

## **DRAFT BUSINESS PLAN**

ISO/TC 132

Ferrous alloys

### **EXECUTIVE SUMMARY**

The amount of Ferrous alloys in the world hits a new record. The demand of ferrous alloys in the world is still growing. It can be said that the significance of international standardization in the ferrous alloy field is increasing more and more.

ISO/TC132 covers standardization in the field of ferrous alloys and other alloying additives used in the relevant. Excluded: standardization of ferronickels which devolves upon ISO / TC 155.

The current main subject in the development of ISO standards in ISO/TC132 is to improve the market relevancy of ISO standards developed or to be developed within ISO/TC132 and to promote the application of ISO standards in the international trade. The benefits of standardization, such as cost reduction and a speedier distribution of products, is expected.

## **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/TC132**

### ***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:

### ***2.1.1 General description of the market***

Ferroalloy products are important raw materials of steel industry, aluminium industry, foundry, chemical industry. Ferroalloy industry is an important segment of the world economy. ISO/TC132 covers standardization in the field of ferroalloys and other alloying additives used in the iron- and steel-making. The market addressed by ISO/TC 132 includes ferromanganese, ferrosilicon, ferrosilicomanganese, ferrochromium, ferrotungsten, ferrovanadium, ferromolybdenum, ferroniobium, ferrotitanium, ferroboron, ferrosilicochromium, chrome metal, silicon metal and so on.

### ***2.1.2 Description of the market structure and the major market players***

The users of International Standards developed by TC 132 are the producers of the ferroalloy products and consumers, inspection agencies, trading and shipping companies.

#### ***2.1.2.1 Structure of the market: Producers***

The ferroalloy producers are centred in South Africa, China, Kazakhstan, Ukraine, Russia, Norway, Brazil, and France. Ferrosilicon producing countries are China, Russia, Norway, Ukraine, and Brazil. Ferromanganese producing countries are China, Russia, Ukraine, Norway, and France. Ferrochromium producing countries are South Africa, Kazakhstan, Russia, Ukraine, India, China, and Zimbabwe. Silicon metal producing countries are China, Russia, America, Brazil, and France.

#### ***2.1.2.2 Structure of the market: Customers***

The ferroalloy products are centered in Japan, USA, Germany, South Korea , Italy, Malaysia, Spain.

### ***2.1.3 Major factors that may have an impact on the development of the markets***

Essentially, ferroalloy production increases in accordance with steel production, which rises with world economic growth. Thus, the consumption of ferroalloy products is influenced by world economic growth.

The supply and demand of market are the major factors on the development of ferroalloy production. The ferroalloy production increases steadily in proportion to the rise in steel production. It is expected that the crude steel production and stainless steel production grew at the annual rate of about 2% and 5% respectively in the next five years. The amount of world crude steel will peak to 955 million tonnes by 2006. The stainless steel production will have a steady growth and peak to about 23 million tonnes by 2005.

The excessive supply of bulk ferroalloys will continue in future. South Africa and China will maintain their status as the super suppliers of ferroalloys. However, the ferroalloy industry in China is being restructured to set up environmental-friendly enterprises. The competition in price and production cost has also an impact on the development of ferroalloy production. In the competition it is important for the producers of ferroalloys to use low-price ores and to use electric energy with high efficiency. Continuous improvements of techniques along with the steadily increases of productivities and compounded with low-price electric energy and low-cost raw materials should be the main target of the most producers. Furthermore, it is inevitable that the players with high production costs have to cut or shut down their production in the future.

The trade restriction has impacted on the development of ferroalloy production. The future trade restriction will also impact on the export of silicon and ferrosilicomanganese from China, Russia, Kazakhstan, and Ukraine, and particularly it will impact on the price for silicon metal in the market. Currently, the major restriction comes from USA and EU through their trade safeguard regulations, which prevents the further increase of silicon export from China.

International Standards for ferroalloy are instruments for avoiding technical barriers in the world market. A strong International standardization activity could be a basis for a good cooperation of national and regional standardization bodies with ISO in the new context of WTO.

