International Organization for Standardization
Organisation internationale de normalisation
Международная организация по стандартизации

FORM 1:
PROPOSAL FOR A NEW FIELD OF TECHNICAL ACTIVITY

Circulation date 30.07.2019 **Closing date for voting** 22.10.2019	**Reference number:** Enter Number (to be given by ISO Central Secretariat)
Proposer DIN	**ISO/TS/P** 282

A proposal for a new field of technical activity shall be submitted to the ISO Central Secretariat, which will assign it a reference number and process the proposal in accordance with the ISO/IEC Directives Part 1, Clause 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.

Proposal (to be completed by the proposer)

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).

Machinery intended for use with foodstuffs

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).

Standardization of individual machine types and their accessories used in the foodstuffs supply chain, as well as processing systems and complete production lines consisting of these machines.

All these machines process various raw materials and ingredients into intermediate food products and/or ready-to-eat food.

The standards to be created in this TC deal with specific and typical aspects of machines used in the food industry. These aspects include – but are not limited to – health and safety at work for operators (safety of food machinery) and consumer health and safety (food safety). Standards of this TC also focus on hygienic design principles.

Excluded are the fields covered by ISO/TC 23 (Tractors and machinery for agriculture and forestry), ISO/TC 283 (Occupational health and safety management) and ISO/TC 293 (Feed machinery).

☒ **The proposer has checked whether the proposed scope of the new committee overlaps with the scope of any existing ISO committee**

☐ **If an overlap or the potential for overlap is identified, the affected committee has been informed and consultation has taken place between proposer and committee on**

i. **modification/restriction of the scope of the proposal to eliminate the overlap,**
ii. **potential modification/restriction of the scope of the existing committee to eliminate the overlap.**

☐ **If agreement with the existing committee has not been reached, arguments are presented in this proposal (under question 7) as to why it should be approved.**

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 and 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.)

There are many different sectors interested in the standardization of machinery intended for use with foodstuffs.

The work of the new ISO/TC shall focus on, but is not limited to the following machinery sectors:

- bakery machinery and equipment,
- meat processing machinery and equipment,
- catering equipment,
- centrifuges for processing edible oil and fats,
- ice-cream machinery,
- pasta and cereals processing machines,
- bulk milk coolers,
- fish processing machinery,
- machinery and equipment for slaughterhouses.
  NOTE This subject is not relevant for the scope of ISO/TC 23 “Tractors and machinery for agriculture and forestry”

Each of the foodstuff machinery sectors mentioned above covers several machine types. The deliverables of this proposed TC may be

- generic for all machine types in its scope when the standard addresses overall aspects, e.g. hygienic design, or
- generic for a group of machine types (e.g. bread slicers) or
- specific for a single machine type (e.g. mincers).

In addition, it has become increasingly important to take complete systems into consideration rather than single machines.

<u>Suggested priorities:</u>

The TC-activities will first focus on the standardization of food processing machinery that is common in the bakery and meat industry worldwide.

Intended time frames:

Upon acceptance of the new TC, subcommittees will be set up to develop standards for the above-listed sectors. The development of a standard in this TC should typically be accomplished within 3 years.

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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).

The primary deliverables of this proposal will be international standards (ISO), but also other ISO-deliverables may be possible.

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.)

The relevant existing documents on the international level are

- ISO 12100:2010 on general machinery safety,
- ISO 14159:2002 concerning hygiene aspects,
- various ISO-standards on more specific machinery safety aspects such as ISO 13850:2015, ISO 13857:2008, ISO 13849-1:2015 etc.,
- ISO 45001:2018 Occupational health and safety management systems -- Requirements with guidance for use.

As far as safety and hygiene aspects for food machinery are concerned, these technologies are widely standardized at European level in CEN/TC 153. A list of the corresponding standards is attached to this proposal and can also be viewed via internet under

https://standards.cen.eu/dyn/www/f?p=204:7:0::::FSP_ORG_ID:6135&cs=195521E3187AB1810FE73D6DD07D7DA2D

Furthermore, there is a vast number of standards, codes and regulations on national level, such as:

- **North America:**
  Safety- and hygiene-related documents based on FDA (e.g. CFR), NSF-standards, 3A sanitary standards
- **China:**
  SAC-standards
- **Eurasian Economic Union:**
  http://www.eurasiancommission.org/ru/act/texnreg/deptexreg/standart/Documents/%d0%a0%d0%9a_1905201555.pdf
- **National standards in various European countries:**
  Available e.g. at DIN/AFNOR/BSI/UNI
- Besides, guidelines of internationally operating organizations may also be considered, e.g. **EHEDG (European Hygienic Engineering & Design Group)**.

