THOROUGH EXAMINATION AND TEST OF LOCAL EXHAUST VENTILATION (LEV) PLANT

LEV ID: LEV 01 – Welding Bay Ex 1

SUMMARY OF THE LEV ASSESSMENT

SATISFACTORY

PLEASE REFER TO DEFECTS & RECOMMENDATIONS PAGE FOR ALL ADVISORY NOTICES

SYSTEM DETAILS & ID			
Site Name:		**System ID:**	
Site Address:		**Location:**	
		Pennaire Drawing No:	
Date of TExT:		**Process:**	
Date of Previous TExT:			
Pennaire Ref:		**IDM Contact:**	

EXAMINERS/COUNTERSIGNATORIES			
Examiner Name	**Designation**	**Date**	**Signature**
Examiner Qualification(s)	**Date(s)**	**Certificate No(s)**	
P601			
Counter Signer	**Designation**	**Date**	**Signature**
Client Representative Accepting Report		**Title**	

1. SYSTEM GENERAL DESCRIPTION

- LEV 1 Extraction 1 System is used to extract fume from a single articulated arm extraction booth for primarily welding locally on a table.
- The system currently operates as and when manually turned on by the operator. The fume hood is fitted on an articulated arm so that it can be positioned close to the fume generation. The hood is ducted to a integral fanset that discharges the fume air to the atmosphere through the building wall via a exhaust duct.
- As this systems purpose is to extract various fumes, HSG258 recommends a minimum transport velocity of *** throughout the LEV ducting, and a hood face velocity of a minimum ***m/s
- See LEV schematic drawing number **** (REV A1) for details of the arrangement. This is installed and no modifications are eveident.
- There is no design data on the original LEV system, so the basis of testing, HSG258 recommendaions will be applied.
- The fanset has no data on its casing.
- The system consists of the following:
- The system being tested is a fume extraction system.

2. METHODOLOGY FOR TEXT

- Quantative methods:
- Qualitative methods:

3. PLANT PROCESS & LEV ARRANGEMENT AT TExT	
Was the Plant, Process and the LEV/Control System Operating Normally at TExT? If not explain how TExT undertaken.	

4. TEST FREQUENCIES	
Max. Interval Between Routine Examinations:	
Date next TExT due:	

5. AVAILABLE DOCUMENTATION	
Commissioning Report Available?	
LEV System Manual Available?	
LEV System Log Book Available?	
CoSHH Health Risk Assessments?	
DSEAR Risk Assessments?	

6. OCCUPATIONAL HYGIENE	
Process Description:	
Substance(s) to be Controlled:	
Site Workplace Exposure Limits *(if available)*:	
Substance Benchmark (Work Exposure Limit or Control Banding):	
Has Occupational Hygiene Monitoring been Carried out in Area?	
If 'Yes', Summarise Findings:	

7. FAN SPECIFICATION & TEST RESULTS (MAIN EXTRACTION FAN)	
Fan Make, Type & Serial No:	
Motor Make, Serial No:	
Drive:	
Motor Speed (RPM):	
Motor Rating/Current:	
Impeller Type:	
Rotation Direction:	
Fan Rotating in Correct Direction?	
Method used to Determine Fan Direction	
Fan Inlet/Outlet Static Pressure	
General Condition of Fan & Motor:	

8. FILTER/AIR CLEANER SPECIFICATION	TICK IF NOT APPLICABLE ☐
If Multiple Filtration State Arrangement:	
Filter Manufacturer & Type:	
Model & Serial Number:	
Primary Filtration Media Type:	
Air Recirculated back into the Workplace?	
If 'Yes', Is There Suitable Secondary Filtration?	
Secondary filter media type:	

9. ATEX/DSEAR	TICK IF NOT APPLICABLE ☐
Is the Substance Explosive?	
Filter Explosion Relief Type:	
Does Explosion Relief Vent to a Safe Place and in Safe Manner?	
Non-return valves in duct?	

