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**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION**

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ISO/TC 26

Draft Business Plan



BUSINESS PLAN

ISO/TC 26

Copper and copper alloys

EXECUTIVE SUMMARY

Business Environment

The scope of ISO/TC 26 "Copper and copper alloys" is standardisation in the field of unwrought, wrought and cast products made from copper and copper alloys.

The following products are covered by the scope of ISO/TC 26 standardization work::

- unwrought copper products;
- rolled flat products (sheet, strip, plate etc.);
- tubes and fittings;
- rod/bar, wire and profiles;
- forgings;
- master alloys, ingots and castings;
- secondary raw material.

The standardization covers:

- material and material condition designations;
- terminology;
- composition of copper and copper alloys;
- mechanical and physical properties;
- technical conditions of delivery;
- tolerances on dimensions and form;
- methods of testing peculiar to copper material.

Parties involved:

- smelters;
- refiners;
- transformers;
- founders;
- traders;
- consumers.

Benefits

To prepare the necessary standards in correlation with the needs of the the international market.

Priorities

- revision of Standards where necessary;
- maintenance of existing standards;
- preparation of standards related to testing and analysis.

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:

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 refined copper production (1999)	14,2 million tonnes
World refined copper consumption (1999)	13,8 million tonnes
Scrap recovery (approx.)	4 million tonnes
World production of semis (1999)	12,1 million tonnes
Of which – copper	8,8 million tonnes
– copper alloy	3,3 million tonnes
Semis production by area – Europe	5,4 million tonnes
– Asia	2,6 million tonnes
– America	4,0 million tonnes

The USA is the largest market, with per capita consumption of 14,0 kg. 40 % goes to building and construction. Europe is the second largest.

Mature economies are characterised by relatively slow growth in industrial production. Economic growth in mature markets is becoming more dependent on non-metal sectors, such as services and information technology.

Of the developing countries, among the Asian countries, South Korea, Taiwan and ASEAN Group countries have been experiencing rapid industrial growth. India, the Middle East and china all have potential for rapid consumption growth. In the former Soviet Union and Eastern Europe, political and economic reform has hampered growth but there are now signs of recovery. Latin America and Africa have had relatively slow rates of economic growth but at low levels of per capita consumption, there is potential for rapid increases in demand.

End uses (cables, semis and castings) are divided approximately:

Building	27 %
Electrical cables	42 %
Engineering	15 %
Electrical equipment	9 %
Transport	4 %

Most unalloyed copper is used in electrical, plumbing and roofing.

3 BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC 26

Removal of technical barriers to trade by defining mechanical and chemical test methods as well as terminology standards for copper and copper alloy 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](#)

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

5.1 *Defined objectives of the ISO/TC*

TC 26 has remained dormant for about 18 years.

The strategies of the Committee are:

1. To maintain the existing Standards and revise them when necessary
2. To assess the need for future standardization in a working group

The present structure of the Committee will continue to be used

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

Risk analysis

During a meeting in 1999, TC 26 considered the current usage of ISO standards and reviewed the TC 26 programme of work and decided upon confirmation, revision or withdrawal of standards. Almost all product standards and standards for chemical composition were proposed for withdrawal.

Terminology and test methods were retained.

The meeting finally concluded that there would be no progress towards global standardisation without commitment and a vision for the future. It was agreed and decided to establish an ad hoc Group under German convenorship to consider plans for the future. In the meantime Germany decided to relinquish the Convenorship of this Ad hoc Group as well as the Secretariat of WG 7 and the Secretariat of TC 26.

