

STANDARDS AND PRODUCT CERTIFICATION IMPROVE INDUSTRY PERFORMANCE

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Abstract

Independent third party bodies carrying out product certification to recognised standards helps manufacturers within the on-site wastewater treatment industry counter the poor image that the industry has had with the regulators and the community at large.

The move to establish an Australian and New Zealand Standard for domestic Aerated Wastewater Treatment Systems (AWTS), based on NSW Health Department guidelines, will improve credibility for companies whose products are certified under the NSW Health Department's accreditation scheme. The new standard will also enable regulators and manufacturers in other states to use the product certification scheme as a means of demonstrating compliance.

Standards are consensus documents written by committees composed of interested parties. No standard is ever final: they are revised regularly or as the need arises. Product standards are written from a point of view of performance and so as **not** to exclude innovative approaches to achieve the performance outcomes.

Product certification enables manufacturers to be recognised in the market place as having the capacity to produce product to standards on a consistent and ongoing basis. Product certification brings market pressure to bear on less scrupulous manufacturers to improve their performance or leave the industry. Experience with companies accredited under the NSW Health Department's scheme for AWTS has shown that the product certification process provides more than just the right to display a compliance mark.

Keywords

AWTS, aerated, wastewater treatment, certification, certification body, product certification, standards, Standards Australia

1 Product Certification (Third Party Assessment)

An independent third party certification body assesses a manufacturer's capability to produce a product to a recognised Australian, international or industry standard. This is achieved by assessing the manufacturer's production system, and selecting representative samples of finished product for test against the standard by independent laboratories or testing facilities. To ensure ongoing compliance, the manufacturer is audited on a regular basis (usually twice per year) to ensure that the systems are still effective and product is still being produced to the standard. Independent testing is usually required on a regular basis.

Quality Assurance Services (a subsidiary of Standards Australia) Product Certification is such a scheme. Products assessed under their Standards Mark scheme can carry the Standards "5 ticks" logo. QAS is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) to carry out Type 5 certifications as defined by the International Standards Organisation (ISO).

2 Other Means of Showing Product Compliance

2.1 Customer–Supplier Assessment (Second Party Assessment)

A purchaser may wish to assess a supplier to ensure that products bought meet the purchaser's requirements. This would form a commercial arrangement between purchaser and supplier, based on agreed standards and conditions. Large purchasers (e.g. governments, Telstra, retail chains, Department of Defence) sometimes use this method for strategic supplies.

2.2 Self Declaration (First Party Assessment)

The manufacturer declares that the products and/or production methods meet recognised standards. Manufacturers who use this approach need to ensure that such compliance is capable of being verified. This may require test results from independent laboratories as well as internal company records which show that all aspects of the standard have been addressed and assessed. If the claims can not be verified, the organisation making the claims may be in breach of the misleading and deceptive conduct or false and misleading representations clauses of the Trade Practices Act (year) (give reference) or the relevant state government's Fair Trading Act. The acceptability to a purchaser of this approach depends on the reputation and past performance history of the manufacturer.

3 Improved Industry Performance

An industry will generally ask for a standard to be written if it believes that there is an element within the industry which is producing goods of an inferior quality, leading to a diminution of the industry's reputation. A standard may be called for after a public outcry where harm of some kind has been done by irresponsible (or unlucky) sections of an industry.

The writing of a standard and the assessment of producers against it will either eliminate those unable or unwilling to meet the standard (if it is called up in statute or regulation), or enable consumers to make a better informed choice of product (if standard is not mandatory).

The benefits that companies gain through the certification process include:

- in some cases, the licence to continue to operate in the industry;
- increased market share (a compliance mark such as the Standards Mark "5 ticks" logo may help sell the product);
- better control of manufacturing processes, leading to efficiencies from less reject and scrap, less rework, and lower levels of complaint;
- improved relationships with suppliers due to better understanding of performance requirements and capabilities of raw materials; and
- increased staff morale, because they know they are involved with a good product of which they can be proud.

4 What is a Standard?

The word 'standard' has a number of different shades of meaning. When applied in an industrial context, it can have the following meanings:

- a weight or a measure to which others conform or by which the accuracy of others is judged;
- thing serving as basis for comparison;
- degree of excellence, required for a particular purpose;
- thing recognised as a model for imitation.

When standards are used in any of the above senses, they can be either physical entities or concepts, usually in some documented format.

The standards produced by Standards Australia are published documents which set out the specifications and procedures designed to ensure that a material, product, method or service is fit for its purpose and consistently performs the way it was meant to perform.

