INTERNATIONAL STANDARD

ISO 17599

First edition
2015-01-15

Technical product documentation (TPD) — General requirements of digital mock-up for mechanical products

Documentation technique de produits (TPD) — Exigences générales de Digital mock-up pour les produits mécaniques

Reference number
ISO 17599:2015(E)

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Published in Switzerland

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Foreword

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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).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/TC 10, *Technical product documentation*, Subcommittee SC 6, *Mechanical engineering documentation*.

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Technical product documentation (TPD) — General requirements of digital mock-up for mechanical products

1 Scope

This International Standard specifies the requirements for the classification, composition, modelling, review, application, and management of digital mock-up.

This International Standard for mechanical products is applicable to the building, management, review, and application of digital mock-up.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 10007:2003, *Quality management systems — Guidelines for configuration management*

ISO 11442, *Technical product documentation — Document management*

ISO 16792:2006, *Technical product documentation — Digital product definition data practices*

3 Terms and definitions

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

3.1
digital mock-up (DMU)
digital specification given to a complete mechanical product or sub-system with an independent function, not only of the geometric properties, but also of its function and/or performance in a particular field

Note 1 to entry: The digital mock-up of the product is built at a design stage and is applicable to the whole life cycle of the product, including design, manufacture, marketing, and aftermarket. The digital mock-up could realize interference check, motion analysis, simulation of performance and manufacturing, technical training, advertising, maintenance planning, etc.

3.2
complete digital mock-up
digital specification given to all the information of a complete mechanical product or its systems

Note 1 to entry: The complete description pertains to mechanical components, system devices, function components, accessories, etc.

3.3
sub-system digital mock-up
digital specification of all the information of sub-systems based on the different functional divisions of mechanical products

EXAMPLE DMU of power, transmission, and control systems

3.4
scheme digital mock-up
part of the complete DMU, which includes the digital specification of product plan design

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