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## **P&J Dust Extraction Ltd**

Design, Manufacture (30,000+ units)  
Installation, Commissioning

UKAS Accredited for  
LEV Commissioning & LEV Inspection  
(2008 inspected 6,872 L.E.V. systems)



# The Intelligent Customer



How purchasers can be

*'intelligent'*

In their dealings with the  
LEV Industry



# Intelligent Customers

Ask the right questions to identify

Good LEV Suppliers

# Who supplies LEV?

- Sheet Metal Fabricators
- Occupational Hygienists
- Health & Safety Consultants
- LEV Manufacturers
- Production Plant Retailers
- Air Conditioning Suppliers
- HVAC Contractors
- Facilities Management Organisations
- Construction Industry

## Buying LEV is different

### Often astute buyers buy poor LEV

- The supplier may be long established
- It could look good
- It may have been expensive

**You can't always rely on your senses to see, taste or smell ineffective LEV**

## **Proof of Effectiveness**

LEV is bought for **only one** reason  
**Control AND Reduction** of  
Inhalation of Hazardous Substances

**The Intelligent Customer asks for  
Guarantees & Evidence**

- Evidence the LEV controls adequately
- Achieves specified exposure reductions
- Measurement of exposure

## Relatively few businesses & consultants **specialise** in LEV

Not all LEV providers realise that they don't know enough about the specialist work they undertake

**Intelligent Customers  
ask the right questions**

# INDG 408

## Questions to ask LEV Suppliers

- Experience with this process, in this industry
- Professional qualifications
- Independent Accreditation of Competency
- Memberships
- Ties to specific makes of LEV
- Guarantees, warranty period
- How will control effectiveness be proved
- Sample Commissioning report
- Hood Airflow Indicators
- What after sales service
- Financial Stability

## Relevant Memberships

- **BOHS** British Occupational Hygiene Society
- **CIBSE** Chartered Institute Building Services Engineers
- **FETA** Federation Environmental Trade Associations
- **FMA** Fan Manufacturers Association
- **HVCA** Heating & Ventilating Contractors Association
- **IOSH** Institution of Occupational Safety & Health
- **SHAPA** Solids Handling and Processing Association

## **Short list firms to visit site, based on**

- Reputation, Recommendations
- Answers to INDG 408 'questions to ask'

## **If possible prepare an outline specification**

- your view of the problem
- identify your own 'must haves'
- Don't forget operator views – it has to be used
- Remain open minded – the way it's always been done is not necessarily the only or the best solution

**Site meetings – observe, listen & answer**

**Evaluate the solution proposals**

# Site meeting

## The Intelligent Customer

- Doesn't delegate this task
- Invests time & reaps dividends
- Looks for indicators of a good supplier

Should be a full discussion of:

Client's view of the problem

- + any special site/process limitations
- Outline specification

Supplier view of the problem

# Indicators of a Good Supplier

- Observed the process
- Observed the operators
- Identified hazardous substances
- Asked questions
- Gives answers
- Made notes
- Discussed alternatives
- Agreed a summary of requirements

## **Emission control not the only factor**

- What's going on around
- Is there a hazardous atmosphere
- Noise restrictions
- Space available
- Discharge options
- Maintenance – Automation v Labour
- Material recovery
- Heat recovery

# After the site meeting

Do you understand how this supplier proposes to resolve the problem?

- Were various solutions discussed?
- Budget costings?
- How much will the problem be reduced?
- Does solution create new problems?
- Compromises?

