



Form 1: Proposal for a new field of technical activity

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Proposer: SAC	ISO/TS/P 255

A proposal for a new field of technical activity shall be submitted to the Central Secretariat, which will assign it a reference number and process the proposal in accordance with the ISO/IEC Directives (part 1, subclause 1.5). The proposer may be a member body of ISO, a technical committee, subcommittee or project committee, the Technical Management Board or a General Assembly committee, the Secretary-General, a body responsible for managing a certification system operating under the auspices of ISO, or another international organization with national body membership. Guidelines for proposing and justifying a new field of technical activity are given in the ISO/IEC Directives (part 1, Annex C).

The proposal (to be completed by the proposer)

<p>Title of the proposed new committee (The title shall indicate clearly yet concisely the new field of technical activity which the proposal is intended to cover.)</p> <p>Foundry Machinery</p>
<p>Scope statement of the proposed new committee (The scope shall precisely define the limits of the field of activity. Scopes shall not repeat general aims and principles governing the work of the organization but shall indicate the specific area concerned.)</p> <p>Standardization of foundry machinery, including terminology, classification, specifications, test methods and quality requirements of sand preparation equipment, moulding equipment, core making equipment, die-casting equipment (die-casting machine, low pressure casting machine, centrifugal casting machine, gravity casting machine) and casting cleaning & grinding equipment etc.</p>

Proposed initial programme of work (The proposed programme of work shall correspond to and clearly reflect the aims of the standardization activities and shall, therefore, show the relationship between the subject proposed. Each item on the programme of work shall be defined by both the subject aspect(s) to be standardized (for products, for example, the items would be the types of products, characteristics, other requirements, data to be supplied, test methods, etc.). Supplementary justification may be combined with particular items in the programme of work. The proposed programme of work shall also suggest priorities and target dates.

Formulation and revision of international standards in the fields of foundry machinery will be launched covering three levels. At Level A, the new TC will focus on basic standards covering terminology and classification of foundry machinery related products. Level B will cover standards related to methods, including test methods of physical and mechanical properties of foundry machinery. Level C will cover standards on products, including standards of related products of foundry machinery. Level A and B form the basis for formulating foundry machinery standards, while level C is for product applications.

1. Basic standards of foundry machinery

- Terminology on foundry machinery, including terminology on moulding machinery, core making machinery, die-casting machinery and shot blasting machinery.

2. Standards on methods of foundry machinery

- Test methods of noise on foundry machinery
- Test methods of accuracy on foundry machinery
- Test methods of energy consumption on foundry machinery

3. Standards on products of foundry machinery

- Safety requirements of foundry machinery

Formulation and revision of standards will start with basic standards and standards on methods since these forms the foundations for product standards. It is most urgent to formulate standards on products for trade on foundry machinery. The new TC plans to propose three international standards in three years.

Indication(s) of the preferred type or types of deliverable(s) to be produced under the proposal (This may be combined with the "Proposed initial programme of work" if more convenient.)

1. Terminology for foundry machinery and related products
2. Test methods on performance of foundry machinery and related products

A listing of relevant existing documents at the international, regional and national levels. (Any known relevant document (such as standards and regulations) shall be listed, regardless of their source and should be accompanied by an indication of their significance.)

Terminology and definition of foundry machinery:

GB/T 25370-2010 Foundry machinery-Terminology

Test methods of foundry machinery:

GB/T 25371-2010 Foundry machinery-Measurement method of sound pressure level

GB/T 31552-2015 Foundry machinery-Model formulating means

GB/T 31562-2015 Foundry machinery-Determination of cleanliness

EN 1265-1999 Noise test code for foundry machines and equipment

Standards on products of foundry machinery:

GB20905-2007 Safety requirements for foundry machinery

GB20906-2007 Safety requirements for high pressure metal diecasting units

GB/T21269-2007 Cold chamber die casting machines

GB/T23576-2009 Abrasive blasting equipment-General technical requirements

GB 24390-2009 Shot(air)blast equipment-Safety requirements

GB 24391-2009 Low pressure diecasting machine-Safety requirements

GB 25491-2010 Moulding machine-Safety requirements

GB 25492-2010 Shakeout-Safety requirements

GB/T 25715-2010 Sphere nodular cast pipe mold finish machining project

GB/T 25716-2010 Cold chamber die casting machines for magnesium alloys

GB/T 25717-2010 Hot chamber die casting machines for magnesium alloys

GB/T 25711-2010 Foundry machinery-General technical requirements

GB/T 31561-2015 Used green sand reclamation equipment-Technical requirements

GB/T 31551-2015 Sodium silicate-bonded sand reclamation equipment-Technical requirements

GB/T 31555-2015 Manipulator for foundry

GB/T 28687-2012 Numerical control die casting machines

EN 1248-2001 Foundry machinery-Safety requirements for abrasive blasting equipment

EN 710-1998 Safety requirements for foundry moulding and core making machinery and plant and associated equipment

EN 869-2006 Safety of machinery-Safety requirements for pressure metal die-casting units

EN 12883:2000 Founding-Equipment for the production of lost patterns for the lost wax casting process

