

SEE1123

INSTRUMENTATION & ELECTRICAL MEASUREMENT

Quality Management System

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3.0 ISO

ISO stands for the International Organization for Standardization. It is a federation of national standards organizations from 156 countries which became its member. Its central secretariat is located in Geneva, Switzerland. ISO has various technical committees which prepare various international standards. Each member organization which are interested in a particular field for which a technical committee has been set up has the right to be represented on that committee. The ISO has been developing technical standards over various sectors of business, industry and technology since 1947. The majority of ISO standards are specific to a particular product, material or process. IEC stands for the International Electrotechnical Commission. It was established in 1906. IEC cooperates closely with ISO on issues concerning electrotechnical standardization.

3.0 ISO (cont)

The requirements for a quality management system have been specified by the international standard in which an organization

- a) has to demonstrate its ability to consistently provide product which satisfies customer and regulatory needs, and
- b) aims to strengthen customer satisfaction by effectively applying the system which includes continually improving the system and assuring the customer of conformity and applicable regulatory needs.

As such to fulfill the requirements of the international standard, the organization has to establish, document, execute and maintain a quality management system and continuously improve its effectiveness.

Malaysian Standards are established based on agreement by committees which consist of representatives from producers, users, consumers and others who have related interests. If appropriate, the relevant Malaysian Standards are adoption of international standards. The Malaysian Standards are periodically reviewed.

3.1 History of ISO

The International Electro Technical Commission also known as IEC was set up in 1906.

3.2 ADVANTAGES OF ISO STANDARD

The ISO standard provides plenty of benefit for mankind. ISO standards can provide the following advantages:

1. Create a more efficient, effective operation.
2. Increase customer satisfaction and retention. Customers are more satisfied because the products and services are based on international standards they also benefit from the effects of competition among suppliers.
3. Reduce audits.
4. Enhance marketing and improved market share.
5. Improve employee motivation, awareness, and morale.
6. Promote international trade. Businesses making use of international standards can compete on many markets worldwide.
7. Increases profit. Adopting ISO 9000 can improve business and can have a positive effect on investment and sales.
8. Reduce waste and increases productivity.
9. Enhanced competitiveness.
10. Improved health.
11. Improved safety. Adoption of international standards ensure that the transport, machines and tools being used are safe.
12. Preserve the environment. Compliance with international standards on air, water and soil quality, and on emissions of gaseous and radiation, can preserve environment.
13. Improved quality.
14. Improved reliability.

3.3 ISO 9000

ISO 9000 is a popular standard. It is applied for quality management requirements.

ISO 9000 is a family of standards for quality management systems. ISO 9000 is maintained by ISO, and is managed by authorized accreditation and certification bodies. ISO 9000 includes standards:

- 1. ISO 9000:2005**, Quality management systems – Fundamentals and vocabulary.
Includes the basics of quality management systems and also contains the core language of the ISO 9000 series of standards. It is a document used to understand terms and vocabulary on the quality management systems.
- 2. ISO 9001:2008** Quality management systems – Requirements
It is intended for use in any organization. It provides requirements which an organization has to fulfill if it is to attain customer satisfaction through consistent products and services which meet customer expectations.

3.4 ISO 14000

ISO 14000 standards are widely applied involving environmental issues. The world is facing a severe climatic change recently which resulted in various calamities such as earthquake, tsunami and severe drought. Developing countries such as America are the major countries which caused severe pollution. This is where ISO 14000 comes into play. ISO 14000 is a family of standards developed by ISO. The standards provide a framework for a strategic approach to an organization's environmental policies, plans and actions. Using the framework, a company develops an environmental management system (EMS). The EMS is evaluated by a "certification body" such as SIRIM to determine whether the EMS conforms to ISO 14000. Any organization which complied with the requirements will be awarded the ISO 14000 certification.

3.4 ISO 14000 (cont)

ISO 14000 grew out of the discussion at the United Nations Conference on Environment and Development at Brazil in 1992. Discussion among 20 countries, 11 international organizations, and more than 100 environmental experts actually started in 1991 to define the basic requirements of a new approach to environment-related standards. The first standards— ISO 14004 and ISO 14001— were published in 1996.

Advantages of getting ISO 14000 certification

Among the benefit of getting ISO 14000 certification are:

1. Cost of waste management is reduced,
2. Savings in consumption of energy and materials,
3. Reduced distribution costs,
4. Improved image among regulators, customers and the public,
5. Provide Framework for continuously improving environmental performance.

3.5 Skim Akreditasi Makmal Malaysia

Skim Akreditasi Makmal Malaysia or abbreviated as SAMM is a laboratory accreditation used to regulate the competency of laboratories which carried out calibration, measurement and testing.

The Laboratory Accreditation Scheme of Malaysia (Skim Akreditasi Makmal Malaysia (SAMM) is one of the accreditation scheme's provided by Department Standards of Malaysia. It was established by the Malaysian Government in 1990. SAMM is a unified national laboratory accreditation scheme and its scope of accreditation activities is multi-disciplinary. It covers calibration and testing. A prerequisite for a laboratory to become accredited is to have a documented quality management system. Accredited laboratories may use SAMM symbol and/or make reference to SAMM accreditation.

3.5 Skim Akreditasi Makmal Malaysia (cont)

Objectives of SAMM

SAMM has the following objectives:

1. To unite all laboratory accreditation schemes that exist in Malaysia.
2. To give formal recognition to laboratories which proved that they are capable and competent in certain fields of calibration/testing.
3. To reduce and finally eliminate the practice of multiple assessments on laboratories.
4. To enhance the status and standard of calibration and testing laboratories in Malaysia.
5. To promote worldwide the acceptance of calibration/tests carried out by SAMM-accredited laboratories.
6. To strengthen the quality, acceptability and reputation of products produced in Malaysia.

3.5 Skim Akreditasi Makmal Malaysia (cont)

Procedure of obtaining accreditation

The procedure for obtaining accreditation is as follows:

1. Application. Application of accreditation made use of the application form available from SAMM Secretariat.
2. Adequacy audit.
3. Pre-assessment.
4. Compliance assessment. The aim of the assessment is to observe whether a laboratory can competently execute calibrations/tests. The assessment is carried out by team of assessors who have been selected based on their expertise and experience in calibration/testing.
5. Discharge of non-conformities
6. Evaluation of assessment report
7. Recommendation for accreditation. When a laboratory fully complies with the criteria for accreditation, a recommendation will be made to the SIRIM council for the award of the accreditation certificate.
8. Granting of accreditation. SIRIM will award the laboratory with certificate of accreditation if it complies with the criteria for accreditation. The accreditation certificate is valid for three years and renewable, subject to terms and conditions of the SAMM scheme.
9. Periodic Surveillance and Re-assessment. Laboratories which have been accredited will be subjected to surveillance assessments to check whether they conform with the relevant requirements.

3.6 Malaysian Standard on Halal Food

Malaysian Standard on Halal Food is placed under MS 1500: 2004.