10. DUCT SPECIFICATION	
Duct Type:	
Duct Temperature:	
External Condition of Duct:	
Damper Operation	
Inspection Hatches Fitted?	
Internal Examination (visual/borescope)	

11. STACK/TERMINATION	TICK IF NOT APPLICABLE ☐
Stack Type:	
Stack Height:	
Stack Height Sufficient to Ensure Dispersion?	
Weatherproof Termination?	
Condition of Stack:	

12. MAKE-UP AIR	TICK IF NOT APPLICABLE ☐
Make-up air Type:	
Adequate Quantity?	
Induced/Unwanted Drafts?	
Comments:	

13. ALARMS	
Hood/Enclosure:	
Duct:	
Air Cleaner:	
Air Mover/Fan:	
Returned Air:	
Comments:	

14. DUCT QUANTITATIVE RESULTS

Describe Style and Type of Ducting:	Circular galvanised with flexible hose connections
Ducting suitable for Process/Substances?	*Flexible ducting could and should be minimized to avoid build up where possible. Test points taken where safest access to reduce testing under turbulent flow.*

Test Point ID	Description	Diameter /Dimension	Duct Area	Static Pressure	Duct Velocity		Duct Volume flow		Damper Open Position
					Measured	Min Transport Velocity	Measured	Min Required Volume for transport velocity	
		(mm)	(m^2)	(mmWG)	(m/s)	(m/s)	(m^3/h)	(m^3/h)	(% Open)
TP01									
TP02									
TP03									
TP04									
TP05									
TP06									
TP07									
TP08									
TP09									
TP10									
TP11									
TP12									
TP13									
TP14									
TP15									

15. HOOD QUANTITATIVE RESULTS

Hood ID	Hood Type/Description	Hood Open Area	Sash or Opening Height	Face Velocity		Hood	Capture Distance	Volume Flow Rate	
				Actual	Min Required	Static Pressure	Fletchers Calculated Distance	Measured	Min Required
		(m^2)	(m)	(m/s)	(m/s)	(Pa)	(mm)	(m^3/h)	

16. LEV CONNECTIONS/HOODS

Are The Connections/Hoods Suitable for Substance/Process?		**No. Connections/Hoods Suitable for Substance/Process.**	
No. Connections/Hoods on System:		**No. Connections/Hoods to be used at any one time?**	
Connection/Hood Static Pressure Gauges or Indicators Installed?		**Hood Pass /Fail Labels Fitted?**	
Were operators working at process during TExT?		**Captor Hood "Effective Distance" Labels Attached?**	
If so – Describe way in which operators were using/interfacing with system:			

17. SYSTEM PERFORMANCE SUMMARY

- Quantitative Results:

- Qualitative Results:

It is advised that the defects and recommendations page is reviewed and the critical actions are acted upon as soon as possible to make this LEV system satisfactory.

To conclude the following TExT of this LEV system I would deem that it is running **UNSATISFACTORY** for its intended purpose.

18. DEFECTS & RECOMMENDATIONS

Critical Defects Are Highlighted Red And Should Be Actioned As Soon As Possible.
All Other Recommendations Are Highlighted In Yellow

LEV Examiner			Employer's Use		
Item in LEV System	**Action Required**	**Priority***	**Person to Take Action**	**Target Date**	**Date Completed**
Documentation					
Inspections					
DIY Hoods					
Dampers					
Manuals					
Logs					
LEV Report					

Priority** **1 = Critical** **2 = High** **3 = Low** **4 = For Awareness

FAILURE TO ACT ON THESE DEFECTS & RECOMMENDATIONS COULD PUT EMPLOYEES AT RISK AS DEEMED BY THE HSE AND COULD FACE CRIMINAL PROSECUTION.

19. INSTRUMENTS

Instrument Description	Serial Number	
Air Flow - Micromanometer		
Dwyer - Manometer		

20. REFERENCES

HSG258 Controlling airborne contaminates at work.
The Control of Substances Hazardous to Health Regulations (CoSHH)
Management of Health and Safety at Work Regulations.
Workplace Exposure Limits: Containing the list of workplace exposure limits for use with the Control of Substances Hazardous to Health Regulations.
Industrial Ventilation: A Manual of Recommended Practice for Design.

23. Attatchments – Documents/Photos/Drawings/Notes Etc.