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](#)

Comments :

The following standards have been withdrawn in 2000 following a meeting of ISO/TC 26 in 1999.:

ISO 274:1975

Copper tubes of circular section -- Dimensions

ISO 426-1:1983

Wrought copper-zinc alloys -- Chemical composition and forms of wrought products -- Part 1: Non-lead and special copper-zinc alloys

ISO 426-2:1983

Wrought copper-zinc alloys -- Chemical composition and forms of wrought products -- Part 2: Lead copper-zinc alloys

ISO 427:1983

Wrought copper-tin alloys -- Chemical composition and forms of wrought products

ISO 428:1983

Wrought copper-aluminium alloys -- Chemical composition and forms of wrought products

ISO 429:1983

Wrought copper-nickel alloys -- Chemical composition and forms of wrought products

ISO 430:1983

Wrought copper-nickel-zinc alloys -- Chemical composition and forms of wrought products

ISO 1187:1983

Special wrought copper alloys -- Chemical composition and forms of wrought products

ISO 1190-2:1982

Copper and copper alloys -- Code of designation -- Part 2: Designation of tempers

ISO 1336:1980

Wrought coppers (having minimum copper contents of 97,5 %) -- Chemical composition and forms of wrought products

ISO 1337:1980

Wrought coppers (having minimum copper contents of 99,85 %) -- Chemical composition and forms of wrought products

ISO 1634-1:1987

Wrought copper and copper alloy plate, sheet and strip -- Part 1: Technical conditions of delivery for plate, sheet and strip for general purposes

ISO 1634-2:1987

Wrought copper and copper alloy plate, sheet and strip -- Part 2: Technical conditions of delivery for plate and sheet for boilers, pressure vessels and heat-exchangers

ISO 1634-3:1987

Wrought copper and copper alloy plate, sheet and strip -- Part 3: Technical conditions of delivery for wrought copper alloy strip for springs

ISO 1635:1974

Wrought copper and copper alloys -- Round tubes for general purposes -- Mechanical properties

ISO 1635-2:1987

Seamless wrought copper and copper alloy tube -- Part 2: Technical conditions of delivery for condenser and heat-exchanger tubes

ISO 1637:1987

Wrought copper and copper alloy rod and bar -- Technical conditions of delivery

ISO 1638:1987

Wrought copper and copper alloy wire -- Technical conditions of delivery

ISO 1639:1974

Wrought copper alloys -- Extruded sections -- Mechanical properties

ISO 1640:1974

Wrought copper alloys -- Forgings -- Mechanical properties

ISO 3486:1980

Wrought copper and copper alloys -- Cold-rolled flat products delivered in straight lengths (sheet) -- Dimensions and tolerances

ISO 3487:1980

Wrought copper and copper alloys -- Cold-rolled flat products in coils or on reels (strip) -- Dimensions and tolerances

ISO 3488:1982

Wrought copper and copper alloys -- Extruded round, square or hexagonal bars -- Dimensions and tolerances

ISO 3489:1984

Wrought copper and copper alloys -- Drawn round bars -- All minus tolerances on diameter and form tolerances

ISO 3490:1984

Wrought copper and copper alloys -- Drawn hexagonal bars -- All minus tolerances on width across flats and form tolerances

ISO 3491:1984

Wrought copper and copper alloys -- Drawn square bars -- All minus tolerances on width across flats and form tolerances

ISO 3492:1982

Wrought copper and copper alloys -- Drawn round wire -- Tolerances on diameter

ISO 6958:1984

Wrought copper and copper alloys -- Drawn rectangular bars -- Dimensions and form tolerances

ISO 7756:1984

Wrought copper and copper alloys -- Drawn round bars -- Symmetric plus and minus tolerances on diameter and form tolerances

ISO 7757:1984

Wrought copper and copper alloys -- Drawn hexagonal bars -- Symmetric plus and minus tolerances on width across flats and form tolerances

ISO 7758:1984

Wrought copper and copper alloys -- Drawn square bars -- Symmetric plus and minus tolerances on width across flats and form tolerances

Reference information

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

NB: This glossary gives the full name and status of terms used, in abbreviated form or in full, in the above "Business Plan for ISO/TCs". The glossary also gives the source of the information provided. Glossary intends to help with the understanding of the terms used. Whenever any of these terms are used by contributors to this Business Plan, they are requested to use them coherently as foreseen in the glossary.