The market outlook for ferroalloy production is summarized as follows:

- a) Recently (2005—2006), ferroalloy production will increase in accordance with steel production. South Africa and China are still the strongest ferroalloy production countries.

- b) Most kinds of ferroalloy products will continue to be in excessive supply.
- c) Price of ferroalloy will be stable.
- d) Trade restrictive has impact on the development of ferroalloy production.

The impact of market trends on TC 132 are expected to be as follows:

- a) Increased needs for low cost, environment-friendly sampling and analysis methods.
- b) Increased need for International Standards for ferrosilicon-manganese, and increased participation of ferroalloy producers and consumers in TC 132.
- c) Compliance to standards, which reflect changes not only in measuring techniques but also in resources, manufacturing technology, and qualitative requirements.
- d) An important part of the work of ISO/TC 132 is in respect of the national and regional legislations, rules and regulations as for example for ferrosilicon, ferrochromium, ferrotungsten, ferromolybdenum, ferrovanadium, ferrotitanium, ferroniobium and etc.

## **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:

### **2.2.1 *The import and export of ferroalloy products in the World***

Recent years, the import amount of ferroalloy products has been increasing steadily in the world market. Table 1 shows that the import amount has been increasing from 7,479 thousand tones in 2002 to 9,056 thousand tones in 2004 by several major imported countries (Japan, USA, Germany, Korea, Taiwan (China), Italy, Spain, and Malaysia). During the same years, the export amount of ferroalloy products has been increasing steadily in the World market too. The export amount has been increasing from **!Invalid Character Setting** thousand tones in 2002 to **!Invalid Character Setting0** thousand tones in 2004 by several major exported countries (South Africa, China, Kazakhstan, Ukraine, Russia, Norway, Brazil, and France) showed in Table 2.

**Table 1 Trend of ferroalloy import amount in the World**  
(thousand tones)

Year	2002	2003	2004
Japan	1651	1899	2000
USA	1157	1285	1649
Germany	1125	1178	1179
Korea	846	1033	1232
Taiwan(China)	844	869	879
Italy	810	809	896
Spain	415	793	416
Malaysia	631	563	805
Total	<b>!Invalid Character Setting</b>	<b>!Invalid Character Setting</b>	<b>!Invalid Character Setting</b>

Source: WSS

**Table 2 Trend of ferroalloy export amount in the World**  
(thousand tones)

Year	2002	2003	2004
South Africa	4137	3989	3533
China	1390	1819	2189
Kazakhstan	1257	1483	1109
Ukraine	952	1099	1339
Russia	362	517	660
Norway	541	503	583
Brazil	308	363	351
France	196	194	186
Total	<b>!Invalid Character Setting</b>	<b>!Invalid Character Setting</b>	<b>!Invalid Character Setting0</b>

Source: WSS

### ***2.2.2 The supply and demand of some kinds of ferroalloy products in the World market***

The total consumption of ferrosilicon in the world market was 3,525 thousand tones and the total production was 3,600 thousand tones in 2004 (See table 3). The total production was 75 thousand tones more than the consumption. For high-carbon ferromanganese, the total consumption and total production were 3,103 thousand tones and 3,030 thousand tones respectively in 2004. The total production was 73 thousand tones less than the consumption, but there was a stock of 146 thousand tones in 2003 (See table 4). There was still a stock of 73 thousand tones in 2004. For ferrosilicomanganese, the total consumption and the total production were 4,403 thousand tones and 4,425 thousand tones respectively in 2004. The total production was 22 thousand tones more than the consumption (See

table 5). For ferrochromium, the total consumption and the total production were 5,992 thousand tones and 5,933 thousand tones respectively in 2004. The total production plus the stock (71 thousand tones) were 12 thousand tones more than the consumption (See table 6).

