

Local Exhaust Ventilation

The Steps to Adequate Control

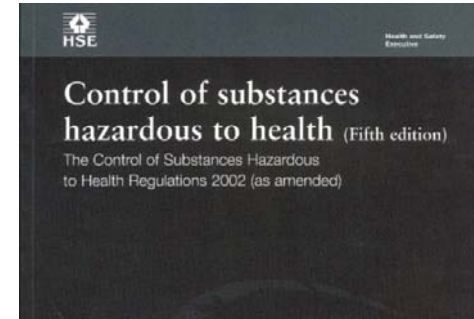
Gareth Ison LFOH

22nd July 2010

Legal Obligations

- Health & Safety at Work Act 1974
- Management of Health & Safety at Work Regulations 1999
- Control of Substances Hazardous to Health Regulations 2002
- The Supply of Machinery (Safety) Regulations 2005

Legal Obligations COSHH



- Regulation 7 – Prevention or control of exposure.
- Regulation 8 - Use of Control Measures
“Every employer who provides any control measure...shall take reasonable steps to ensure that it is properly used or applied...”
- Regulation 9 - Maintenance, examination and testing of control measures.
“In the case of local exhaust ventilation plant, thorough examination and testing must be done at least once every 14 months or for those processes specified in column 1, schedule 4 at not more than the specified period”

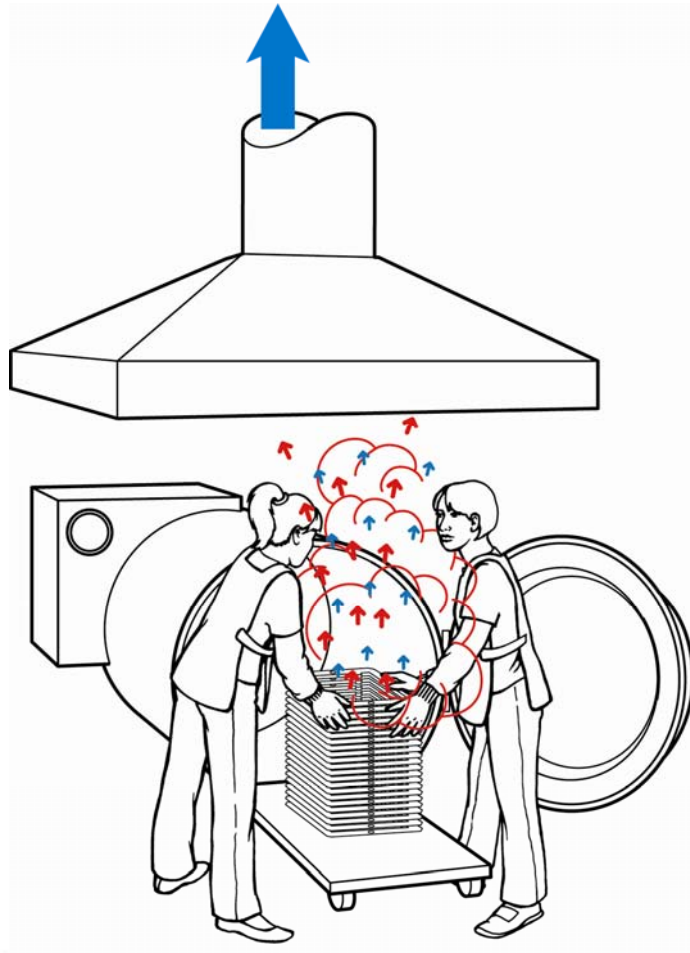
Understanding Hazards



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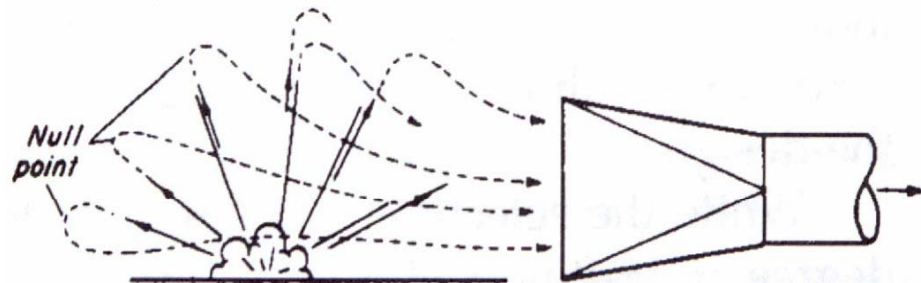
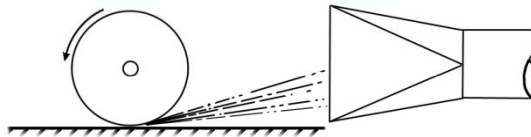
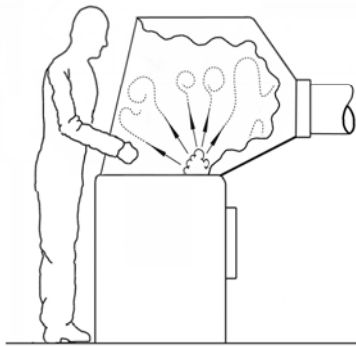


Canopy hoods provide little protection against hot processes

Understanding Hazards

Air density = 1.2kg/m^3

Toluene vapour density = 3.2kg/m^3



What type of LEV?

