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Tyre intelligent manufacturing - Data dictionary

轮胎智能制造 数据字典

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

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1 Scope

GB/T 45018-2024 is the data dictionary for intelligent tyre manufacturing, and at 74,000 words it is the largest document in the Chinese tyre manufacturing series. A data dictionary is the unglamorous thing that makes an integration project finish: it fixes the name, the definition, the data type, the unit, the permitted values and the identifier of every item of data that moves between the mixing, calendaring, extrusion, building, curing and inspection systems of a tyre plant, and between those systems and the MES and ERP above them. Without it every interface is negotiated twice, once for the meaning and once for the format. The document defines the data elements grouped by process stage and by object, the material, the semi-finished component, the green tyre, the cured tyre, the mould, the machine, the recipe, the batch and the quality record, together with the classification and coding scheme, the rules for extending the dictionary and the mapping to the network architecture of GB/T 45132. For a tyre maker, an automation supplier or an integrator in China, this is the vocabulary the systems are built on.

This document specifies the structure, external entities, data flows, data items, data structures, data storage and data Data processing logic. This document is applicable to the construction, updating and maintenance of databases for each process of the tire intelligent manufacturing process.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 6326 Tire Terminology

GB/T 18391.1 Information Technology Metadata Registration System (MDR) Part

3 Terms and definitions

The terms and definitions defined in GB/T 6326, GB/T 18391.1, GB/T 36587 and the following apply to this document.

3.1 external entity People or things outside the system that are related to the system and describe the external source and destination of data.

3.2 data flow It reflects the data flowing in the system, exhibits the characteristics of dynamic data, and is a data sequence that is read once in a specified order.

3.3 data storage Data is recorded in a certain format inside the computer or on an external storage medium, showing the characteristics of static data and reflecting the static state of the system. data.

3.4 Data structure A collection of data elements that have one or more specific relationships with each other.

4 Abbreviations

The following abbreviations apply to this document. DAQ. Data Acquisition DB. Dynamic Balance