**Did they inspire your confidence?**

## Intelligent Customers expect of quotations:

- Based on site discussions
- Hazardous substance & processes named
- Workplace Exposure Limit (W.E.L)
  - How to apply?
  - Asthmagen, Sensitiser, Carcinogen?
- Exposure Level Guarantee
  - How measured / proved
- Detailed specification, including hoods
- Commissioning Details
- Evidence of Supplier Competency
- Training included

# Does the quote demonstrate understanding of your:

- Process requirements
- Operator behaviour
- Workplace specific conditions
- Environmental considerations
- ATEX zones
- Views on option pros & cons
- Budget / Time scale

# Evidence of Competence?

- Appropriate knowledge & capabilities
- Suitable qualifications
- Relevant experience
- Ability to install safely
- Understanding of best practice
- Working to recognised standards



# LEV Design Qualifications

- BOHS Modules M103, P602
- CIBSE Qualified Engineers
- Other Qualifications? Relevant?



## Intelligent Customers ask for examples

- Industries supplied with LEV
- Successful LEV in your process / industry
- Relevant references & testimonials

Check these out!

Talk to other clients

Look at previous similar projects



# Ductwork

Duct Material must suit Hazardous Substance

- Metal ductwork HVCA standard DW144
- Duct design by LEV designer - not Air Con

HVCA Membership shows competence

But you must check relates to LEV

Air Conditioning Ducting is different

# Installation Safety

- Working at height
- Operation of Powered Access/Lifting Gear
- Use & checking of scaffolds & towers
- CDM Regns
- Manual Handling
- Hazards specific to LEV  
(ignition of flammable fume residues)

# More Installation Safety.....

- Vehicle movements
  - On site
  - In the building
- Machinery
- Electrical hazards
- Asbestos

# Commissioning – 4 stages

- Installed as per quote?
- Performance checks
- Effective control ?
- Reporting – setting benchmarks

# Commissioning Report

## Detailed description of LEV system

- Hazardous substance & control limits
- Measurements of actual exposure
- System performance data when proven adequate control of hazardous substance
- Layout drawings & photographs
- Hood types & effectiveness
- Effectiveness of operator use
- Filtered air returned – contaminant measured
- Prioritised action plan
- Absence of Airflow Indicators noted in plan

# When is air sampling reqd?

Regn 10 of COSHH requires air monitoring for

- Asthmagens (eg soft wood, solder fume)
- Carcinogen (eg hard woods)

that also have a WEL

UNLESS

The employers Regn 6 risk assessment shows that the level of exposure is most unlikely ever to exceed the WEL.

# Prioritised Action Plan

- Commissioning reports
- In service thorough examination & test
- Prioritised action plan
  - Inspector competent to diagnose faults AND specify solutions.
  - Inspector determines priority & time scales
- Red labels on ineffective hoods
- Absent hood pressure gauges noted



