



STRATEGIC BUSINESS PLAN – ISO/TC 30

Executive summary

Technical Committee ISO/TC 30 is engaged in standardization of methods for the measurement of fluid flow in closed conduits, e.g., pipelines. This includes the consideration of; the terminology used; rules for inspection, installation and operation; the construction of necessary instruments and equipment; the conditions under which measurements are to be made; and methods of collection, evaluation and interpretation of data obtained, including the assessment of errors.

All generic techniques for fluid flow measurements in closed conduits (pipes) are covered by this work. The scope covers both single-phase gas and liquid phase flow measurements and flow measurements which some of another phase present.

Measurement techniques addressed include use of pressure differential devices, velocity, mass and volume methods.

ISO/TC 30 seeks to generate and maintain relevant and up to date standards, that will support the needs of industry and back up relevant legislation. The areas of national and international activity where such standards may be used are potentially very great, since they include the pipeline transport of water, hydrocarbon products and other resources.

ISO/TC 30 liaises with other international bodies to ensure its standards take due account of related work elsewhere.

1 Introduction

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: [ISO](#) (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of [IEC](#) (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of [ITU](#) (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 164 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the [International Standard](#).

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its [Technical Committees](#) are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2 Business Environment of the ISO/TC

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

ISO/TC 30 is required to prepare International Standards, Technical Reports and Guides on flow measurement covering a wide range of metering methods, meter sizes, flow rates and fluids measured. The flow meters can vary in size from very small models for use with 3 mm tubing and smaller, to those for use with pipelines of 1 m diameter or more. The fluids may be gaseous or liquid and, in some cases, may be cryogenic or high viscosity. The flow measurement is predominantly single phase with traces of another phase present, e.g. gas with small amounts of liquid present.

While this area of technology is not characterized by rapid change, the business environment is one of worldwide growth. Due to a recent change of focus, there is an increasing interest in flow measurements for custody transfer of hydrogen and carbon dioxide for Carbon Capture Utilisation and Storage (CCUS).

Primary stakeholders concerned are: governments, gas, water and engineering industries; suppliers and contractors; and consumer and public interest groups. Some aspects of the industries concerned are likely to be strongly regulated by government bodies and the existence of appropriate standards may assist in the removal of technical barriers to trade.

Related work is under way in the European standards organization CEN and in the International Organisation of Legal Metrology (OIML). In addition, some of the work of the American Petroleum Institute (API) is a major influence on TC 30's activity.

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

The measurement of fluid flow in closed conduits is a multi-million-dollar international business, which is standardized on the basis of documents prepared by ISO/TC 30. The basic economy of some of the largest nations in the world is fundamentally affected by the ability to meter hydrocarbon gas being exported or imported by that country. The Russian economy, for example, depends to a substantial extent on its export of gas and orifice plate meters designed in accordance with ISO 5167 are used for this purpose. Similarly, Norway and the United Kingdom export natural gas using this technique, as do many other nations. The venturi meters described in ISO 5167 are being used more for gas flow measurements on unmanned offshore installations as part of a low-cost solution.

More recently ultrasonic and coriolis meters are being used for custody transfer measurements for both gas and liquids.

Countries producing natural gas also need to monitor the production for the purpose of government taxation. Measurements of this type are regulated by government bodies in addition to commercial agreements, both rely on the use of standards produced by ISO/TC 30.

Beyond the consideration of hydrocarbons, water metering has increased greatly in importance in recent years and the revision of international standards to match this development is under way in ISO/TC 30, in liaison with CEN and OIML. Steam measurement is important for the power generation industry. Flow measurement is equally important in numerous industrial processes, for both engineering, environmental (European emission trading scheme) and financial purposes such as gas custody transfer measurements and gas distribution networks.

3 Benefits expected from the work of the ISO/TC

The Business Environment described in 2 above may be expected to benefit from progress made in the work of ISO/TC 30.

ISO/TC 30's activity has the potential to contribute greatly to the harmonization of national and regional standards on fluid flow measurement and, thereby, the alignment of the regulation of businesses relying on this technology. This will be furthered by alignment, where possible, with CEN, which would guarantee the implementation of the standards in most of Western Europe. Similarly, alignment of ISO/TC 30 documents, where possible, with those of the American Petroleum Institute (API) will ensure wider harmonization.

4 Representation and participation in the ISO/TC

4.1 Membership

Countries/ISO members bodies that are P and O members of the ISO committee

4.2 Analysis of the participation

Developed countries (for example those of Western Europe, North America and the Far East) are generally strong participants in ISO/TC 30. There has been more interest recently from developed countries in developing standards for new type of meters. In addition, there has been interest and effort in redrafting existing standards to encompass new data to improve these standards. Countries in economic transition, such as those of Eastern Europe, show a rather variable participation. The participation of developing countries, including some with major oil or gas industries, is low.

