### **Professional Profile**

Pollution Control Consultancy and Design is managed by ALEX JOCHELSON [MEMech MIEAust CPEng (Reg)].

#### Alex has:

- a solid academic background;
- extensive, practical, field-orientated environmental engineering experience;
- excellent computer application skills; and
- the ability to develop inventive, functional and cost effective solutions.

Alex has a Master's degree in Mechanical Engineering (MEMech), and formal post-graduate training in air pollution control. He has completed many specialty in-service courses in air, noise and water pollution assessment and control.

His comprehensive experience in environmental engineering comprises:

- all important elements of engineering activities; and
- all principal fields of environment protection, i.e. it is a well balanced: (1) industrial, (2) design and research, (3) statutory and (4) consulting experience in air, water and noise pollution assessment and engineering control, viz.
- (1) four-year industrial experience (environment protection specialist at ferro-chromium smelting plant);
- (2) four-year design and research experience (design and research engineer at university);
- (3) nine-year industrial pollution control experience at the NSW Environment Protection Authority (EPA, now Office of Environment and Heritage) (engineer - operations, at Central and Inner Sydney Regions); and
- (4) current, since January 1995, consulting experience at Pollution Control Consultancy and Design (PCCD) (principal consultant).

### Alex is:

- i. a Corporate Member and Chartered Professional Engineer of The Institution of Engineers, Australia (Engineers, Australia);
- ii. registered on the National Professional Engineers Register Section Three (NPER-3) under No 371231, in the Categories of Environmental Engineering and Mechanical Engineering [MIEAust CPEng (Reg)];
- iii. an accredited consultant: a Member of The Association of Consulting Engineers, Australia (M ACEA) and Australian Acoustical Society (M.A.A.S.).





## Pollution Control Consultancy and Design

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# Pollution Control Consultancy and Design



Outstanding, All-Inclusive Occupational Noise Surveys

# Why to choose PCCD Occupational Noise Surveys?

Occupational noise surveys carried out by Pollution Control Consultancy and Design will:

- (1) certify your compliance with the New South Wales (WorkCover) legal requirements;
- (2) guide you, step-by-step, to achieve these requirements, if you currently do not comply; and
- (3) contribute to demonstrate your all due diligence, or duty of care, in potential court proceedings (industrial deafness worker's compensation claims).

Our surveys, unlike most of the others readily available now, do not only identify possible problems, but also effectively resolve them by developing or helping you to develop thorough administrative and/or engineering noise reduction programs.

Our engineering noise reduction programs are based on results of state-of-the-art measurements of SOUND INTENSITY.



PLEASE NOTE that according to the current legislation of New South Wales, personal hearing protectors (ear-plugs and earmuffs) are not enough to protect your employees from noise that exceeds the statutory limits, and you must reduce any excessive noise by administrative and/or engineering noise control measures.



## **Sound Intensity**

Our engineering noise reduction programs (modification of noisy equipment, and modification of buildings and/or enclosures accommodating noisy equipment) are based on the most advanced acoustical technology - state-of-the-art measurements of SOUND INTENSITY, which, unlike common measurements of SOUND PRESSURE, allow to identify, pinpoint, rank and quantify individually all noisy parts of a mechanical system (worn-out bearings, vibrating panels, cooling fans, gear boxes, motors, supporting structure).

SOUND INTENSITY LEVEL is measured with a sophisticated probe of two carefully spaced and opposite - directed microphones. On the right, our measuring equipment - hand-held sound intensity system:

Brüel & Kjær (B&K) Modular Precision Real-Time Sound Analyser type 2260 Investigator, with Sound Intensity Probe type 3595.

Although sound intensity technology allows to resolve noise problems in the scientifically most advanced and effective way, there are only few acoustical consultants in Sydney that use this technology because of the high cost of required measuring equipment and/or lack of expertise.

### Accreditation

Pollution Control Consultancy and Design is a member of:



Consult Australia [formerly Association of Consulting Engineers Australia (ACEA)]



Association of Australian Acoustical Consultants (AAAC)

and its Principal Consultant, who endorses all our reports, is a Corporate Member of:



Engineers, Australia [The Institute of Engineers, Australia (IEAust)]



Australian Acoustical Society (AAS)

## Comprehensive Occupational Noise Surveys

Occupational noise surveys provided by Pollution Control Consultancy and Design include:

- (1) noise measurements with the best available on the market, the latest technology, factory-/NATA-calibrated Brüel & Kjær (B&K) Modular Precision Real-Time Sound Analysers type 2250 and 2270 (class 1 integrating sound pressure level meters);
- (2) verification of compliance with the statutory occupational noise exposure criteria (legal limits);
- (3) optimal, cost-effective engineering noise reduction program based on measurements of sound intensity that, in full, may include:
  - design of noise barriers, enclosures and silencers,
  - modification of noisy equipment, and/or
  - modification of buildings and/or enclosures accommodating noisy equipment;
- (4) accurate (based on spectra of sound frequency) selection of appropriate personal hearing protectors for areas where engineering noise reduction is impractical or cannot be implemented immediately;
- (5) formal written report that, in full, includes:
  - discussion on occupational noise control criteria,
  - complete results of noise measurements, including octave band and/or one-third octave band spectra of noise,
  - plotting of sound energy isopleths (LAeq, T) over the "factory floor",

detailed discussion of measurement results,
 recommendations for administrative and/or engineering noise reduction measures,
 selection of correct personal hearing protectors.