4.1 Product Standards

These standards set out the specifications for particular products or groups of products. They usually contain test methods, or references to test methods for measuring whether product conforms to the standard. These standards are generated when a need is perceived that there is a risk to health or safety if the product is not made to an acceptable standard. These standards are often called up in regulation to ensure that dangerous goods are not marketed. They are also developed by an industry to lift the level of performance of members of that industry.

4.2 Standard Methods of Analysis

Sampling methods, test methods, and analytical methods which are agreed upon and have wide industry or commercial application (e.g. methods of test for soils, petroleum products, test for contaminants in waters.).

4.3 Codes of Practice, Management Standards

These standards describe what is to be done to achieve defined outcomes. They can be industry specific (e.g. laundry practice, gas cylinder testing stations), or generic and applicable across many industries (e.g. quality management, environmental management, risk management, complaint handling).

5 Who Sets the Standards?

Standards Australia International Limited (SAI) is the major organisation in Australia to facilitate the development of standards. Standards Australia brings together experts from representative interest groups to form or revise standards. About 9,000 experts in various fields are members of Standards Australia's technical committees. They are drawn from sectors such as:

- Government (Federal, State, Local);
- Trade unions;
- Research, academic and testing organisations;
- Manufacturing and industry.
- Commercial and retail interests;
- Consumer groups;
- Professional bodies; and

6 How are Standards Written?

Standards are written by committees of interested parties. A project to write a standard will be commenced if there is shown to be a widespread demand in the community for standardisation in a particular area. The standard for domestic wastewater treatment (AS/NZS 1546 and AS/NZS 1547) was developed as a result of a need perceived by those concerned with public health and protection of the environment.

Standards Australia's policy is to adopt an existing International Standard when a need for a standard has been identified, and if such a standard exists. The committee may decide to modify an existing International Standard for Australian conditions and use its membership of ISO or IEC to amend the International Standard. Alternately, the committee may decide to write a joint Australian / New Zealand Standard (under CER). The AS/NZS 1546 and 1547 standards are being developed and issued as joint Australian and New Zealand Standards.

Individual committee members represent the organisations that have nominated them. Their role is to represent the views of that organisation (or its industry sector) and feed back

information to the nominating organisation. The committee's task is to draft the standard within a framework that has become the accepted format for standards.

The aim is to produce standards that specify performance characteristics rather than prescriptive means of achieving performance outcomes. Standards should describe what the outcome should be, rather than how it is to be achieved, to ensure they neither restrict innovation nor limit the ability of producers to achieve efficiency and effectiveness gains.

For product standards, test methods for measuring product against the specifications set in the standard will be referenced or appended as detailed test methods.

Standards may include, as informative appendices, methods for achieving compliance and guidelines on producing to the requirements of the standard. These are usually not mandatory.

All the committee members vote on the draft standard. Any 'no' votes must be supported by comments as to why the draft is not agreed. The committee then seeks consensus on whether changes should be made or the draft remains the same. Once the committee has agreed on a draft standard, it is open for public comment. This process can take two to six months, depending on the complexity of the standard and the likely level of public interest.

Copies of draft standards are available from Standards Australia and their web site (www.standards.com.au). Ninety five percent of Draft Australian Standards are free when downloaded from the web site. Draft standards released for public comment are listed in each month's issue of 'The Australian Standard'.

At the close of the public comment period, responses are collated and circulated to the committee for resolution. The committee must address every comment and decide, based on technical merit, to either accept or reject any changes that the comment may imply.

The standard will be published once the committee has addressed and agreed on any changes generated by the public comment, and the appropriate industry standards board approves the final draft standard.

Standards are not set in stone. In this day of rapid change, the ink is no sooner dry, than some new technology or new knowledge may overtake the content of the standard. All standards are reviewed on a regular basis (if they are still in use).

7 Conclusion

Developing standards for products used in the wastewater treatment industry and third party certification schemes are a powerful means of improving the performance of the industry. In particular it enables the industry to show, through independent evidence, that it is working to achieve the desired outcomes demanded by the community, in relation to health and the environment. As experience is gained with the application of the standards, the standards will be improved and the industry will come up with innovative ways to improve the health and environmental outcomes expected of the industry.

References

Standards Australia/Standards New Zealand. 1998. *AS/NZS 1546.1:1998 On-site domestic wastewater treatment units*. Part 1: Septic Tanks. Standards Australia/Standards New Zealand. Homebush and Wellington.

Standards Australia and Standards New Zealand (2000) *AS/NZS 1547:2000 On-site domestic-wastewater management*. Standards Australia and Standards New Zealand