**Table 3 Supply and demand of ferrosilicon in the World market**  
(thousand tones)

Year	2003	2004	2005(first half year)
Europe	1065	1170	562
Asia	1590	1790	910
North America	335	350	172
The others	194	215	107
Total consumption	<b>!Invalid Character Setting</b>	3525	1751
Total production	3277	3600	1925
Balance	93	75	174

Source: MBR

**Table 4 Supply and demand of high-carbon ferromanganese in the World market**  
(thousand tonnes)

Year	2003	2004	2005(first half year)
Europe,(Ma content)	620	694	336
Asia,(Ma content)	1232	1287	663
North America, (Ma content)	191	209	102
The others,(Ma content)	211	230	115
Total consume, (Ma content)	2254	2420	1216
Total consumption	2890	3103	1559
Total production	3036	3030	1595
Balance	146	-73	36

Source: MBR

**Table 5 Supply and demand of ferrosilicomanganese in the World market**  
(thousand tonnes)

Year	2003	2004	2005(first half year)
Europe,(Ma content)	1054	1125	535
Asia, (Ma content)	1104	1238	620
North America, (Ma content)	264	361	167
The others, (Ma content)	194	226	115
Total consumption, (Ma content)	<b>!Invalid Character Setting</b>	2950	1437
Total consumption	3904	4403	2145
Total production	3928	4425	2240
Balance	24	22	95

Source: MBR

**Table 6 Supply and demand of ferrochromium in the World market**  
(thousand tonnes)

Year	2002	2003	2004
Total consumption	4528	5395	5992

Total production	4486	5341	5933
Stock	30	61	71
Balance	-12	7	12

Source: MBR

### **3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC132**

The standards in the field of ferroalloy are roughly classified into 3 kinds of basic standards, test method and inspection standards and product standards. Basic standards such as terminology and definitions are needed for smoothing communication and for avoiding misunderstanding between the parties concerned in transactions of ferroalloy products. In this respect, TC 132 has developed 3 standards.

Test method and Inspection standards are also indispensable in order to avoid unnecessary troubles. The differences of the test methods or inspection standards between shipment and delivery of goods sometimes cause troubles. TC 132 has developed 16 standards, among them there are 8 standards of sampling and sample preparation, 9 methods of chemical analysis.

Product standards such as specification and conditions of delivery are used for trade in the market. TC 132 has developed 12 standards.

International standardization of ferroalloy products would lead to a total cost saving by unifying the kind of products, reducing the stock of products.

The current main subject in the development of ISO standards in ISO/TC132 is to improve the market relevancy of ISO standards developed or to be developed within ISO/TC132, that is,

- a) To make ISO standards more usable in the market, directly or indirectly through their being adopted by national or regional standards in accordance with the requirement of WTO/TBT agreement and the long-range strategy of the ISO council.
- b) To promote the timely and speedy development of ISO standards.

Benefits expected from the work of ISO/TC 132 are summarized as follows:

- (a) Development of acceptable and validated standard methods in the most economical, scientific and practical way.
- (b) Elimination, or at least mitigation, of those barriers to ferroalloy trade caused by differences in standards, whilst assisting in furthering the aims of the WTO/TBT agreement.

(c) Ability to respond quickly to the need for new or revised standards resulting from the development of ferroalloy production and the technologies of user industries as well as of the instrumentation to measure quality characteristics.

## **4 REPRESENTATION AND PARTICIPATION IN THE ISO/TC**

### 4.1 Countries/ISO member bodies that are P and O members of ISO/TC 132

#### ***4.2 Analysis of the participation***

The main participants in ISO/TC 132 are the major industries, manufacturers, consumers, trade unions, public authorities and non-governmental organizations.

One of the major risks for ISO/TC132 is the lack of availability of experts due to the crisis of the sector and the continuous evolution of the economic situation.

The members participating in the preparation of appropriate standards reflecting the market needs of individual nations are expected to have the following attitudes:

#### a) Chairman, Convener and Secretary

- It is desirable for the Chairman, Convener and Secretary to collect and sort the market needs of individual nations and analysis and evaluate their needs, appropriateness and feasibility as international standards based on the national standards or technical comments provided by the P-members in the proposal or preliminary stage.

