

NICOLETTE KRAUSE - CURRICULUM VITAE

Nicolette Krause has five years of experience in air quality impact assessment and management. She is an employee of Airshed Planning Professionals (Pty) Ltd and is involved in the compilation of emission inventories, air pollution mitigation and management, and air pollution impact work. Airshed Planning Professionals is affiliated with Francois Malherbe Acoustic Consulting cc and in assisting with numerous projects she has gained experience in environmental noise measurement, modelling and assessment.

1. LANGUAGE CAPABILITIES

Fluent in English and Afrikaans

2. CURRENT AFFILIATION

Airshed Planning Professionals (Pty) Ltd & Francois Malherbe Acoustic Consulting cc (January 2006 to present). Task related experience include:

- Air Quality:
 - Emissions inventory compilation
 - Meteorological data processing and preparation
 - Dispersion modelling
 - Impact and compliance assessment
 - Air quality and dust management plan preparation
 - Report writing
- Noise:
 - Ambient noise measurement and analysis
 - Noise inventory compilation
 - Noise propagation modelling
 - Impact and compliance assessment
 - Report writing

3. MEMBERSHIPS

- South African Acoustic Institute (SAAI), 2006 to present
- National Association for Clean Air (NACA), 2006 to present

4. ACADEMIC QUALIFICATIONS

- BEng: (Mechanical Engineering), 2005, *University of Pretoria*
- BEng (Hons): (Mechanical Engineering) 2010, *University of Pretoria*; specializing in:
 - Advance Heat and Mass Transfer
 - Advanced Fluid Mechanics
 - Numerical Thermo-flow
 - Tribology

5. COURSES COMPLETED AND CONFERENCES ATTENDED

- Course: Air Quality Management. Presented by the University of Johannesburg (March 2006)
- Course: AERMET/AERMAP/AERMOD Dispersion Model. Presented by the University of Johannesburg (March 2010)
- Conference: NACA (October 2007), Attended and presented a paper
- Conference: NACA (October 2008), Attended and presented a paper

6. PREVIOUS TECHNICAL EXPERIENCE

- 2003 Industrial Training at Transwerk (Investigating the effect of the surface roughness of train wheel axles on bearing press fits).
- 2004 Industrial Training Khulanawe Construction (Investigating the possibilities of designing improved petrochemical pumps including a detailed study of patent rights and registration).
- 2005 Final Year Design: Wheelchair access system for Minibuses.
- 2005 Final Year Thesis: Vibration based acceptance tests for production line units.

7. EXPERIENCE WITH REGARDS TO AIR QUALITY AND NOISE IMPACT ASSESSMENTS

- Models applied to date include:
 - CONCAWE (noise propagation model);
 - SANS 10201 (calculating and predicting road traffic noise);
 - ADDAS (wind erosion emission model);
 - HIPPO/WRPLOT (wind & pollution rose generation);
 - METREADER (preparing meteorological data for dispersion models);
 - ISCST3 (air dispersion model);
 - ADMS (air dispersion model);
 - AERMOD/AERMET (air dispersion model);
 - CALMET/CALPUFF Suite (air dispersion model);
 - GASSIM (landfill emission estimation model); and
 - WATER9 (waste water treatment plant emission estimation model)
- Industry sectors in which experience have been gained with specific reference to air quality:
 - Iron and steel industry
 - Ferroalloy industry
 - Waste water treatment works
 - General and hazardous waste disposal facilities
 - Opencast and underground mining (coal, chrome, manganese, uranium)
 - Pulp and paper industries
 - Power generation industry
- Industry sectors in which experience have been gained with specific reference to noise:
 - Opencast and underground mining
 - Ferroalloy industry
 - Platinum group metals industry
 - Iron and steel industry
 - Transport and logistics sector
 - Residential development sector