



BUSINESS PLAN

**ISO/TC 74
Cement and lime**

EXECUTIVE SUMMARY

The main objective of the technical committee is to reach harmonization of methods of tests. The work is done in collaboration with CEN/TC 51 due to the fact that the world's five largest cement producers are the four West European groups and Cemex from Mexico.

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:

Cement is a finely ground, non-metallic, inorganic powder when mixed with water forms a paste that sets and hardens. This hydraulic hardening is primarily due to the formation of calcium silicate hydrates as a result of the reaction between mixing water and the constituents of the cement. In the case of a aluminous cements hydraulic hardening involves the formation of calcium aluminate hydrates.

Cement is a basic material for building and civil engineering construction. In Europe the use of cement and concrete (a mixture of cement, aggregates, sand and water) in large civic works can be traced back to antiquity. Portland cement, the most widely used cement in concrete construction, was patented in 1824. Output from the cement industry is directly related to the state of the construction business in general and therefore tracks the overall economic situation closely.

The cement industry is an energy intensive industry with energy typically accounting for about 30% of production costs (i.e. excluding capital costs). The primary fuels are solid combustibles such as petcoke and coal natural gas and oils. In addition of these fuel types, the cement industry uses various types of waste-derived alternative fuels for more than 15 years.

	2002
Petcoke	50.5%
Coal	24.0%
Fuel oil incl. HVFO	5.0%
Lignite & other solid fuels	5.5%
Gas	1.0%
Alternative fuels	14.0%

Table 1.3 : Fuel consumption by the European cement industry
(CEMBUREAU report, 2004)

The emissions from cement plants which cause greatest concern are nitrogen oxides (No_x), sulphur dioxide (SO₂) and dust. Other emissions to be considered are carbon oxides

(CO, CO₂), volatile organic compounds (VOCs), polychlorinated dibenzodioxins (PCDDs) and dibenzofurans (PCDFs), metals, and noise.

The cement industry is a capital-intensive industry. The cost of a new cement plant is equivalent to around 3 years' turnover, which ranks the cement industry among the most capital-intensive industries. The profitability of the cement industry is around 14% as a proportion of turnover (on the basis of pre-tax profits before interest repayments).

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:

World cement production has grown steadily since the early 1950s, with increase production in developing countries, particularly in Asia, accounting for the lion's share of growth in world cement production in the 1990s.

In 2003 world production of cement reached 1.9 billion tonnes. Table 1.1 shows the distribution of cement production by geographic regions.

	2003		2003
China	41.9 %	USA	4.7 %
India	6.2%	Other America	6.6 %
Japan	3.6%	Africa	4.1 %
Other Asia	15.3%	CIS	2.8 %
European Union(25)	11.6%	Oceania	0.4 %
Other Europe	2.8 %		

Table 1.1 : World cement production by geographic regions in 2003

There is generally little import and export of cement, mainly as a result of the high cost of road transport. World foreign trade in cement still accounts for only about 6-7% of production, most of which is transported by sea. Road deliveries of cement generally do not exceed distances of 150 km.

The world's five largest cement producers are the four West European groups ; Lafarge, Holcim, HeidelbergCement, and Italcementi, together with Cemex from Mexico. Apart from producing cement, these companies have also diversified into several other building materials sub-sectors such as aggregates, concrete products, plasterboards, etc.

Transport costs make markets for cement predominantly local. However, some global trade does exist and in some cases it is economically viable to ship cement around the world. International competition is mainly a threat for individual plants, and within the EU increasing imports from Eastern Europe does affect local market conditions.

This increase in productivity is a result of the introduction of larger scale production units. These use advanced operation automation and therefore require fewer, but higher qualified, staff. The number of people employed in the cement industry in the European Union (25) is now close to 60 000.

3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC

The priority given to standardise the test methods demonstrates the wish to harmonise the basic elements for a free market developed on the same language and to improve the world certification of the products.

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*

The received requests from a lot of countries from different parts of the world (United States, Brazil, South Africa, China, India for instance) on the way to implement the European standards justifies the strategy developed by ISO/TC 74.

No need for meeting was emphasised and participation of Japan to the plenary meeting of CEN/TC 51 demonstrated the possible synergy between the standardizers around the world.

Regular information by experts in different parts of the world improve the international harmonization.

5 OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 *Defined objectives of the ISO/TC*

The standardization of test methods remain the first priority and a package of revised standards will be published in 2004.

At short time, the determination of the heat of hydration (2 methods) will also be standardized at ISO level.

No need was identified in 2002/2003 for standardization of specification or for matters linked to certification.

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

The Vienna agreement is used and electronic correspondence permit to manage the activities of ISO/TC 74.

6 FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

ISO activities are dependant of CEN/TC 51 activities.

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](#)