INTERNATIONAL STANDARD

ISO 23472-2

First edition
2020-11

Foundry machinery — Vocabulary —

Part 2: Molding and coremaking machines and other equipment related to non-permanent mold casting process

Machines de fonderie — Terminologie —

Partie 2: Machines de moulage et de noyautage et autres équipements liés au procédé de coulée en moule non permanent

Reference number
ISO 23472-2:2020(E)

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Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 306, *Foundry machinery*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Documentation gives rise to numerous international exchanges of both intellectual and material nature. These exchanges often become difficult, either because of the great variety of terms used in various fields or languages to express the same concept or because of the absence or imprecision of useful concepts.

To avoid misunderstandings due to this situation and to facilitate such exchanges, it is advisable to select terms to be used in various languages or in various countries to express the same concept, and to establish definitions providing satisfactory equivalents for the various terms in different languages.

The objects involved in the ISO 23472 series are foundry machines used in foundry production.

The purpose of the ISO 23472 series is to provide definitions in English that are rigorous, uncomplicated and which can be understood by all concerned. The scope of each concept defined has been chosen to provide a definition that is suitable for general application within foundry machinery, which includes machines and equipment adapted in each stage of the processes within different casting processes.

As a metal thermoforming method that fills molten metal into the mold to produce machine parts or rough parts after solidification, casting has a long history and various processes and its technology remains constantly developing and changing. According to the difference between the mold used, or different ways of molten metal filling or solidification, casting processes are usually divided into sand casting, permanent casting and other casting processes. According to different casting processes and different stages of production, casting equipment covered by foundry machinery is divided into the following major categories:

— molding and coremaking machines and other equipment related to non-permanent mold casting process;

— die casting machines and other equipment related to permanent mold casting process;

— abrasive blasting machines and other equipment related to cleaning and finishing for casting;

— cupola furnaces and pouring devices and ladles.

This document only involves terms and definitions of molding and coremaking machines and other equipment related to non-permanent mold casting process. This includes basic concepts specifically concerning structural characteristics and functions, important mechanisms and parts, main technological processes and parameters of various molding machines, coremaking machines, knock-out equipment, equipment for molding sand preparation and sand reclamation, equipment for lost foam casting and investment casting, and other related equipment (see Figure 1).

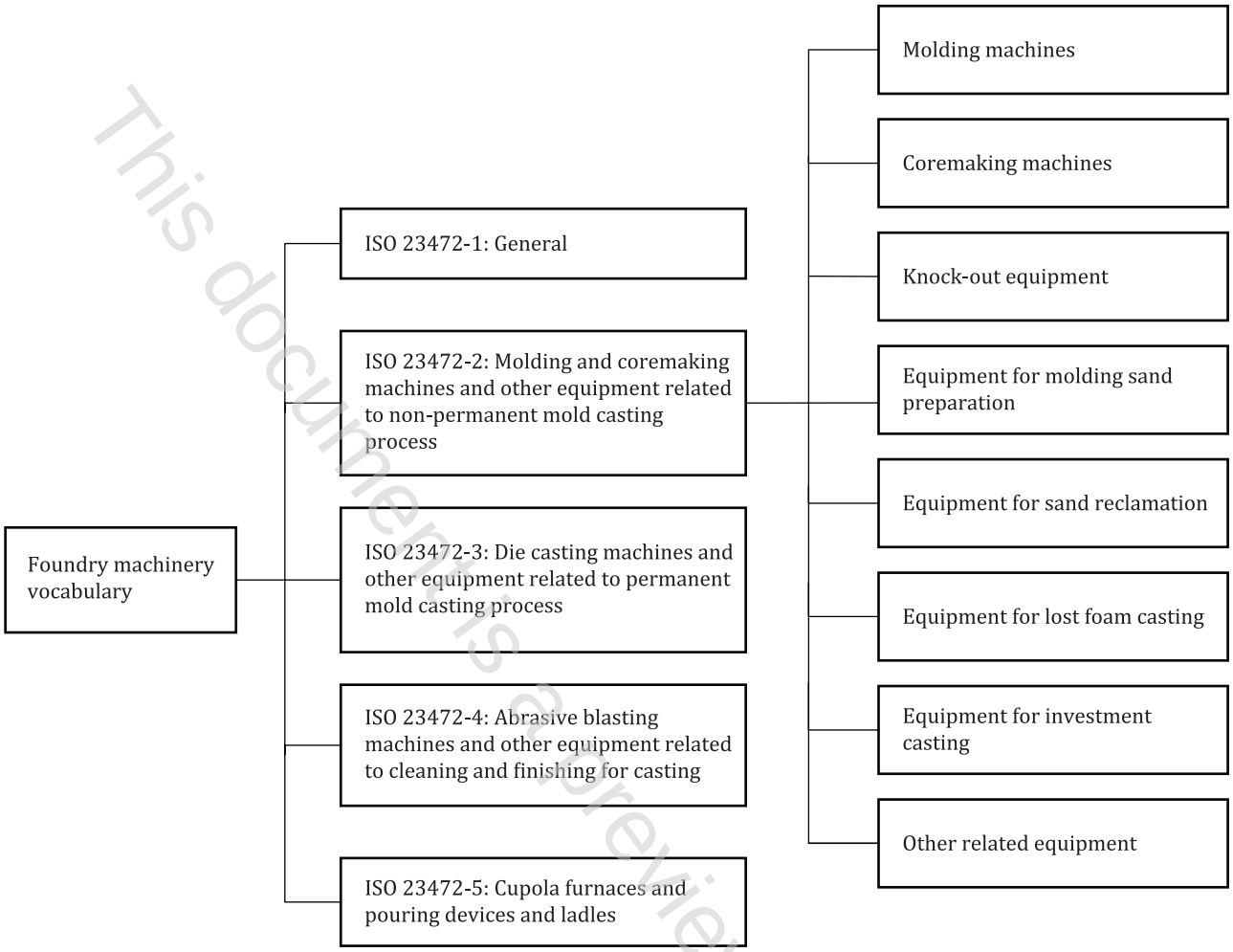

Figure 1 — Structure of vocabulary on molding and coremaking machines, and other equipment related to non-permanent mold casting process

Foundry machinery — Vocabulary —

Part 2: Molding and coremaking machines and other equipment related to non-permanent mold casting process

1 Scope

This document defines a set of terms and definitions of molding and coremaking machines and other equipment related to non-permanent mold casting process in foundry machinery.

It applies to standard development in foundry machinery field, technical documentation, related scientific and technical publication, etc.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
3-D vibrating table
vibrating table (3.199) which can ram in X, Y and Z direction

3.2
A+B liquid control system
automatic control system for two different hardeners A and B, which can adjust each consumption of A and B in real time and control each addition by adjusting the flowrate of the pump with frequency converter to make hardening time proper and strength of sand mold stable

3.3
abnormal casting separator
device for separating waste or trial-produced castings before shakeout

3.4
air wax injection machine
machine used for injecting the wax pattern by compressed air

3.5
air-flow-squeeze molding
molding method which applies air flow for pre-compaction and uses pressure head for compaction for molding sand