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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

DL/T 5789-2019

**Technical guidelines for construction of insulated tubular
busbar**

绝缘管型母线施工工艺导则

(English Translation)

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Foreword

This standard is based on the National Energy Administration's National Energy Technology (2015) No. 283, "The National Energy Administration issued the 2015 energy sector industry the requirements of the "Notice of the Standard System (Revision) Plan" were conducted by Guangxi Transmission and Transformation Construction Co., Ltd. together with relevant units after extensive investigation and research.

Research, carefully summarize the construction technology and construction experience of my country's insulated tubular bus, refer to the current national standards, Based on this standard.

This guideline is divided into 7 chapters and 2 appendices. The main contents include. general rules, terminology, basic regulations, construction preparation, busbar installation, Test, project handover and acceptance, etc.

This standard is managed by the China Electricity Council.

This standard is under the jurisdiction and interpretation of the Electrical Engineering Construction and Commissioning Standardization Committee of the Power Industry.

An accessory connected to electrical equipment at the end of a solid-insulated tubular bus system.

3 Basic regulations

3.0.1

The insulated tubular busbar products used should comply with the current national standard "35kV and below solid insulated tubular busbar" DL/T 1658 and other relevant standards and product technical documents, and should have qualified certificates.

3.0.2

Fasteners for the installation of insulated tubular busbars and accessories shall be made of hot-dip galvanized products that meet the current national standards, or equivalent to hot-dip galvanized products.

Products with galvanized properties.

3.0.3

After the insulated tubular bus and accessories arrive at the site, they should be inspected and accepted, and fire-proof and moisture-proof measures should be taken during storage.

3.0.4

In the process of loading, unloading, handling and hoisting the insulated tubular bus, the lifting points should be set according to the product technical documents.

3.0.5

Safety technical measures shall be formulated for the construction of insulated tubular bus bars, and the construction shall meet the requirements of the design and product technical documents.

3.0.6

The fixing fittings and wall metal sealing plate of the insulated tubular bus bar shall not form a closed magnetic circuit around the single-phase bus bar, and shall be connected to the grounding grid. Reliable connection, metal components should be treated with anti-corrosion.

3.0.7

The metal shielding layer of the insulated tubular bus should be reliably grounded.

3.0.8

The hand-over test shall be carried out on the insulated tubular busbar after installation according to the requirements of the "test" part of this guideline.

4 Construction preparation

4.0.1

Check the type and specification of insulated tubular busbar, the quantity of accessories, brackets, etc., certificate of conformity, factory test report, etc. according to the packing list.

The product technical documents should be complete, and the appearance of the insulated tubular bus should not be damaged, scratched, or deformed.

4.0.2

Technical clarifications should be made to the construction personnel before construction. The construction personnel should be familiar with the busbar structure, and be proficient in the "Work Safety Regulations" GB 26164, have corresponding operating skills, and should be familiar with the construction environment and connection methods of the bus line formula.

4.0.3

The equipment to be connected to the insulated tubular bus should be installed.

4.0.4

For high-altitude operations, a working platform that meets safety requirements should be set up in advance, and construction personnel should properly equip and use safety protection equipment.

4.0.5

To work in a live area, work tickets should be processed in advance, and safety isolation measures should be taken according to the requirements of the operation department. Enter you special for construction in places with special requirements, it is still necessary to understand and abide by the relevant regulations of special management requirements.

4.0.6

The tools and tools should be prepared according to the requirements of the construction site; the performance and condition of the tools and tools should be good.

4.0.7

According to the design drawings and product technical documents, the relevant departments shall conduct on-site re-testing of the foundation, embedded parts, and pillars, and measure the absolute the level and center deviation of the edge bus pillar.

5.1 General provisions

5.1.1

The laying path of insulated tubular busbars shall be connected to water, heating, oil, gas and other pipelines, roads, buildings and other live installations.

The minimum clear distance of construction shall meet the design requirements.

5.1.2

The main bus, branch bus, down conductor and equipment connection line of the same arrangement of insulated tubular bus should be symmetrical and consistent, horizontal and vertical.

Neat and beautiful; the bending degree of the bending part of the bus bar should be consistent.

5.1.3

The installation of insulated tubular bus should take temperature compensation measures according to the design requirements.

5.1.4

When the insulated tubular busbar is connected to the equipment terminal and between the busbar sections, the overlapping surface should be silver-plated or tin-lined; copper and aluminum when connecting, copper-aluminum transition measures should be adopted.

5.1.5

The phase sequence arrangement of the insulated tubular bus bar shall meet the design requirements and match the phase sequence arrangement of the main bus bar of the electrical equipment.

5.1.6

Insulated tubular busbars should be marked with color at both ends of the busbar, branches, busbar transposition, etc. Three-phase AC bus identification color should be. A phase yellow, B phase green, C phase red.

5.1.7

The fittings, intermediate joints and terminal connectors and materials of the insulated tubular bus bar shall be supplied by the manufacturer, and shall be qualified the number, model, specification, and voltage level of the certificate and installation manual should meet the requirements of the product technical documentation. Intermediate joint and end Auxiliary materials required for end production shall meet the requirements of product technical documents.

5.1.8

The insulation connection structure of the insulated tubular busbar intermediate joint should be the same or similar to the insulation structure of the busbar body, that is, it should include insulation the insulation strength of the insulation layer, insulation shielding layer, metal shielding layer and protective layer shall not be lower than that of the busbar body, and shall meet the requirements of waterproof Tide performance requirements.