

PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD



**Smart manufacturing service platform – Service-oriented integration
requirements of the manufacturing resource/capability**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SMART MANUFACTURING SERVICE PLATFORM – SERVICE-ORIENTED INTEGRATION REQUIREMENTS OF THE MANUFACTURING RESOURCE/CAPABILITY

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The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document

Draft PAS	Report on voting
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SMART MANUFACTURING SERVICE PLATFORM – SERVICE-ORIENTED INTEGRATION REQUIREMENTS OF THE MANUFACTURING RESOURCE/CAPABILITY

1 Scope

This PAS provides the requirements of all relevant manufacturing resources integrated to the cloud manufacturing service platform, including integration of hard manufacturing resources, soft manufacturing resources and manufacturing capabilities.

This document is used for the integration of the relevant resources to the smart manufacturing service platform.

2 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:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

2.1

soft manufacturing resource

manufacturing resources that are based on software, data, models, knowledge

2.2

hard manufacturing resource

manufacturing equipment, computing equipment, materials, etc. used in a product life cycle

2.3

manufacturing capability

ability to complete various activities during the product life cycle, featured by the organic combination of three main elements, human labour, management and technology

3 General requirements

The following requirements should be met:

- a) Resource/capability integration to the smart manufacturing platform is generally divided into hard manufacturing resource integration, soft manufacturing resource integration and manufacturing capability integration.
- b) Status data of soft/hard manufacturing resource and capability should be extracted, and integrated to smart manufacturing platform through a wired or wireless network.
- c) Physical manufacturing resource/capability should be transformed to logical ones. Logical manufacturing resource/capability should be defined by unified description, which forms description document of virtual manufacturing resource/capability.
- d) Virtual manufacturing resource/capability should be integrated to the smart manufacturing platform as a cloud service through a unified description of services and packaging method.