BUSINESS PLAN

ISO/TC 30
Measurement of fluid flow in closed conduits

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 fluid flow measurements are covered by this work, including hydrocarbon metering, water metering and process metering.

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 140 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 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 of high viscosity.

While this area of technology is not characterized by rapid change, the business environment is one of worldwide growth. 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 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.

Countries producing natural gas also need to monitor the production for the purpose of government taxation. Measurements of this type likewise 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. Flow measurement is equally important in numerous industrial processes, for both engineering, environmental and financial purposes.
3 BENEFITS EXPECTED FROM THE WORK OF ISO/TC 30

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 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. 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:

- ISO/TC 28/SC 2 Dynamic petroleum measurement;
- ISO/TC 28/SC 5 Measurement of light hydrocarbon fluids;
- ISO/TC 115 Pumps;
- ISO/TC 116 Space heating appliances;
- ISO/TC 117 Industrial fans;
- ISO/TC 193 Natural gas;
- IEC/TC 4 Hydraulic turbines.

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 Union of National Associations of Water 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.

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.

It should be noted that ISO/TC 30/SC 9 ‘General topics’ plays an important role in covering horizontal issues applicable to the whole of TC 30’s work. The work of this subcommittee 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 approximately every 18 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.

Active promotion of ISO/TC 30’s work is made through papers, presentations, seminars, training courses and the addition of hyperlinks to appropriate websites.
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 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 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. ISO/TC 30 strives for efficiency, in delivering documents on time as specified in the ISO timescales to minimize the costs of the participants and through working together where possible with other standards organizations.
7 STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

This section gives an overview of the ISO/TC’s structure, scopes of the ISO/TCs and any existing subcommittees and information on existing and planned standardization projects, publication of the ISO/TC and its subcommittees.

7.1 Structure of the ISO committee

7.2 Current projects of the ISO technical committee and its subcommittees

7.3 Publications of the ISO technical committee and its subcommittees

Reference information

Glossary of terms and abbreviations used in ISO/TC Business Plans

General information on the principles of ISO’s technical work