INTERNATIONAL STANDARD

ISO

13399-1

First edition
2006-02-15
AMENDMENT 1
2010-05-01

Cutting tool data representation and exchange —

Part 1:
Overview, fundamental principles and general information model

AMENDMENT 1

Représentation et échange des données relatives aux outils coupants —

Partie 1: Vue d'ensemble, principes fondamentaux et modèle général d'informations

AMENDEMENT 1

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ISO 13399-1:2006/Amd 1:2010
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00111ed8cd0a/iso-13399-1-2006-amd-1-2010

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Amendment 1 to ISO 13399-1:2006 was prepared by Technical Committee ISO/TC 29, *Small tools.*

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AMENDMENT 1

Page 6, 5.1.2

Add the following application object as the first indent:

— fitting_bounds

Page 14, 5.2.11

Replace the EXPRESS specification with the following:

EXPRESS specification:

TYPE limitation_definition_select = SELECT

(limits_and_fits,

plus_minus_bounds,

fitting_bounds);

END_TYPE;

Page 21, 5.2.26

Add the following definition below the title.

A coating is an applied material layer or layers deposited on a substrate.

Add the following subclauses.

5.2.26.1 coating_name

A coating_name is a name by which the coating is referred to.

5.2.26.2 coating_process

A coating_process is a process by which the coating has been applied.

Page 42, 5.2.58

Replace this subclause with the following:

5.2.58   grade

A grade is a label for the final composition of the cutting item material substrate or substrate and coating.

5.2.58.1   coating

The coating specifies the coating of the grade.

5.2.58.2   cutting_condition

The cutting_condition specifies the relevant cutting conditions for the grade.

5.2.58.3   identifier

This is an identifier for the grade.

5.2.58.4   standard_designation

A standard_designation is a designation for the grade based on a standard.

5.2.58.5   substrate

The substrate specifies the substrate of the grade.

5.2.58.6   workpiece_material

The workpiece_material specifies workpiece materials that are suitable for machines using the grade.

Page 43, 5.2.60

Replace the first paragraph with the following:

5.2.60   item

An item is either a single object or a unit in a group of objects. It collects the information that is common to all versions of the object. An item shall always be classified as 'cutting item', 'tool item', 'adaptive item', or 'assembly item' using a specific_item_classification. Additionally, if an assembly_definition exists for at least one version of the item, the item shall be classified as being an 'assembly' using specific_item_classification.

Page 44, 5.2.61

Replace this subclause with the following:

5.2.61   item_characteristic_association

An item_characteristic_association associates a characteristic to an item_definition.

```
ENTITY item_characteristic_association;

    associated_characteristic  :   item_characteristic_select;

    associated_item            :   item_definition;

    relation_type              :   OPTIONAL STRING;

END_ENTITY;
```

Add the following subclause.

5.2.61.3   relation_type

The relation_type specifies the meaning of the relationship. Where applicable, the following values shall be used:

— 'has characteristic': The relationship indicates that the item possesses the related characteristic.

— 'is related to': The relationship indicates that the item is related to the characteristic.

— 'used for': The relationship indicates that the item may be used in the context of the related characteristic.

Page 44, 5.2.62

Replace this subclause with the following:

5.2.62 item_definition

An item_definition is a view of an item_version. This view is relevant for the requirements of one or more application domains and collects product data of the item_version.

NOTE   The selection of data describing an item_version can be different for assembly purposes, shipping purposes or analysis purposes.

Each item_definition may be a mating_definition, an assembly_definition, or a physical_item_definition.

<u>EXPRESS specification:</u>

```
ENTITY item_definition
    SUPERTYPE OF (ONEOF(assembly_definition, mating_definition, physical_item_definition));

        associated_item_version   :       item_version;

        contexts                  :       OPTIONAL SET OF application_context;

        id                        :       STRING;

        name                      :       OPTIONAL string_select;

    END_ENTITY;
```

Page 44, 5.2.62.1

Replace this subclause with the following:

5.2.62.1   contexts

The contexts specifies the set of application_context objects in which this view of the item_version is relevant.

Page 44, delete 5.2.62.4

Page 50, 5.2.70

Add the following definition below the title.

A location is a place or position where a product or resource can exist.

Add the following subclauses.

5.2.70.1 location_id

A location_id is an identifier of the location.

5.2.70.2 location_name

A location_name is the word or group of words by which the location is known.

5.2.70.3 location_type

The location_type specifies the type of location. Where applicable, the following values shall be used:

— 'warehouse': The location is a warehouse.

— 'turret': The location is a tool turret.

— 'room': The location is a room.

— 'machine': The location is a machine tool.

Page 57, 5.2.84

Add the following definition below the title.

A physical_item is a type of item that identifies an individual artefact that has been made. It is a collector of data common to all revisions of the physical_item.

Page 57, 5.2.85

Add the following definition below the title.

A physical_item_location_association is a relationship that allows a physical_item_definition to have a location.

Add the following subclauses.

5.2.85.1 located_item

The located_item attribute specifies the physical_item that is being located.

5.2.85.2 location

The location attribute specifies the location object.

Page 57, 5.2.86

Add the following definition below the title.

A physical_item_definition is a type of item_definition that defines a characterization view of a version of a physical_item.

NOTE   The physical_item_definition entity type supports the representation of different views of a physical_item for different purposes. Multiple views of the same physical_item are represented by different instances of physical_item_definition for the same physical_item_version.

Page 57, 5.2.87

Add the following definition below the title.

A physical_item_state_association is a relationship that allows a physical_item_definition to have state or to be in a state.

Add the following subclauses.

5.2.87.1   associated_physical_item

The associated_physical_item specifies the physical_item_definition which has a state.

5.2.87.2   associated_state

The associated_state specifies the state which is being assigned.

5.2.87.3   role

The role specifies the role of the physical_item_state_association. Where applicable, the following values shall be used:

—   'observed': The associated state is an actual observed state.

—   'predicted': The associated state is a predicted state, it may or may not be true.

Page 57, 5.2.88

Add the following definition below the title.

A physical_item_structure_association creates a parent child relationship between physical_item_definitions.

NOTE   The relationship relates physical_items at the physical_item_definition level since a single physical_item (a single solid body which you can touch) can have multiple functions with their own assembly of components.

EXAMPLE   A multi-function tool which has three different functions on the same tool body, each function having its own insert and clamping system.

Add the following subclauses.

5.2.88.1   related

The related attribute specifies the child of the relationship.

5.2.88.2   relating

The relating attribute specifies the parent of the relationship.

Page 58, 5.2.89

Add the following definition below the title.

A physical_item_version is a type of item_version that identifies a revision of an individual artefact that has been made. An item whose properties can only be known by observation, or by derivation from observations.