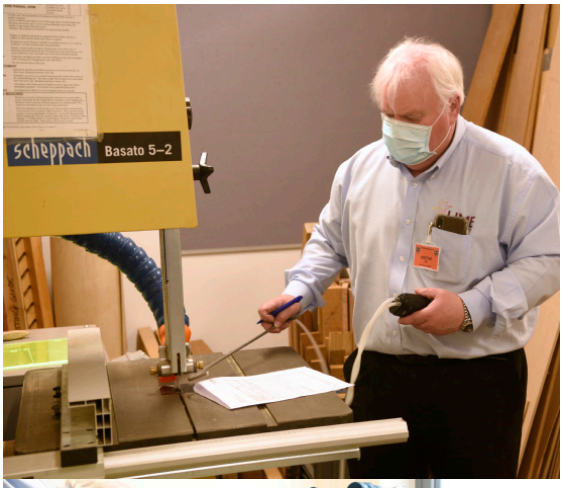
CLEAPSS Design and Technology

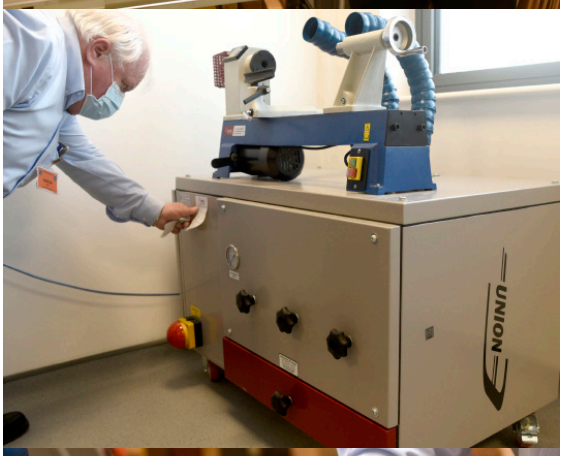
A 3 YEAR FIXED PRICE CONTRACT WITH HME CAN SAVE YOU MONEY!

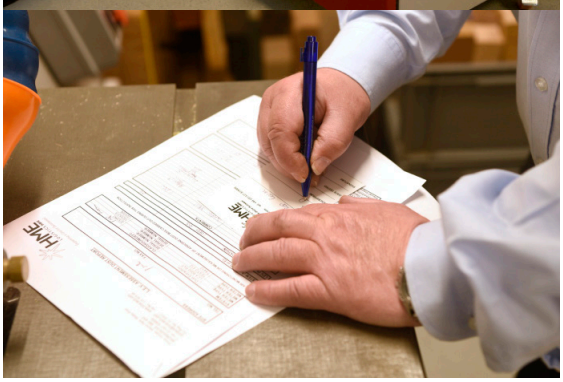
Does a training course make a person competent?

No. A training course by itself will not make a person competent. Competence comes from a combination of knowledge, skills and experience. Some people with lots of experience, but with no formal qualifications, may be competent. **HME offer Health & Safety Training as an important part of our services.**

What Should My LEV Inspection Report Contain?







- The name and address of the employer responsible for the LEV;
- The date of examination and test;
- The date of the last thorough examination and test;
- The identification and location of the LEV, and the process and hazardous substance conerned;
- The conditions at the time of the test and whether this was normal production or special conditions;
- A simple diagram of the LEV layout and location, with test points;
- The condition of the LEV system including hood serial numbers and, where appropriate, photographs of relevant parts;
- Its intended operating performance for adequately controlling the hazardous substance and whether it is still achieving the same performance;
- The methods used to make a judgement of performance and what needs to be done to achieve that performance, eg: visual, pressure measurements, airflow measurements, dust lamp, air sampling, tests to check the condition and effectiveness of the filter;
- The results of any air sampling relevant to LEV performance;
- Comments on the way operators used the LEV;
- Comments on system wear and tear and whether components may need repair or replaceent before the next annual test;
- The name, job title and employer of the person carrying out the examination and test;
- The signature of the person carrying out the examination and test;
- The details of any minor adjustments or repairs carried out to make the LEV system effective.

Note: An employer needs to know about critical defects immediately and should not wait for the report. The report should be accompanied with a maintenance log book for each piece of LEV machinery. Identification should be left on the LEV equipment to show that it is operational and when it was last tested.

So, what's next?

As you will now be aware, LEV Testing is a statutory requirement every 12 to 14 months and thats where we come in. Our team of LEV examiners have an enviable reputation in thorough as well as being personable and popular. In essence, nothing is too much trouble as our customers health and safety is paramount.....and we can probably save you money!

For further information or to discuss your specific requirements and obtain a quote, please contact our Accreditation Manager - Kevin Hughes
contact@hme-tech.com

HME
Priory House, Saxon Business Park, Stoke Prior,
Bromsgrove B60 4AD
Tel: 01527 839000
www.hme-edutech.com

HME
UNLEASHING INNOVATIVE TECHNOLOGY