Adrian Sims

Vent-Tech Ltd

Vice Chair ILEVE

Commissioning Guidance and Standard TExT Report.


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Ventilation Engineers


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Commissioning Guidance and Standard TExT Report.

LEV TExT Report Content

Section	Section Heading	Content	Notes/Comments	
1	Client details	o Name o Address		All on 1st page
2	Site details	o Address/site o Area/room number/name o Conditions during test (normal or special for part or whole of test)		
3	LEV Plant details	o Serial number o Asset number o Date of last examination o Frequency of testing o The existence (and observation) of any LEV log book/maintenance records that proportionate to usage o Commissioning report o COSHH Regulation 6 Risk Assessment o DSEAR Regulation 5 Risk Assessment (if applicable) or report	Where the LEV system was previously undocumented the thorough test and examination record should be a suitable basis for carrying out a retrospective Commissioning report	
4	Introduction	The report should contain an introduction explaining the scope of the work required and the purpose, aims and objectives of the LEV system.		
5	Description of system		Detailed.	
6	Description of process to be controlled	Including: o Frequency of process, o Quantities of substances, o Operating temperatures.	Detailed.	
7	Hazardous substance to be controlled	Substance name, WEL, quantity being used. Is the product flammable/explosive? IS the generation of an explosive atmosphere present/likely/unlikely? o DSEAR zoning o Lower Explosive Limits o Upper Explosive Limits		
8	Result of test	Satisfactory / Un-satisfactory Next test due date.		
9	Testers details	o Name o Contact details o Signature		
10	Executive summary	A clear statement of whether the system is: o Capable of adequately controlling the hazards,	Numbered action points. Suggest break down into:	

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		○ Is maintained in an efficient state, ○ In efficient working order, ○ In good repair and ○ In good condition, ○ Is being used correctly, ○ Clear statement on any required action(s), including design modifications and their priorities and implementation timescales.	○ Major Failings ○ Solutions ○ Minor Issues ○ Positive actions that were noted	
11	Photographs of systems	Photographic evidence showing evidence of issues raised within this report.	Labelled / noted. The readers attention should be focused on the problem area with the use of clouds/circles etc.	
12	Schematic drawing	Line schematic showing key components of the system including: ○ hoods, ○ ducting (inc sizes), ○ dampers, ○ filters, ○ fan, ○ discharge point & ○ test points.	Labelled / noted	
13	Conclusions & comments	The conclusions section should summarise the findings made and make clear and concise recommendations where appropriate. This should include, most of which is specified in HSG258, the following: ○ Defects identified should be classified ie. Critical, Essential, Recommended, Observations/good practice including prioritised time scales for repairs/actions ○ Clear statement on whether system is: ○ adequately controlling the hazardous substances ○ maintained in an efficient state, efficient working order, in good repair and in a clean condition (with qualifying commentary where appropriate) ○ The details of any adjustments or repairs carried out to make the LEV system effective ○ Any concerns arising from the extraction of a mixture of different hazardous material eg. Ferrous Metals and Aluminium or chemicals which can react with each other The employer needs to know about critical defects immediately and should not wait for the report. This is to ensure the employer/client/user does not mistake these as observations or merely optional items.	Numbered comments. Comparison with previous or commissioning test results, good practice guidance such as HSG258 etc.	

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		Considerations should be given to other safety critical concerns such as ATEX / DSEAR including any explosion venting arrangements / PUWER / Electricity at Work Regulations (EAWR)		
14	Recommendations	TExT engineers professional recommendations to ensure adequate control is achieved.	Numbered.	

15	Visual examination	o Hood type
		o Hood appropriateness
		o Plant details, including:
		  o Filter (make, model, serial number, specification, ATEX rating, cleaning device type & condition)
		  o Fan (make, model, serial number, specification, ATEX Rating)
		  o Fan motor (make, model, serial number, power (kW), RPM, Amps, direction of rotation, ATEX Rating)
		  o Drive type (direct/belt), if belt, drive details (pulley sizes, centres, belt type & number)
		o Controls (on/off, variable speed, manual/auto etc)
		o Assessment of the whole system to check the condition (including filter media and exhaust ducts/stacks, internal inspection of ducts)
		o Comments on system wear and tear and whether components may need repair or replacement before next thorough examination and test
		o Make up air; sufficient and clean
				Appendices

