

Chartered Institute of Environmental Health North West Region

Fan Noise Control Workshop

Novotel Manchester West Hotel, Worsley

Wednesday 15 September 2010

Workshop Content and Objectives

Fans are, by far, the most common environmental noise sources and the commonest cause of complaints from premises. This workshop not only provides the definitive guide to what constitutes “best practice” in assessing and controlling fan noise (from take-aways to steel works), but it also includes practical advice on effective measurement, analysis and the specification of noise limits.

This fan noise control workshop includes extended material to cover sound recording and analysis on virtually any sound level meter.

The workshop includes:

- **Fan noise control**
Simple low cost retro-fit noise control techniques for many common fan noise problems – materials – installation details – silencers – setting noise specifications – BAT / BPM
- **Diagnosis – SLM recording – analysis**
BS 4142 problems – how to assess fan noise – fan noise analysis, from ears to PCs...
- **Remote control of fan noise**
Fan noise control option information by email

Programme Content

1. Measurement parameters

What are the best measurement parameters for assessing fan noise? dB(A), (C), (lin), Leq, Lns – frequency analysis: 1/1, 1/3, octave, narrow band – setting noise specifications

2. Sound propagation

The behaviour of sound and acoustic materials – decay with distance – sound transmission in ducts – standing waves – acoustic absorbents and insulation

3. Fan sound power

Use manufacturer's sound power data to calculate noise levels – prediction of fan noise levels – typical fan signatures

4. Fan noise control

Installation details – source control – damping – vibration isolation – silencers (reactive, absorptive) – simple “Blue Peter” solutions for many common problems on small fans – BAT

5. Diagnosis – Recording – Analysis

Calibrated noise recording – time and frequency analysis

6. Remote Control of Noise

Putting together the information required for free noise control option evaluation by email

Multi-media case studies are used throughout to illustrate the main points. All material is audio-visual with opportunities for questions and feedback concerning the experience of delegates

Delegate Opportunities

Delegates can bring current or past case studies for discussion. They can also bring recordings for analysis (CD, USB key or prior to the workshop via email – by prior-arrangement). Practical examples of recording from a sound level meter are included.

This workshop draws heavily on past fan “best practicable means” / “BAT” related projects carried out for LAs and for industry.