Term	Abbrev.	Definition
standardization	---	<p>Activity of establishing, with regard to actual or potential problems, provisions for common and repeated use, aimed at the achievement of the optimum degree of order in a given context.</p> <p>NOTES</p> <p>1 In particular, the activity consists of the processes of formulating, issuing and implementing standards.</p> <p>2 Important benefits of standardization are improvement of the suitability of products, processes and services for their intended purposes, prevention of barriers to trade and facilitation of technological cooperation.</p>
standard	---	<p>Document, established by consensus and approved by a recognized body, that provides, for common and repeated use, rules guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.</p> <p>NOTE Standards should be based on the consolidated results of science, technology and experience, and aimed at the promotion of optimum community benefits.</p>
package of standards	---	<p>A group, as small as possible, of inter-related standards in the scope of one or more ISO/TCs which are usually developed simultaneously to one another as parts of one standard, or standards that must be developed simultaneously.</p>
consensus	---	<p>General agreement, characterized by the absence of sustained opposition to substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments.</p> <p>NOTE - Consensus need not imply unanimity</p>
ISO/TC International Standardization Deliverables:		
International Standard	IS	<p>A normative document, developed according to consensus procedures, which has been approved by the ISO membership and P-members of the responsible committee in accordance with Part 1 of the ISO/IEC Directives as a draft International Standard and/or as a final draft International Standard and which has been published by the ISO Central Secretariat.</p>
ISO Technical Specification	ISO/TS	<p>A normative document representing the technical consensus within an ISO committee, approved by 2/3 of the P-members of the ISO/TC or SC.</p>
ISO Public Available Specification	ISO/PAS	<p>A normative document representing the consensus within a working group, approved by a simple majority of the P-members of the TC/SC under which the working group operates.</p>
ISO Technical Report	ISO/TR	<p>An informative document containing information of a</p>

Term	Abbrev.	Definition
		different form from that of normally published in a normative document.
Amendment	Amd	An amendment alters and/or adds to previously agreed technical provisions in an existing standard.
Technical Committee	ISO/TC	A technical body responsible for the programming and planning of technical work and the monitoring and execution of this technical work. The ISO/TC is also responsible for the consensus building process among its members for individual work items.
Subcommittee	SC	A technical body reporting to an ISO/TC which, within its scope which is covered by the scope of its parent ISO/TC, is responsible for the monitoring and execution of the technical work. The SC is also responsible for the approval and consensus building process among its members for individual work items.
ISO/TC Working group and ISO/SC Working group	WG	A technical body, appointed by the ISO/TC or ISO/SC and composed of experts, responsible for the drafting of standards, in accordance to the ISO rules and the clear specifications set by the ISO/TC or ISO/SC.
Editing Committee	---	A committee set up by a technical body (ISO/TC or SC) at the beginning of its work, which represents the three official languages of ISO. It is responsible for the correct formulation and presentation of the standard(s) prepared by the technical body (ISO/TC or SC) and the equivalence of the texts in the three official languages.
Participating member	P-member	A member body participating actively in the work of a TC or SC, with an obligation to vote on all questions formally submitted for voting within the TC or SC on enquiry drafts and final draft international standards and, wherever possible, to participate in meetings.
Work Item number	WI	The identification number given to a standards project in a standards work programme. It is intended that the standards project leads to the issue of a new, amended or revised standard, an ISO/PAS, ISO/TS or other ISO product.
Vienna Agreement	VA	Agreement on technical cooperation between ISO and CEN.
VA ISO lead (5.1)	---	Technical cooperation between ISO and CEN under the VA, where the work is done by the ISO/TC, where a formal notification of interest was received by ISO from CEN, and where parallel synchronized procedures are applied in ISO and CEN for the approval processes.
VA CEN lead (5.2)	---	Technical cooperation between ISO and CEN under the VA, where the work is done by the CEN/TC or SC, where a formal notification of interest was received by CEN from ISO, and where parallel synchronized procedures are applied in ISO and CEN for the approval processes.
ISO stakeholders	---	Individuals, institutions, organizations or enterprises who have a direct or indirect interest in the ISO System, its activities and products and who have a specific interest in the effective programming of ISO work items and their adequate resourcing.

General information on the principles of ISO's technical work