16	Qualitative Assessments	o Use of dust lamp and/or Smoke tracing to check the effectiveness o Observation and comment on the appropriateness of the operator(s) use and adjustment of the system, including hoods, for effective control (i.e. Hoods positioned appropriately or number of extract points/hoods operated simultaneously etc.)		
17	Quantitative assessments	o Pressure measurements, specifically behind hoods / across filters etc. o Airflow measurements; face & duct velocities & static pressures, including total volume flow o Effective range of capture hoods o The filter, efficiency and concentration of contaminant in filtered air which returns, or is vented to the workplace should be available, if not sampling of the LEV system exhaust air should be carried out. o The results of any air sampling relevant to LEV performance o Verification of clearance time in accordance with xxx of fully enclosed Spray booth(s) or room(s) in the absence of a clearance time add this to the required actions o Pressure gauges; presence & efficacy o Record the settings and performance of any invertors o Temperature and atmospheric pressure where deemed relevant		
18	Compliance and documentation	o List of Test Equipment Used with Calibration Data	Insert images of latest up to date calibration certificates	

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3	LEV Plant details	o Serial number o Asset number o Date of last examination o Frequency of testing o The existence (and observation) of any LEV log book/maintenance records that proportionate to usage o COSHH Regulation 6 Risk Assessment o DSEAR Regulation 5 Risk Assessment (if applicable) or report		
4	Introduction	The report should contain an introduction explaining the scope of the work required and the purpose, aims and objectives of the LEV system.		
5	Description of system		Detailed.	
6	Description of process to be controlled	Including: o Type of tool / equipment / machinery o Frequency of process, o Duration of process, o Quantities of substances, o Operating temperatures of the process.	Detailed.	
7	Hazardous substance to be controlled	Substance name, WEL, quantity being used. o Material Safety Data Sheets Is the product flammable/explosive? Is the generation of an explosive atmosphere present/likely/unlikely? o DSEAR zoning o Lower Explosive Limits o Upper Explosive Limits		
8	Result of test	Satisfactory / Un-satisfactory Confirm benchmarks for future routine TExT. Next test due date.		
9	Tester engineers details	o Name o Contact details		

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		○ Signature		
10	Executive summary	A clear statement of whether the system is: ○ Capable of adequately controlling the hazards, ○ Is maintained in an efficient state, ○ In efficient working order, ○ In good repair and ○ In good condition, ○ Is being used correctly, ○ Clear statement on any required action(s), including design modifications and their priorities and implementation timescales.	Numbered action points. Suggest break down into: ○ Major Failings ○ Solutions ○ Minor Issues ○ Positive actions that were noted	
11	Photographs of systems	Photographic evidence showing evidence of issues raised within this report.	Labelled / noted. The readers attention should be focused on the problem area with the use of clouds/circles etc.	
12	Schematic drawing	Line schematic showing key components of the system including: ○ hoods, ○ ducting (inc sizes), ○ dampers, ○ filters, ○ fan, ○ discharge point & ○ test points.	Labelled / noted	
13	Conclusions & comments	The conclusions section should summarise the findings made and make clear and concise recommendations where appropriate. This should include, most of which is specified in HSG258, the following: ○ Defects identified should be classified ie. Critical, Essential, Recommended, Observations/good practice including prioritised time scales for repairs/actions ○ Clear statement on whether system is: ○ adequately controlling the hazardous substances ○ maintained in an efficient state, efficient working order, in good repair and in a clean condition (with qualifying commentary where appropriate) ○ The details of any adjustments or repairs carried out to make the LEV system effective ○ Any concerns arising from the system e.g. ○ extraction of a mixture of different hazardous material eg. Ferrous Metals and Aluminium or chemicals which can react with each other	Numbered comments. Comparison with previous or commissioning test results, good practice guidance such as HSG258 etc.	