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.)

There will be no direct work scope overlap or conflict between this proposal and other technical committees or sub-committees within ISO and IEC.

There exist, however, other ISO/TCs that do have some elements in common with this newly proposed TC. In particular, these are:

I**SO/TC 199 – Safety of machinery**

ISO/TC 199 is the ISO-committee that addresses safety of machinery in general. Its standard ISO 14159 deals with hygiene aspects for machinery in the food, pharma and cosmetics sector in a general manner. Since hygienic design experts and hygiene know-how are most common in the food machinery sector, the experts in the new TC would happily liaise with the hygiene experts in ISO/TC 199 in further developing ISO 14159.

ISO/TC 293 – Feed machinery

A food processing machine is intended to come into contact with products intended for consumption by people. Food products can be solid, liquid (e.g. fruit juice, wine, milk) or even in powder form (e.g. powdered milk).

Machines intended for use with foodstuffs are produced by a wide variety of companies. Many of these companies are also suppliers for the feed processing sector.

Generally, the technologies for feed machinery derive from those for food. Hence, at a first glance, feed machinery appears to be similar to food machinery. A closer look, however, reveals that food machinery – and the corresponding safety and hygiene requirements – differ considerably from those of feed machines:

- Feed products are exclusively used for agricultural livestock breeding. The focus of the standardization activities around feed machines therefore primarily lies on performance aspects like e.g. dosing precision or composition of feed from different ingredients, including the addition of pharmaceutical products.
- Standardization of food machinery focuses on aspects that are vital for the safe manufacture of products that are intended for human consumption. This encompasses the safety (safe use) of the food machines as well as hygienic aspects – both for the user of the machine as well as for the consumer who purchases the final food products.
- Most food machines are used exclusively in the food sector. Typical examples are bakery machinery, machines for dairy products, machines for alcoholic and non-alcoholic beverages, smokehouses, pasta machinery, machines for confectionery products and various types of meat processing machines (for example slicers).
- Certain machine types are primarily intended and used for the processing of food products (e.g. vegetables, meat, cereals) and are clearly food machines, but may also be used in the production of ingredients for feed products. This does not interfere with the scope of ISO/TC 293.

There are no areas of conflict between the scope of the proposed ISO/TC on machinery for use with foodstuffs and the scope of the existing ISO/TC 293 on feed machinery. Because of certain interrelations between both machine categories a close liaison with ISO/TC 293 is envisaged in order to use possible synergies and to avoid potential conflicts.

Of course, aspects like hygiene are of importance in several ISO/TCs, but they are dealt with on different levels. In cases where there is an overlap on this aspect, we are committed to collaborate closely with the committee experts from these other TCs.

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

- European Union (EU-28)
- China
- USA / Canada
- Australia
- Eurasian Economic Union (Russia / Kazakhstan / Belarus / Kyrgyzstan / Armenia)

Moreover, the standards in the scope of this TC would be globally relevant. Machinery safety should be harmonized wherever possible.

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 34 for Food products
- ISO/TC 34/SC 17 for Management systems for food safety
- ISO/TC 199 for hygiene and safety of machinery
- ISO/TC 283 for Occupational health and safety management
- ISO/TC 293 for feed machinery (hygiene aspects)
- ISO/TC 313 for packaging machinery (in cases of similar machines)
- IEC/TC 61 on household machines and similar electrical appliances

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).

The parties involved in the work of the proposed TC are:

- machinery manufacturers,
- machine suppliers,
- food producers,
- public authorities,
- health and safety organizations,
- testing and certification bodies / technical service organizations,
- research organizations.

Relevant stakeholders also include customers, employees, trade unions, consultants, and consumers.

Food industry is one of the biggest consumer-oriented markets. It is highly diverse due to the wide variety of food products.

Over the years food machinery, highly automated appliances and system components have become more complex. Machinery standardization therefore needs an appropriate structure to comply with these technical developments. So far, there is no equivalent standardization program in ISO for machinery intended for use with foodstuffs.