EN 12890:2000 Founding-Patterns, pattern equipment and core boxes for the production of sand moulds and sand cores

EN 12892:2000 Founding-Equipment for the production of lost patterns for the lost foam casting process

DIN 24482:1992 Horizontal cold chamber die-casting-machines Main dimensions

DIN24900-23:1991 Graphical symbols for use in the engineering and related fields; die casting machines

DIN 24480-1-1974 Die casting machines; classification of machines, terminology

DIN 24480-2-1974 Die casting machines; construction groups, terminology

DIN 24480-3-1974 Die casting machines; parts, terminology

DIN 24480-4-1974 Die casting machines; characteristics, terminology

ANSI B152.2-1982 Permanent mold casting machines (Other than gray iron), safety requirements for the construction, care, and use of

A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. (The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized. If seemingly similar or related work is already in the scope of other committees of the organization or in other organizations, the proposed scope shall distinguish between the proposed work and the other work. The proposer shall indicate whether his or her proposal could be dealt with by widening the scope of an existing committee or by establishing a new committee.)

Currently there is no technical committee of standardization (TC or PC) directly related to foundry machinery in ISO and IEC. The proposed Technical Committee of foundry machinery would be responsible for standardization of foundry machinery, including formulating standards in terminology, classification, specifications, test methods and quality requirements. These standards will provide technical basis to global trade and cooperation and promote technological progress and products upgrading, as well as improve green foundry machinery production and quality.

A listing of relevant countries where the subject of the proposal is important to their national commercial interests.

There are over 30 foundry machinery producer countries and regions, including China, Germany, Japan, USA, Italy, Denmark, Spain, Switzerland, India, Brazil, Russia, Korea, Austria, France, Czech, Hong Kong and Taiwan. Main consumer markets for foundry machinery include China, the European Union, the United States, India, Japan, and Brazil.

A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s). (In order to avoid conflict with, or duplication of efforts of, other bodies, it is important to indicate all points of possible conflict or overlap. The result of any communication with other interested bodies shall also be included.)

ISO/TC 199 is responsible for standardization of basic concepts and general principles for safety of machinery incorporating terminology, methodology, guards and safety devices. Currently, ISO safety standard is divided into three levels, ISO/TC 199 is mainly for standardization of level A and level B; because level A and level B are covering most machinery, and foundry machinery in this proposal is belonging to level C, it's possible to quote standards of level A and level B in new TC. The new TC has no conflict or overlap with ISO/TC 199; we don't formulate standards of level A and level B either.

The new TC has no conflict and overlap with existing ISO and/or IEC TCs.

SAC/TC186 held bilateral exchanges with CEN/TC202 in Shanghai on April 1st, 2015.

Both sides believed that formation of ISO/TC (Foundry machinery) was basic conditions and technical support for international trade and technological exchanges and cooperation.

Both sides reached an agreement on working scope and tasks of new TC.

A simple and concise statement identifying and describing relevant affected stakeholder categories (including small and medium sized enterprises) and how they will each benefit from or be impacted by the proposed deliverable(s).

Stakeholders of foundry machinery refer to manufacturers, buyers, distributors, government agencies, and third-party agencies that will be affected or may be affected by implementation of foundry machinery standards. International standards of foundry machinery will bring the following benefits and impacts to the above stakeholders: buyers will gain access to foundry machinery with reliable quality and security, thus conserving the ecological environment and ensuring rational use of resources; the interests of buyers will also be safeguarded. For manufacturers, international standards will help them to improve their management capacity, as well as stabilize and improve machinery quality. This promotes manufacturers to take a quality-oriented mindset to enhance quality and improve competitiveness. For distributors, international standards will enhance mutual communication and understanding across borders, facilitate trade, provide market access for foundry machinery, and promote free and fair trade. For third-party organizations, it will offer tools of scientific evaluation to establish a standardized evaluation scale to expand the size of the market, resulting in tremendous business value.

An expression of commitment from the proposer to provide the committee secretariat if the proposal succeeds.

China is willing to undertake the work of secretariat of new TC.

Purpose and justification for the proposal. (The purpose and justification for the creation of a new technical committee shall be made clear and the need for standardization in this field shall be justified. Clause C.4.13.3 of Annex C of the ISO/IEC Directives, Part 1 contains a menu of suggestions or ideas for possible documentation to support and purpose and justification of proposals. Proposers should consider these suggestions, but they are not limited to them, nor are they required to comply strictly with them. What is most important is that proposers develop and provide purpose and justification information that is most relevant to their proposals and that makes a substantial business case for the market relevance and the need for their proposals. Thorough, well-developed and robust purpose and justification documentation will lead to more informed consideration of proposals and ultimately their possible success in the ISO IEC system.)