# Re- Commissioning Required

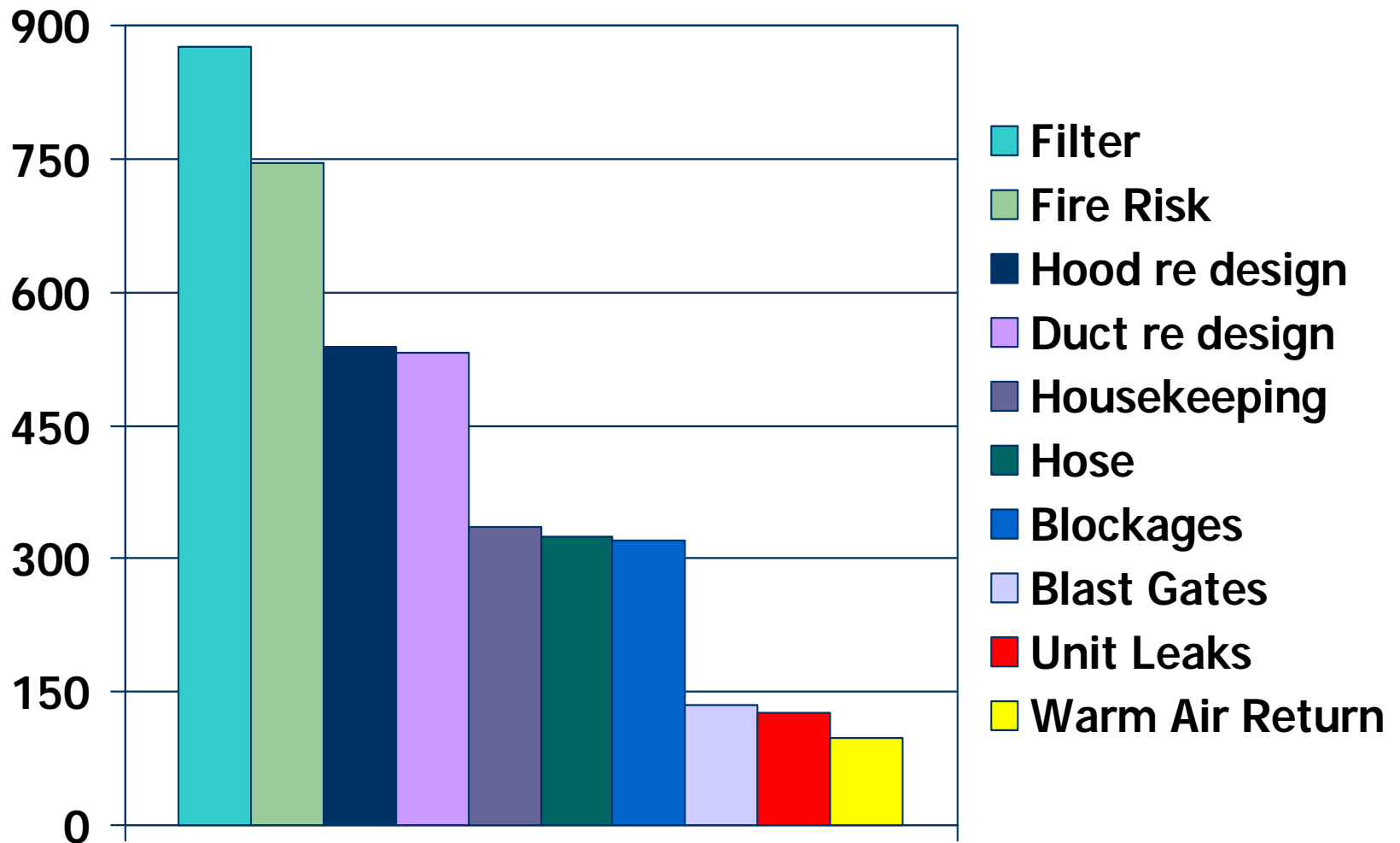
When any of these change:

- Process
- Workplace layout;
- Contaminant source (production eqpt)
- Duct modified (change or add a branch)

# Retrospective Commissioning

- If you don't have a detailed commissioning report then you need to get the system retrospectively commissioned
- Ask a good LEV supplier to do this

# Retrospective LEV Commissioning



**Top 10 Action Plan Items**

# Qualifications for, Commissioning & Inspection

BOHS offer approved courses

- BOHS Courses M303, P601,
- If not BOHS, ask relevance to LEV

# UKAS Inspection Body Accreditation

## LEV Inspection Body Competency Grades

- LEV Commissioning
- LEV In Service Inspection & Test

## Inspection Body Independence & Integrity Type

A – Restricted to 3<sup>rd</sup> party inspections

B – Restricted to their own plant

C – ALL Inspections (Own plant AND 3<sup>rd</sup> party)

LEV Commissioning, Type C Inspection Body

# User Training – How to

- Effectively use the LEV
- Check & maintain it
- Complete the Log Book





# LEV Document File

- Readily accessible - any format
- Agreed specification / quotation
- As installed drawing
- LEV Commissioning Report
- Proof of Effectiveness
- Log Book
- SYSTEM Manual
- IEE Electrical Installation Certificate



**We've looked at what  
The Intelligent Customer  
should reasonably expect from a  
Good Supplier**



**Are there any questions?**



**Thank you**