The proposed ISO/TC supports all above-mentioned stakeholders by providing deliverables that address essential safety, health and hygienic design requirements for machinery intended for use with foodstuffs. The resulting deliverables (e.g. standards) support the planning as well as the construction of food machines, ensure and improve their safety and reliability and thus have a significant effect on purchasing decisions of food producers. Consequently, they also help to ensure food safety.

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

DIN will bear all the responsibilities of the proposed Technical Committee secretariat:
Machinery intended for use with foodstuffs

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.)

Purpose:
The purpose of this proposed ISO/TC is to elaborate international standards addressing safety and hygiene aspects for machinery intended for the use with foodstuffs.

Objectives:

The objectives of these standards are the creation of

– a common international level of safety requirements according to occupational health and safety (OHS) and

– comprehensive requirements on the needed hygiene and hygienic design

for machinery intended for use with foodstuffs.

Needs and justification:

Feeding a growing world population is an enormous challenge for both primary and food producers. Food is derived from animals or plants, and the continuous satisfaction of the demand for raw materials already represents an enormous task for primary production. Products from agriculture, fisheries and aquaculture are processed as required and are used for food production.

Industrial processing is indispensable to meet society's needs for food in sufficient quantities and of the necessary quality to meet the ever-increasing demands of the growing population. In the long term, this is only possible with the use of machines and their technologies. Machinery intended for the use with foodstuffs is therefore part of a modern food supply system. For these reasons, the number of such machines, as well as the number of food producers is continuously increasing.

In addition to quantity and quality, the increase of shelf life of the food products is also a decisive factor in this system, which can be achieved by hygienic machine processing. The production of food with long shelf lives allows longer transport routes to consumers, from local to global.

Today our food supply system is very complex. However, not in all regions of the world foodstuffs are safe, tasty, nutritious, plentiful, varied, convenient, inexpensive and easily accessible. Scientific and technological advances in machinery intended for the use with foodstuffs must therefore be accelerated. Machines must be used in both developed and developing countries to feed a growing world population. They are therefore producing not only for the local and national, but also for the international market.

Machinery intended for the use with foodstuffs are becoming increasingly complex, and their system components and processes to be executed are becoming increasingly comprehensive. Even ethnic or religious concerns of the food target groups can play a role in the technical design and construction of the machine. Due to the diversity of the product recipes and processing methods, there is a very wide range of machines designed for the use with foodstuffs. Food producers and machine manufacturers are in close contact with each other and develop tailor-made solutions. Frequently, also food producers themselves develop machines that are individually tailored to their products and processes. In all cases, the aim is the most efficient use of food raw materials and energy to reduce food losses and save resources.

Food producers also demand machines and systems that offer more and more flexibility in order to be able to react quickly to fluctuations in the supply of raw materials or shifts in market requirements. These machines usually must integrate and execute several different process steps. All this has led and in the future will lead to the development of more advanced and at the same time increasingly complex machines.

Despite all efforts, the degree of automation of various processes is not complete, as it depends on many factors due to the individuality of the raw material. Human resources remain indispensable. People still have to operate machines and/or work hand in hand with them. They even have to face new tasks and challenges which may be connected with new hazards.

Machines intended for use with foodstuffs are characterized by additional specific hazards and risks in relation to other machines. Furthermore, complex machines may create new safety and health hazards from which operators have to be protected. The same applies to hygienic design requirements for machinery intended for the use with foodstuffs. A lack in the hygienic design of machinery can be seen as a hazard and may lead to risks for operators.

<u>Benefits:</u>

Standards for food processing machinery efficiently help to implement a commonly accepted safety level which already serves as a basis during the planning and construction phase of the machines. In addition, compliance with hygienic requirements for machines also has a direct influence on the shelf life of food and therefore also consumer safety.

For the food machinery sector there is obviously a lack of international standards describing the requirements for OHS and hygiene of machinery intended for the use with foodstuffs. The development of international standards for foodstuff machines in this proposed new ISO/TC is therefore urgently needed and will facilitate the safety at work in the food industry as well as the food safety for the consumer.

The work of this proposed ISO/TC will be

- of benefit for manufacturers and operators of such machinery and any associated equipment. It will also be of considerable help for occupational health and safety authorities and institutions since the standards will serve as benchmarks for setting common – globally acknowledged – safety levels;
- help to ensure that safe food is produced with the machinery concerned. This will help to ensure that food does not cause health risks to consumers and that food losses are minimized.

Signature of the proposer DIN

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