

Good Morning

My name is Andrea Beswick and I
will be taking today's workshop.

Local Exhaust Ventilation (LEV)

- Local Exhaust Ventilation (LEV) systems capture airborne contaminants at the point of generation, preventing inhalation by workers in the vicinity.



Examples of LEV in use

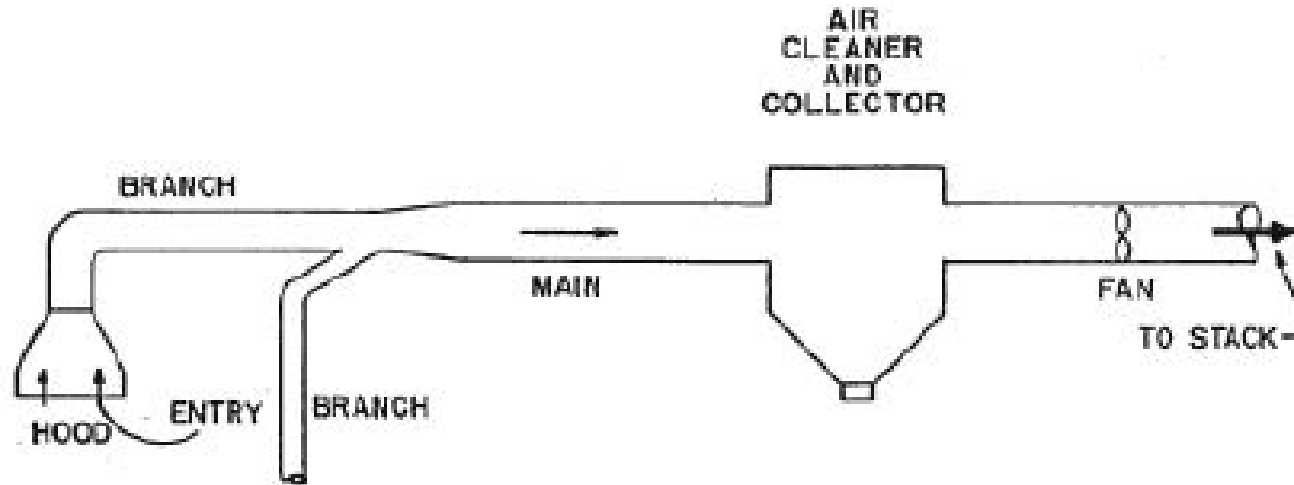
- Sanding wood
- Welding
- Spraying paint
- Cutting MDF
- Carpet Cropping



LEV System Components

- A hood or collector to capture the contaminant close to the point of generation.
- Ductwork to move the contaminant away from the source.
- A filter or air cleaning device to remove contaminant from the extracted airstream.
- A fan or air moving device to provide the necessary air flow.
- Ductwork to discharge cleaned air to the external atmosphere at a suitable point.

LEV System



Schematic of a Local Exhaust System



COSHH Requirements

- Under the COSHH Regulations, risks from hazardous substances must be controlled.
- LEV is not the first tool we should reach for.
- There is a hierarchy of control that should be followed:

