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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 30425-2025

Replacing GB/T 30425-2013

Water cooling equipment for converter valves for high voltage direct current (HVDC) power transmission

高压直流输电换流阀水冷却设备

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Table of Contents

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting is required.

This document replaces GB/T 30425-2013 "Water Cooling Equipment for High Voltage Direct Current Transmission Converter Valves". Compared with GB/T 30425-2013, In addition to structural adjustments and editorial changes, the main technical changes are as follows.

-- Added the terms "(HVDC converter valve) water cooling equipment", "rated cooling capacity", "rated cooling power", "rated flow Quantity" (see 3.1, 3.5, 3.6);

-- The terms "indirect cooling", "forced circulation", "forced cooling", "heat transfer coefficient" and "logarithmic mean temperature difference" have been deleted (see the 2013 edition 3.3, 3.4, 3.8, 3.9);

--The definitions of the terms "internal cooling water" and "external cooling water" have been changed (see 3.7, 3.8, 3.6, 3.7 of the 2013 edition);

--Changed the product specification range (see 4.1, 4.1 of the 2013 edition);

--Changed the rules for compiling water cooling equipment models (see 4.2, 4.2 of the 2013 edition);

--Changed the outdoor environmental conditions (see 5.3, 5.3 of the 2013 edition);

--Changed the requirements for external cooling water (see 5.4, 5.4 of the 2013 edition);

--Changed the requirements for power supply (see 5.5.1, 5.5.1 of the 2013 edition);

--Changed the requirements for control power supply (see 5.5.2, 5.5.2 of the 2013 edition);

--Deleted "other requirements" (see 5.5.3 of the 2013 edition);

--Changed the flow requirements of internal cooling water (see 6.1.3, 6.1.3 of the 2013 edition);

--Changed the general requirements for configuration and function (see 6.2.1, 6.2.1 of the

2013 edition);

-- Deleted the requirements for electric motors (see 6.2.2 of the 2013 edition);

-- Deleted the requirements for pumps and main circulation pump configuration, and added requirements for main circulation pumps and spray pumps (see 6.2.2, 6.2.3, 2013 Version 6.2.3, 6.2.7);

-- Deleted the requirements for cooling fans (see 6.2.4 of the 2013 edition);

--Deleted key equipment configuration and merged it into general rules (see 6.2.1, 6.2.1 and 6.2.5 of the 2013 edition);

--Change "buffer configuration" to "buffer voltage stabilizing device" (see 6.2.4, 6.2.6 of the 2013 edition);

--Changed the requirements for heat exchangers and changed the heat transfer performance requirements (see 6.2.7, 6.2.10 and 6.3 of the 2013 edition);

-- Changed the requirements for monitoring instruments (see 6.2.8, 6.2.11 of the 2013 edition);

--Changed the general requirements for control and protection systems and the requirements for redundant configuration (see 6.2.12.1, 6.2.12.2, 2013 edition) 6.2.15.1, 6.2.15.2);

--Changed the requirements for power supply control (see 6.2.12.3, 6.2.15.3 of the 2013 edition);

-- Changed the requirements for standby switching (see 6.2.12.4, 6.2.15.4 of the 2013 edition);

-- Changed the temperature control requirements (see 6.2.12.5, 6.2.15.5 of the 2013 edition);

--Changed the monitoring requirements for control systems (see 6.2.12.6, 6.2.15.6 of the 2013 edition);

-- Changed the requirements for electrical control cabinets (see 6.2.12.7, 6.2.15.7 of the 2013 edition);

--Change "external cooling water hardness monitoring" to "external cooling water quality monitoring" (see 6.2.12.10, 6.2.15.10 of the 2013 edition);

-- Changed the requirements for alarm signals (see 6.2.12.12, 6.2.15.12 of the 2013 edition);

-- Changed the requirements for tripping signals (see 6.2.12.13, 6.2.15.13 of the 2013 edition);

--Added "Interface Requirements" related content (see 6.2.12.14);

-- Changed the requirements for appearance (see 6.3, 6.4 of the 2013 edition);

--Changed the relevant requirements for insulation strength (see 6.4, 6.5 of the 2013 edition);

--Changed the requirements for grounding resistance (see 6.5, 6.6 of the 2013 edition);

--Changed the noise related requirements (see 6.6, 6.7 of the 2013 edition);

-- Changed the relevant requirements for materials (see 6.8.1, 7.1 of the 2013 edition);

--Added "non-destructive testing" related content (see 6.8.2.2);

-- Changed the relevant requirements for installation (see 6.8.2.3, 7.2.2 of the 2013 edition);

-- The requirement that factory tests must include heat transfer performance tests has been deleted (see 8.1 of the 2013 edition);

-- The requirement that type tests must include communication and interface tests has been deleted (see 8.1 of the 2013 edition);

--Changed the insulation test requirements (see 7.2.2, 8.2.2 of the 2013 edition);

--The requirements for air pressure test have been changed (see 7.2.4.2, 8.2.4.2 of the 2013 edition);

--Added the test sample requirements for heat transfer performance test and changed the test method for heat transfer performance test (see 7.2.7, 2013 edition) 8.2.7);

--Changed the requirements for noise measurement (see 7.2.8, 8.2.8 of the 2013 edition);

-- Changed the electromagnetic compatibility test requirements (see 7.2.10, 8.2.10 of the 2013 edition);

--Changed the requirements for factory testing (see 7.3, 8.3 of the 2013 edition);

-- Changed the requirements for field tests (see 7.4, 8.4 of the 2013 edition);

-- Changed the relevant requirements for labeling (see Chapter 9, Chapter 10 of the 2013 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed by the China Electrical Equipment Industry Association.

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