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		○ Filter suitability The employer needs to know about critical defects immediately and should not wait for the report. This is to ensure the employer/client/user does not mistake these as observations or merely optional items. Considerations should be given to other safety critical concerns such as ATEX / DSEAR including any explosion venting arrangements / PUWER / Electricity at Work Regulations (EAWR)		
14	Recommendations	TExT engineers professional recommendations to ensure adequate control is achieved.	Numbered.	
15	Visual examination	○ Hood type ○ Hood appropriateness ○ Plant details, including: ○ Filter (make, model, serial number, specification, ATEX rating, cleaning device type & condition) ○ Fan (make, model, serial number, specification, ATEX Rating) ○ Fan motor (make, model, serial number, power (kW), RPM, Amps, direction of rotation, ATEX Rating) ○ Drive type (direct/belt), if belt, drive details (pulley sizes, centres, belt type & number) ○ Controls (on/off, variable speed, manual/auto, alarms and other warning devices etc) ○ Assessment of the whole system to check the condition (including filter media and exhaust ducts/stacks, internal inspection of ducts) ○ Comments on system wear and tear and whether components may need repair or replacement before next thorough examination and test ○ Make up air; sufficient and clean	System should be tested as found. Any alarms or warning devices should be checked in accordance with the manufacturers instructions.	Appendices
16	Qualitative Assessments	○ Use of dust lamp and/or Smoke tracing to check the effectiveness ○ Observation and comment on the appropriateness of the operator(s) use and adjustment of the system, including hoods, for effective control (i.e. Hoods positioned appropriately or number of extract points/hoods operated simultaneously etc.)	Include photo of results in report if possible.	
17	Quantitative assessments	○ Pressure measurements, specifically behind hoods / across filters etc. ○ Airflow measurements; face & duct velocities (including temperature) & static pressures, including ○ Effective range of capture hoods ○ The filter, efficiency and concentration of contaminant in filtered air which returns, or is vented to the workplace should be available, if not sampling of the LEV system exhaust air should be carried out. ○ The results of any air sampling relevant to LEV performance ○ Verification of clearance time in accordance with xxx of fully enclosed Spray booth(s) or room(s) in the absence of a clearance time add this to the required actions	All doors and windows should be closed when carrying out tests.	

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		○ Pressure gauges; presence & efficacy ○ Record the settings and performance of any invertors ○ Temperature and atmospheric pressure where deemed relevant		
18	Compliance and documentation	○ List of Test Equipment Used with Calibration Data	Insert images of latest up to date calibration certificates of any test kits used (reduce image size to 4 per page).	

Commissioning Guidance and Standard TExT Report.

Purpose:

This document is to be used as a **best practice guide** for the commissioning of local exhaust ventilation systems.

It is to be used by local exhaust ventilation (LEV) commissioning engineers.

It may also be helpful to system owners and duty holders in checking that commissioning has been carried out in accordance with statutory requirements and industry best practice.

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- Information and Documentation Required for Commissioning
- Installation Verification
- Demonstrating Adequate Control
- User Training
- Statement of Compliance
- Statement of Concern or Non-Compliance

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LEV 2020 Extracting the Best Practices
Tuesday 25th February 2020 | Hilton East Midlands Airport

LEV Commissioning Report

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Section 1	Clients Details

Name:
Address:

Section 2	Site Details

Address/site:

Area/room number/name:

Conditions during test:

Section 3	LEV Plant Details

Serial number: Asset number
Brief description of system:

Description of process to be controlled:
(including: type of tool/equipment/machinery, frequency of process, duration of process, quantities of substances, operating temperatures)

Hazardous substance to be controlled:
(including: substance name, WEL, quantity being used)

Section 4	Executive Summary

Item	Responsible person	Due date
1		
2		
3		
4		
5		

Summary of the Assessment of Control

Satisfactory	Unsatisfactory

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Section 5 Test Engineers Details

I can confirm that the system addressed by this report has been carried out in full accordance with COSHH Regulation 9.

Name: Signature:

Contact details:

Section 6 Additional Plant Information

Frequency of testing:	Monthly	6 monthly	14 monthly	Other (specify)
(Tick one)				

Evidence of:	COSHH Reg 6 Risk Assessment	DSEAR Reg 5 Risk Assessment	Material Safety Data Sheets	
(Tick)				

Evidence of:	Design Specification	Logbook	O& M Manual	User training records
(Tick)				

Section 7 DSEAR & ATEX

Is the substance: Flammable? Y/N Explosive? Y/N

Is the generation of an explosive atmosphere:	Present	Likely	Unlikely
(Tick one)			

DSEAR Zoning:	Work area	Hood	Plant
Lower Explosive Limit:		Upper Explosive Limit:	

Explosion vent panel:			
Is one required?	Y/N	Is one fitted?	Y/N
Is it venting to a safe place?	Y/N	Is it in good condition?	Y/N
Explosion non-return damper:			
Is one required?	Y/N	Is one fitted?	Y/N
Is the connecting ductwork suitable?	Y/N		

