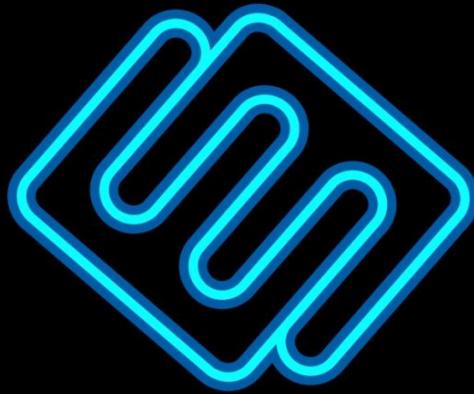


Making an application to become an accredited ...



EnergyMasters

Pumping
Specialist

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Becoming an *EnergyMasters Pumping Specialist* – Applicant's Guide

1. Overview

Applicants for *EnergyMasters Pumping Specialist* accreditation are expected to be persons with specific competence and experience in industrial pumping systems.

The minimum requirements for *EnergyMasters Pumping Specialist* include the applicant demonstrating to the pumping systems Assessor(s), appointed by EMANZ, that he/she has general competence in comprehending technical concepts and applying systematic scientific and engineering methods to pumps problem solving. The pumping systems Assessor will consider both academic qualifications and experience relating to these technologies. Part of this requirement involves applying their knowledge in the performance of a Type 3: Precision Subsystem ('investment grade' for industrial operations) Pumping Systems Audit (AS/NZS 3598.2:2014)

An *EnergyMasters Pumping Specialist* demonstrates a high degree of competence in this field, and importantly understands that industrial processes are usually comprised of a number of technologies. As such, they understand where their specialist knowledge applies and where it does not.

2. Competence Requirements

Applicants will be required to demonstrate general and specific pumping systems competence, including their ability to:

1. Comprehend and apply knowledge that underpins good practice in the technical aspects of industrial processes and systems;
2. Identify, state and analyse industrial systems problems and risks in accordance with sound scientific and engineering methods;
3. Develop and articulate clear and well-founded solutions to industrial pumping systems problems, by using systematic procedures, sound technical and financial analysis and good judgment; and,
4. Communicate clearly with others in the course of his/her business activities, including the ability to work objectively with large and medium-sized industrial organisations to facilitate positive change (e.g. improved energy efficiency).

The *Competency Self Assessment Form* must be completed by all applicants.

3. Work Experience

An applicant's practice field of experience is expected to include pumping systems.

Applicants are expected to have specific competence and experience in the review and analysis of the performance of pumping systems relevant to New Zealand industry.

The pumping systems Assessor will require details of an applicant's recent significant practical work experience in the industrial sector with pumping systems and/or comparable technologies and processes.

Applicants should list, in chronological order, details of their project and work history using the *Application Form*. Details should include:

1. Recent employers and the nature of the type of work undertaken
2. Specific details of work done, including the date, client, and details of each audit or energy management/improvement work done.

4. Academic and Practical Experience

Given the level of technical competence required for accreditation, applicants are required to have the following combination (and provide details) of EITHER A + B OR A + C + D.

EITHER:

(A) An approved Bachelors Degree or NZQA Level 6 diploma or other equivalent qualification in Engineering or Science from a tertiary education institution which includes at least two courses/papers(0.125 FTE each) of study in fluid mechanics, at level 6 or higher, AND

(B) A minimum of five years experience in fields allied to Pumping systems, such as process engineering system design, system auditing, system troubleshooting and/or system improvement implementation if a level 8 or higher course/paper has not been completed.

OR:

(A) An approved Bachelors Degree or NZQA Level 6 diploma or other equivalent qualification in Engineering or Science from a tertiary education institution which includes at least two courses/papers(0.125 FTE each) of study in fluid mechanics, at level 6 or higher, AND

(C) Completion of at least one course/paper (0.125 FTE) at level 8 or higher in fluid mechanics and/or pumping systems from a tertiary institution, AND

(D) A minimum of three years experience in fields allied to Pumping systems, such as process engineering system design, system auditing, system troubleshooting and/or system improvement implementation.