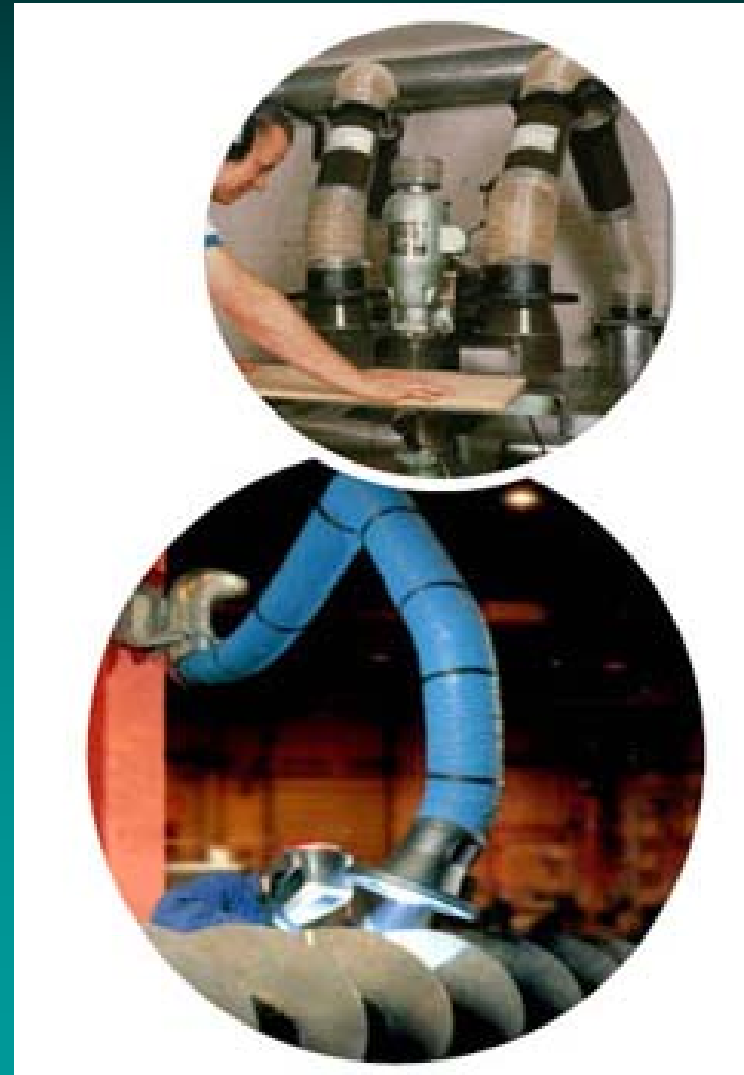
Hierarchy of Controls

- Elimination
- Substitution
- Segregation
- Engineering Controls, such as LEV
- Reduction
- Modification
- Working Procedures
- Working Practices
- Personal Protective Equipment



How can LEV achieve Control

- LEV design needs to be properly fitted to the type of pollutant and situation.



Efficient LEV

- Collect the air containing the pollutant.
- Ensure pollutants are contained and taken away from people.
- Clean the air, if its needed, and get rid of the pollutants safely.
- All this will prevent or minimise workers breathing in the pollutants.

Common Problems with LEV

- Workers not using it.
- Employers, supervisors, managers, not ensuring it is used properly, or even at all.
- LEV not being checked, tested or maintained effectively.
- Checks not made on whether exposure is controlled.

More Problems

- Poor housekeeping of areas where build up of pollutants occurs, i.e. wood dust piled high on machines.
- Ignoring of unusual noises or vibration that may point to faults or maintenance issues.
- Workers not moving the moveable hoods close enough to the point where the dust, fume, mist is created, or not moving or stood correctly in the spray booth.

Fixes for Common Problems

- LEV needs to be the right type for the job.
- LEV needs to be installed properly in the first place.
- LEV needs regular checking and maintenance throughout the year.



LEV Testing

- LEV needs testing thoroughly at least once a year.



More Fixes

- If LEV is moved, you need to make sure it still works!
- LEV often needs an indicator to show it is working properly.
- Employers and employees need to check that it works properly **EVERY TIME** you use it.
- **WORKERS** need to use it properly in the way it is designed.