- When there are multiple proposals which are technically appropriate, they should determine their acceptability and try to achieve a consensus among the members so that there is no inconsistency or ambiguity left in the standards prepared.

#### b) P-members

- The P-members should submit their proposals in writing, together with a clear description of market needs and technical backgrounds or grounds to ensure a good understanding of these proposals among all members.

- When considering the proposals, the P-members should bear in mind to respect and accept the needs of other nations or regions as well as their own ones.

- When the P-members have agreed to any decision, they should not hesitate to revise the relevant standards of their own nations in order to harmonize them internationally.

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

### **5.1 Defined objectives of the ISO/TC132**

#### ***5.1.1 Supply equitable International Standards that facilitate international trade in ferroalloys by:***

- a) Preparing in a cost-effective manner, timely, safe and environmentally responsible standards of known and demonstrated precision and reliability that meet the quality requirements and operating practices of the ferroalloy and user industries.
- b) Serving as a major instrument in achieving harmonization of the national ferroalloy standards of the various producer and consumer countries throughout the world.
- c) Assisting in the orderly international marketing of ferroalloys by having standards acceptable to and used by international trading partners.

#### **5.1.2 Draft International Standards based on industry (ferroalloy industry, user industries) best practices and sound scientific principles that meet industry requirements by:**

- a) Developing new or revised International Standards to take into consideration new technology and instrumentation for measuring quality characteristics.
- b) Identifying and quickly responding to changing circumstances in ferroalloy technology and marketing requirements for new or revised standards and anticipating possible future needs for standards of commercial relevance.

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

The strategy is to establish working groups (WG) and study groups (SG) that are assigned responsibility for specific areas and standardization tasks covered by the scope of TC 132 including the effective organizations of the available expertise and specialized laboratory facilities for standards development.

### **5.2.1 System organization for efficient drafting of standards**

#### **a) Enrichment of project management functions**

- 1) Screening, refinement and prioritization of themes  
Confirmation of fundamentals at meetings (market needs, feasibility, particulars of necessary work, roles of each member participates, target date)
- 2) Progress follow-up and go/stop judgment on theme at meetings
- 3) WD enhancement (elaborate review in WG, particularly for work requiring international co-operative test )

#### **b) Work streamlining**

- 1) Effective use of electronic tools such as ISO templates and ISO TC servers
- 2) Concurrent plenary meetings
- 3) Forward planning of meetings and locations for 4-year periods
- 4) Clear network of organized bodies (Secretariat-member bodies-mirror committees, experts )
- 5) Draft review by editing committee (for formatting and comparability with other standards)

### **5.2.2 Developing International Standards relevant to the market**

#### **a) Concentration on market needs by developing standards that reflect the evolution of the ferroalloy industry**

- 1) Encouragement of increased participation of ferroalloy producers and consumers to provide the expertise needed to develop standards for this segment of international trade
- 2) Regular updating of standards to ensure their continued relevance

#### **b) Revision of published ISO standards to comply with current requirements**

Quality, environmental friendliness and safety for use in each country

#### **c) Investigation of the implementation of ISO standards developed by ISO/TC 132**

- 1) Survey on implementation of ISO standards by ISO/TC 132
- 2) Clarifying why the ISO standards are not used in each member country, if the implementation of ISO standards developed by ISO/TC 132 members is not high

3) Development of countermeasure proposals based on the implementation investigations

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

Besides the lack of availability of experts, there are great difficulties for harmonization of standards based on different basic concepts.

Difficulties have also been found in the harmonization of the ferroalloy used in various standards and of the technical requirements of products, due to the existing differences in national standards.

## **7 Current projects and publications of ISO/TC 132**

This section gives an overview of the ISO/TC's structure, scopes of the ISO/TCs 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 subcommittee](#)

### [7.3 Publications of the ISO technical committee and its subcommittee](#)

## **8 Reference information**

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

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