Location?

High or low level?

The Consequences

- Incidence of occupational ill health (acute or chronic)
- Failure to comply with COSHH Regulations.
- Failure to comply with Health & Safety at Work Act
- Increased insurance premiums
- Absenteeism
- Occupational ill health claims
- Consequential loss
- Prosecution



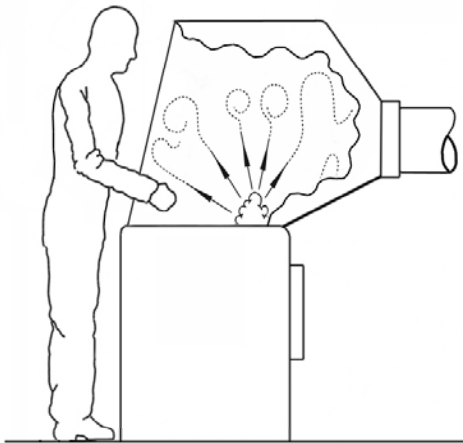
Stakeholders



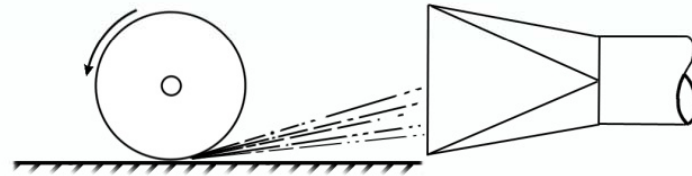
Basic Design

Three basic types of hood:

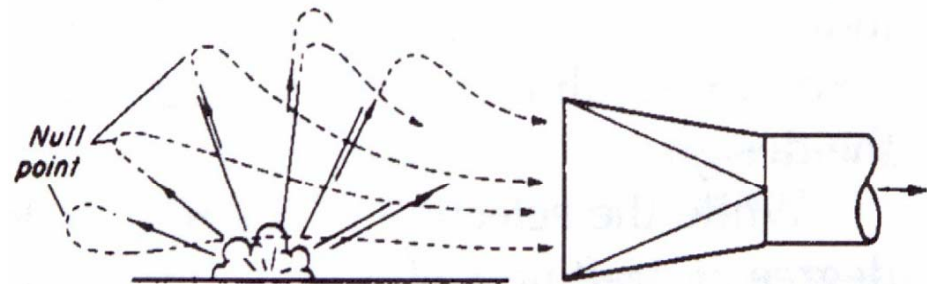
Enclosing Hood



Receiving Hood



Capturing Hood



Basic Design



Correct Use of LEV

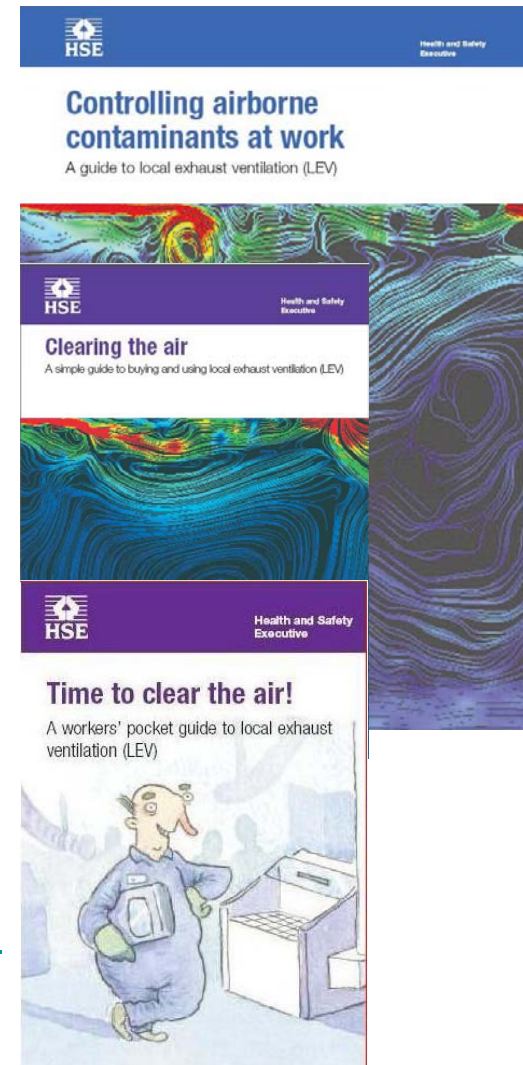


Guidance Available

HSG 258 – Controlling Airborne Contaminants at Work. A guide to local exhaust ventilation

INDG 408 “Clearing the air”: A simple guide to buying and using local exhaust ventilation” Leaflet available on:
<http://www.hse.gov.uk/lev/index.htm>

INDG 409 “Time to clear the air”
A pocket guide to local exhaust ventilation (LEV)”
Leaflet available on: <http://www.hse.gov.uk/lev/index.htm>



Prevention Better Than Cure

- Get the design right in the first place (starting with the hood).
- Establish a clear design specification
- Installation
- Commissioning (very important)
- Log book / User manual
- Daily weekly, monthly checks as specified by log book.
- Thorough examination & test
- Planned preventative maintenance as specified by log book

Acknowledgements

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www.hsl.gov.uk