If you believe you are sufficiently qualified in this area through other means, please contact EMANZ. If you do not have the recommended background above and would like further training, there are a number of courses available within New Zealand to further develop your knowledge. Please contact EMANZ at admin@emanz.org.nz to discuss your training needs.

5. Sample Pumping Systems Audit Report

Applicants are required to provide a sample of their pumping systems auditing work as evidence of the quality of their auditing, analysis and reporting, to ensure that their knowledge can be appropriately applied.

For *EnergyMasters Pumping Specialist* 'full' accreditation, the applicant must provide a

Type 3: Precision Subsystem ('investment grade' for industrial operations) Pumping Systems Audit Report produced by the applicant and in accordance with the *Pumping Systems Audit Standard* published by EMANZ.

The Audit Report must relate to an industrial pumping system of not less than 100 kW capacity, and have involved in-depth measurement, analysis and reporting, as described in the Audit Standard.

For *EnergyMasters Pumping Specialist* 'provisional' accreditation, the applicant may submit a Type 2 report that does not meet the requirements above. Provisional accreditation will remain until a Type 3: Precision Subsystem ('investment grade' for industrial operations) Pumping Systems Audit Report is provided and successfully 'passed' by the assessor within a 5-year period.

6. Referees for Assessment Purposes

Applicants are required to provide the details of two referees who are sufficiently familiar with the applicant's work to provide comment on the applicant's competence with regard to pumping systems auditing.

Referees must be independent, i.e. not personally related to the applicant and not expected to gain materially if the application is successful. The applicant's employer may be a nominated referee, provided the interest in the outcome is professional and not personal.

Applicants must forward the *Referee Form* to the two nominated referees, along with a copy of the applicant's *Competency Self Assessment Form*, for each referee to complete and then return to EMANZ.

7. Application Checklist

The following checklist details the forms and evidence required to make a complete application for accreditation as an *EnergyMasters Pumping Specialist*.

Application Form	
Competency Self Assessment Form	
Referee Forms (with copy of completed Competency Self Assessment Form) sent to two Referees	
Type 3: Precision Subsystem Pumping Systems Audit	
Other information that you may wish to have considered.	
Copy of certificate or academic record as appropriate	

8. Reaccreditation – required every 5 years

An Accredited *EnergyMasters Pumping Specialist* is expected to remain active in the

field of pumping systems auditing to retain continuity of his/her accredited status.

Evidence of current Pumping Systems competency must be provided at the time of reassessment of accreditation.

Accredited *EnergyMasters Pumping Specialists* must submit the completed Reaccreditation Forms as part of the 5-yearly reaccreditation assessment.

For reaccreditation, the minimum requirements consist of:

- Evidence of at least 20 hours of continuing professional develop (CPD) in areas relevant to pumping systems auditing and analysis
- Details of three Type 3/Level 3 in-depth pumping system audits completed in the previous 5 years, one of which was completed in the previous 18 months
- A full copy of one of those Type 3/level 3 pumping system audits.
- The details of the other two audits are to include the date of the audit; the thermal capacity of the boiler(s) or furnace(s) concerned; and the name and contact details of the client who received the audit report.

With respect to CPD, accredited *EnergyMasters Pumping Specialists* must demonstrate the undertaking of activities that contribute to their understanding and maintenance of their general and pumping systems skills. 'Quality of content' rather than 'quantity of hours spent' is the key measure of suitable professional development.

A fee is payable for reaccreditation assessment.

9. Ethical Conduct

An Accredited *EnergyMasters Pumping Specialist* is expected to conduct his/her auditing activities according to ethical standards generally accepted in New Zealand business. They must also abide by the EMANZ Code of Ethics as stated on <http://www.emanz.org.nz/about-us/code-ethics>.

Accreditation may be rescinded by EMANZ if, following a fair and impartial hearing of the parties affected, EMANZ considers that the EnergyMaster's behaviour has not met these standards.