ISO/TC 30 has liaisons with other ISO and IEC Committees as follows:

Liaison Committees to ISO/TC 30

The committees below can access the documents of ISO/TC 30:

IEC/TC 4 Hydraulic turbines

IEC/TC 5 Steam turbines

ISO/TC 28/SC 2 Measurement of petroleum and related products

ISO/TC 28/SC 5 Measurement of refrigerated hydrocarbon and non-petroleum based liquefied gaseous fuels

ISO/TC 113 Hydrometry

ISO/TC 115 Pumps

ISO/TC 117 Fans

ISO/TC 193 Natural gas

ISO/TC 193/SC 3 Upstream area

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ISO/TC 30 can access the documents of the committees below:

ISO/TC 28/SC 2 Measurement of petroleum and related products

ISO/TC 28/SC 5 Measurement of refrigerated hydrocarbon and non-petroleum based liquefied gaseous fuels

ISO/TC 69/SC 6 Measurement methods and results

ISO/TC 86 Refrigeration and air-conditioning

ISO/TC 113 Hydrometry

ISO/TC 115 Pumps

ISO/TC 115/SC 2 Methods of measurement and testing

ISO/TC 117 Fans

ISO/TC 153 Valves

ISO/TC 193 Natural gas

ISO/TC 193/SC 3 Upstream area

ISO/TC 197 Hydrogen technologies ISO

ISO/TC 265 Carbon dioxide capture, transportation, and geological storage

These liaisons are generally not close, with the possible exception of ISO/TC 28/SC 2 and /SC 5, whose work is also closely aligned with the API.

ISO/TC 30 is also in liaison with:

- International Organisation of Legal Metrology (OIML);
- European Gas Research Group (GERG, through SC 2);
- European Federation of national associations of water & wastewater services Suppliers (EUREAU, through SC 7).

These liaisons are potentially very important, depending on the extent of harmonization achievable in, particularly, water meter standards and on the extent to which those of TC 30 can be adopted. The work of European committee CEN/TC 92 on water meter standards should be noted and cooperation between this committee and ISO/TC 30/SC 7 encouraged.

There is a possible lack of sufficient involvement from some interest groups, e.g. the environmental lobby.

5 Objectives of the ISO/TC and strategies for their achievement

5.1 Defined objectives of the ISO/TC

As a general rule ISO/TC 30 oversees and facilitates the work of the Subcommittees without becoming directly involved in the technical projects. It is an objective of the Technical Committee to ensure the timely delivery of all TC 30 standards to the publication stage, in accordance with ISO Technical Management Board (ISO/TMB) requirements and guidelines. ISO/TC 30 also has it as an objective to regularly review and maintain all its standards, which will ensure that they remain up to date and valid for the industries concerned. In the course of all reviews, the economic impact of any changes found to be necessary will be considered, but technical correctness must remain the priority. In addition, it is essential that there is consistency of approach across the different technical areas dealt with by TC 30. For example, following the recent revision of ISO 5167 it is necessary to ensure that the related standards are updated consistent across the whole series. In addition, the new revision would focus more on a complete flow measurement system rather than just the primary element providing more useful information for the users.

ISO/TC 30 considers harmonization of its standards with those of other organizations to be highly important and has this as an objective to be pursued.

5.2 Identified strategies to achieve the ISO/TC's defined objectives

Project management under ISO/TC 30 should be in accordance with all guidelines and recommendations from the ISO/TMB, including those guidelines given in ISO/TMB Communiqué 19 (July 2003).

ISO/TC 30 Chairman's Advisory Group (CAG) meetings will be used as a means of overseeing and steering TC/SC coordination and to prepare for plenary meetings.

The standards under the direct responsibility of the ISO/TC 30 Secretariat often cover horizontal issues applicable to the whole of TC 30's work. The production of these standards by the parent committee contributes to ensuring the consistency of approach necessary as indicated in 5.1 above.

With regard to the harmonization of standards, ISO/TC 30 will seek for standards to be developed in collaboration with CEN under the terms of the Vienna Agreement wherever possible.

ISO/TC 30 meets as required (approximately every 18-24 months), with subcommittees meeting more often if necessary. Much of the business of the committees can be carried out by electronic correspondence and this is a policy of TC 30 for the most effective management of the work. When meetings are called, these will often be in association with another event, to ensure the most profitable use of delegates' resources.

Where an international standard is demonstrated not to be the most appropriate deliverable from the discussions of the technical experts concerned, an alternative deliverable such as a Technical Specification, Technical Report or Guide will be considered.

6 Factors affecting completion and implementation of the ISO/TC work programme

With regard to the completion of ISO work items, the major factors are the availability of participants and the financial resource to support their participation. In the current economic climate, the member countries and technical experts are very sensitive to the cost of voluntary participation, and this can lead to difficulty in ensuring sufficient involvement. This is a continual problem, which makes it essential that the work programme is relevant and dynamic.

There is also a risk that alternative standards developed by other organizations, such as OIML, API and CEN, will in some cases undermine the ISO activity. Such duplication of effort may lead both to a diminution of resource available to ISO/TC 30 and to a lesser use of the end product.

As a consequence, at the TC30 meeting in 2017 it was agreed that the subsequent revision of the ISO 5167 series of standards will ensure alignment between individual standards and encompass the design and devotement of a complete metering system creating more complete standards rather than focusing on just the primary flow measurement element. The revision of the 5167 series was completed and all six parts published in 2022.

At the ISO/TC30 meeting (November 2022) it was agreed that ISO 2186, ISO 11583 and ISO 5168 will be reviewed with the intention of updating them to ensure alignment with the revised ISO 5167 series of standard and standards associated with ISO 5167.

7 Structure, current projects and publications of the ISO/TC

Information on ISO online

The link below is to the TC's page on ISO's website:

ISO TC 30 on ISO Online

Click on the tabs and links on this page to find the following information:

- About (Secretariat, Committee Manager, Chair, Date of creation, Scope, etc.)
- Contact details
- Structure (Subcommittees and working groups)
- Liaisons
- Meetings
- Tools
- Work programme (published standards and standards under development)

Reference information

[Glossary of terms and abbreviations used in ISO/TC Business Plans](#)

[General information on the principles of ISO's technical work](#)