Foundry is the foundation of machine industry, without high-quality castings; there cannot be high-performance machinery and equipment. Along with the economic globalization, development of international trade is increasingly active; Foundry machinery international trade and cooperation have developed rapidly. But with no corresponding international standards, the international trade and technical cooperation of foundry machinery have been influenced already. Mainly in the following areas:

1) Normally, most foundry equipment manufacturers have problems in acceptance standard in business negotiation when they enter the international market. Due to the uneven level of development of each country, there are significant differences in the standard level content, so manufacturers need to translate a large number of other countries' standards or relevant enterprise standards which greatly increase the production costs, and sometimes it will be insurmountable threshold. Disunity standards among different countries create enormous obstacles to international exchange and trade. Lack of international standards has become one of the main obstacles to international trade development and international exchanges.

2) Foundry machinery working environment is generally in a state of high temperature, high pressure and high speed which will bring a great threat to the operators, so we need international standard to guarantee the safety of employees.

3) Foundry machinery consumes lots of resources and energy, discharge large amounts of pollutants and damage both human body and environment. It is necessary to develop relevant international standards to save energy, protect environment, ensure the safety of persons and property, and to maintain sustainable economic development.

These issues have been brought to our attention; we believe that ISO international standards and related work in foundry machinery is very important. We proposed to establish an ISO/TC special for foundry machinery to undertake foundry machinery standardization, including terminology, classification, specifications, test methods and quality requirements.

Due to reliable products and technology of foundry machinery, the proposal of establishing new TC of foundry machinery is very reasonable.

After establishing the new TC, we will focus on developing international standardization on foundry machinery of countries, which manufacture and use foundry machinery. First, we will formulate terminology of foundry machinery that will promote international trade and technical exchange. Second, formulate related test methods according to different products in foundry machinery field. Third, develop international standards on main products according to current situation of foundry industry. These will provide guidance to global enterprises, especially to small and medium enterprises in developing countries, and promote their own value and competitiveness to facilitate international trade.

The main purpose of the new TC is as follows:

- (1) To share the best research results and practical experience in foundry machinery field;
- (2) To increase the foundry machinery products value, effectiveness, and market competitiveness;
- (3) To provide guidance to buyers and other stakeholders;
- (4) To promote international trade.

Signature of the proposer

Li Yubing

Further information to assist with understanding the requirements for the items above can be found in [the Directives, Part 1, Annex C](#).

The secretariat of ISO raised some questions and comments in return mail, we organized relevant experts to analysis these questions and we considered that expect ISO/TC 199-Safety of machinery may be related to the new TC, there's no possibility that other TCs will be related or conflicted with the new TC. Specific instructions are as follows:

1. ISO/TC 5/SC 2 –Cast iron pipes, fittings and their joints

Scope: Standardization of threaded fittings, solder fittings, welding fittings, pipe threads, thread gauges.

— ISO/TC5/SC2 is for standardization of castings; Our proposal is for standardization of foundry machinery, so it has no overlap or conflict with ISO/TC5/SC2.

2. ISO/TC 18 –Zinc and zinc alloys

Scope: Standardization of definitions, classifications, quality, sampling and acceptance tests of zinc and zinc alloys, as well as of zinc alloy castings.

— ISO/TC18 is for standardization of non-ferrous materials; Our proposal is for standardization of foundry machinery, so it has no overlap or conflict with it.

3. ISO/TC 25 –Cast irons and pig irons

Scope: Standardization in the field of all types of cast iron and all types of pig iron.

— ISO/TC25 is for standardization of ferrous metal material; our proposal has no overlap or conflict with it.

4. ISO/TC 94 – Personal safety-Protective clothing and equipment

Scope: Standardization of the quality and performance of clothing and personal equipment designed to safeguard persons against hazards other than those concerned with nuclear radiation

— This TC is for personal safety, the new TC involves safety of foundry machinery, so it has no overlap or conflict with ISO/TC 94.

5. ISO/TC 96 –Cranes

Scope: Standardization in the field of cranes and related equipment which suspend loads by means of a load-handling device.

- Although the classification (ISO 4301-5:1995) of crane include casting crane, but the work scope of new TC doesn't including casting crane.

6. ISO/TC 132 –Ferroalloys

Scope: Standardization in the field of ferroalloys and other alloying additives used in iron- and steelmaking

- ISO/TC 132 involves ferrous metal material and its additives. Our proposal is for standardization of foundry machinery, so it has no overlap or conflict with it.

7. ISO/TC 184/SC 4 –Industrial data

Scope: Standardization of industrial data during life cycle.

- This proposal only focuses on standardization of foundry machinery and doesn't involve standardization of industrial data.

8. ISO/TC 199 –Safety of machinery

Scope: Standardization of basic concepts and general principles for safety of machinery incorporating terminology, methodology, guards and safety devices.

- Currently, ISO safety standard is divided into three levels, ISO/TC 199 is mainly for standardization of level A and level B; because level A and level B are covering most machinery, and foundry machinery in this proposal is belonging to level C, it's possible to quote standards of level A and level B in new TC. The new TC has no conflict or overlap with ISO/TC199, we don't formulate standards of level A and level B either.

9. ISO/TC 195 –Building construction machinery and equipment

Scope: Standardization in the field of machines and equipment used on construction sites

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- This TC involves construction machines and equipment, our proposal is for standardization of foundry machinery, so it has no overlap or conflict with ISO/TC 195.