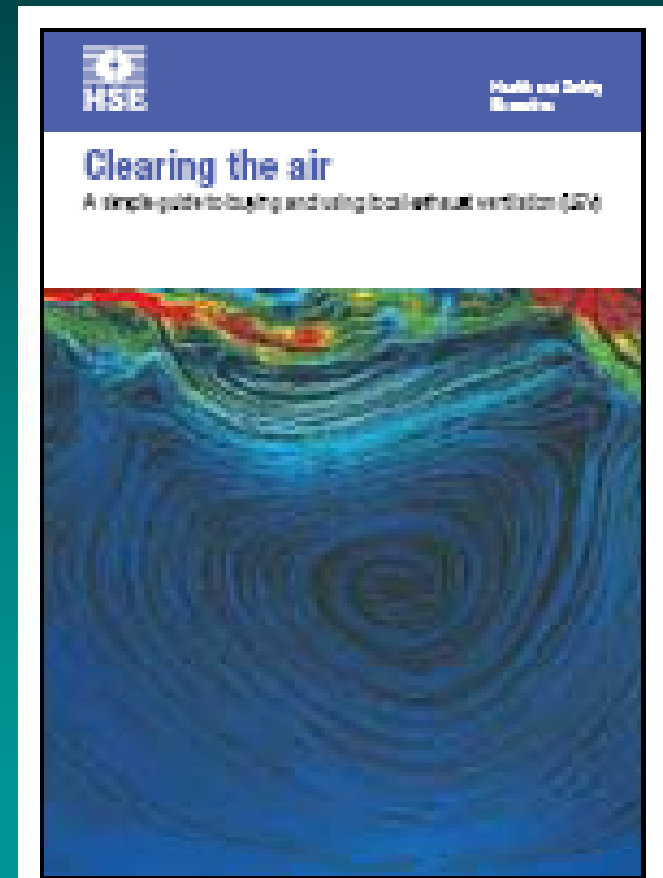
Further Information

- **Time to clear the air!**
A workers' pocket guide to local exhaust ventilation (LEV)



Further Information

- **Clearing the air**
A simple guide to buying and using local exhaust ventilation (LEV)



HSG 258

New comprehensive guide on local exhaust ventilation (LEV)



Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV) HSG258

This new book provides guidance on the supply of new LEV equipment. It describes the principles and good practice of deciding on, designing, commissioning and testing cost-effective local exhaust ventilation.

This guidance is written for the suppliers of LEV goods and services. It will be helpful for employers and managers in medium sized businesses and trade union and employee safety representatives. All of these groups need to work together to provide, maintain and use effective LEV, and to reduce exposure from inhalation of hazardous substances.

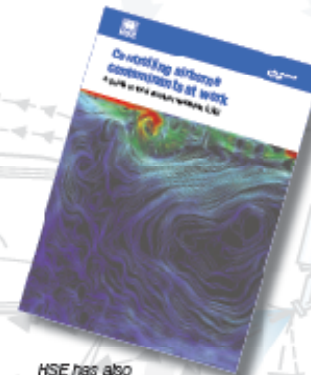
The book contains information about:

- the roles and legal responsibilities of suppliers, and of their clients as employers
- competence
- principles of good design practice for effective LEV hoods and their classification
- ducts, air movers, air cleaners
- system documentation – with checking and maintenance schedules, marking defective equipment

NEW features include:

- Specification of LEV
- Supplier's quotation
- Commissioning
- Zone marking
- User manual
- Logbook
- Testing – hood label

It replaces HSG37 Introduction to local exhaust ventilation and HSG54 Maintenance, examination and testing of local exhaust ventilation



HSE has also produced a leaflet and a pocket card for employees:

Clearing the air: A simple guide to buying and using local exhaust ventilation (LEV) INDG408 single copies free (packs of 15 £5.00)

Time to clear the air! A workers' pocket guide to local exhaust ventilation (LEV) INDG409 single copies free (packs of 25 £5.00)

Special offer

Order a copy of the HSG with the DVD *Everybody needs to breathe – an introduction to local exhaust ventilation* (14 minutes) for just £22.95. This provides information and advice on the key points to consider when choosing LEV. It shows the use of LEV in many work processes, describes some common problems that affect LEV performance, and covers the importance of good design, effective use, testing and maintenance.

Note the DVD is not available on its own.

www.hse.gov.uk/lev

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