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**NATIONAL STANDARD OF THE
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GB/T 42782-2023

**Digital collaborative engineering - Collaborative design
requirements**

数字化协同工程 协同设计要求

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Foreword

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1 Scope

GB/T 42782-2023 sets the collaborative design requirements for digital engineering. Large engineering projects are designed by many disciplines in several organisations working on the same model at the same time, and the failures are not technical: they are two people editing the same thing, a downstream discipline working from a superseded revision, and nobody being able to say who approved what. The standard classifies the kinds of collaboration - across the design phases, between personnel roles, between disciplines, across hierarchical levels and across domains - then sets the general requirements on the collaborative environment, on data collaboration and on process collaboration, and the collaboration requirements specific to each design stage. It took effect on 1 September 2023.

This document specifies the classification and general requirements of collaborative design in digital collaborative engineering of mechanical products, as well as requirements for different design stages and different Detailed requirements for personnel roles, different professions, different levels, and different domains for collaborative design: This document is applicable to the application of digital collaborative design of mechanical products:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to this document: GB/T 24734:

1 Technical Product Documentation Digital Product Definition Data General Rules Part 1: Terms and Definitions

3 Terms and Definitions

The following terms and definitions defined in GB/T 24734:1 apply to this document: 3:1

collaborative design collaborative design In order to achieve the same design goal, two or more design subjects apply the same or different design tools in the same One or different domains, through the agreed means of information interaction and coordination mechanism, apply a unified process and task management mechanism, respectively implement the same Or different design tasks, share design data and design status, and finally achieve the design method of the design goal together: 3:2 collaborative design (3:1) performed on two or more domains (network segments, servers or databases): 3:3 model maturity modelmaturity In the process of collaborative design (3:1), the quantification used to reflect the degree of perfection of the technical status of the 3D model from the initial design to the final controlled release index:

4 Abbreviations

The following abbreviations apply to this document: BOM: Bill of Materials (BilofMaterial)