Section 8 Conclusions and Comments

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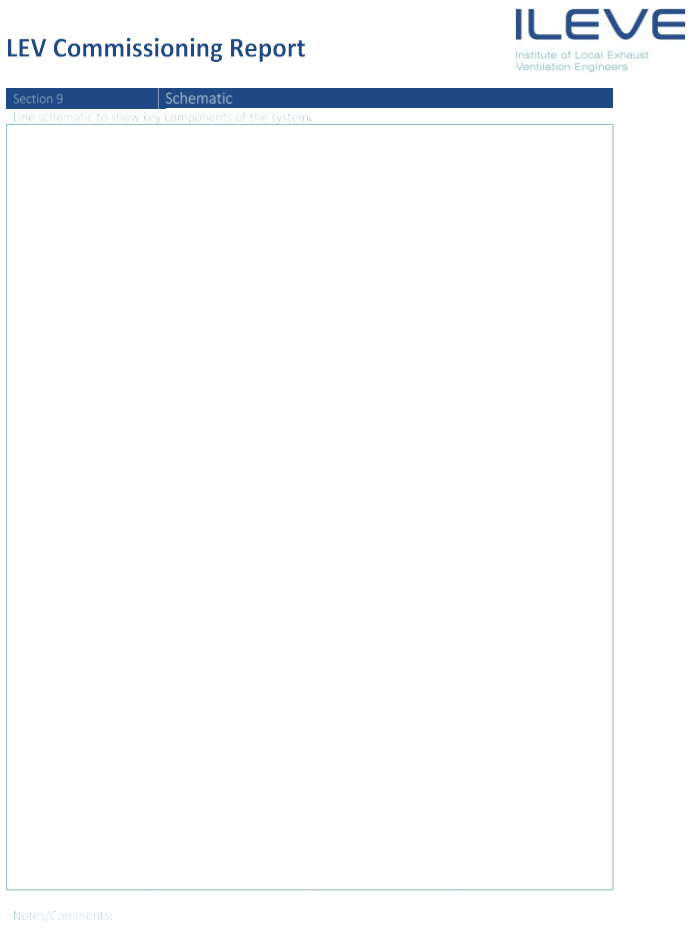

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Section 9	Schematic

Line schematic to show key components of the system.

Notes/Comments:

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Appendices

1. Visual Assessment
   - 1.1. Hood type
   - 1.2. Hood appropriateness
   - 1.3. Plant details, including
     - 1.3.1. Filter (make, model, serial number, specification, ATEX rating, cleaning device type and condition)
     - 1.3.2. Fan (make, model, serial number, specification, ATEX rating)
     - 1.3.3. Fan motor (make, model, serial number, power, RPM, Amps, direction of rotation, ATEX rating)
     - 1.3.4. Drive type (direct / belt), if belt, drive details (pulley sizes, RPM, centres, belt type & number)
   - 1.4. Controls (On/off, variable speed, manual/auto, alarms other warning devices)
   - 1.5. Ducting condition
     - 1.5.1. Inside
     - 1.5.2. Outside
   - 1.6. Discharge arrangement
   - 1.7. Make-up air
   - 1.8. Comments on wear & tear
2. Qualative Assessment
   - 2.1. Method (dust lamp or smoke)
   - 2.2. Evidence of test
   - 2.3. Observations and comments
3. Quantative Assessment
   - 3.1. Pressure measurements (at hoods, filters, fans,
   - 3.2. Pressure gauges; presence & efficacy
   - 3.3. Air flow measurements (face, duct & discharge velocities)
   - 3.4. Effective capture zone (if appropriate)
   - 3.5. Filter efficiency (if appropriate)
   - 3.6. Air sampling results (if appropriate)
   - 3.7. Clearance time (if appropriate)
   - 3.8. Control settings (if appropriate)
4. Compliance and documentation
   - 4.1. List of equipment used
   - 4.2. Calibration certificates
5. User Training record

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Best Practice Guide to Commissioning of LEV Systems.

LEV Commissioning Report

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Section 1	Clients Details

Name:
Address:

Section 2	Site Details

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Hazardous substance to be controlled:
(including: substance name, WEL, quantity being used)

Section 4	Executive Summary

Item	Responsible person	Due date
1		
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Summary of the Assessment of Control:

Satisfactory	Unsatisfactory