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

DL/T 741-2019

Replacing DL/T 741-2010

**Operating code for overhead transmission line
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules of the national standard GB/T 1.1-2009.

Please note that certain contents of this document may involve patents. The issuing agency of this document is not responsible for identifying these patents.

Compared with DL/T 741-2010, the main changes of this standard are as follows.

--The original standard is applicable to AC 110(66)kV~750kV overhead transmission lines. With the development of transmission voltage levels in my country in recent years, in particular, the DC transmission voltage level is further improved, and the operation and maintenance of AC and DC transmission lines have many common points. Therefore, the scope of this standard is adjusted.

It is suitable for AC 110(66)kV and above, DC ± 400 kV and above overhead transmission

lines, 35kV overhead lines and Other overhead transmission lines can be used as reference.

--In order to standardize terms, the terms and definitions of the original standard have been expanded to the relevant content of DC transmission lines.

--With the promotion and application of helicopter inspections and drone inspections of transmission lines, the relevant content of three-dimensional inspections has been added.

Appendix A and Appendix D of this standard are informative appendices, and Appendix B and Appendix C are normative appendices.

After the implementation of this standard, it will replace DL/T 741-2010.

This standard was proposed by the China Electricity Council.

This standard is under the jurisdiction of the National Overhead Line Standardization Technical Committee Line Operation Subcommittee.

The main drafting organizations of this standard. China Electric Power Research Institute Co., Ltd., State Grid Co., Ltd., State Grid Hubei Electric Power Co., Ltd.

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1 Scope

This standard specifies the basic requirements and operating standards for the operation of overhead power transmission lines, and provides inspection,, maintenance, and technical Management, etc. put forward specific requirements, and put forward clear regulations on the maintenance of special sections of transmission lines, protected areas, and line environmental protection.

This standard is applicable to overhead transmission lines with voltage levels of 110 (66) kV AC, ± 400 kV and above (including grounding electrode lines).

35kV overhead lines and other overhead transmission lines can be used as reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 2900.51 Electrical terminology overhead line GB/T 4365 EMC terminology GB/T

25094 General technical requirements for emergency repair of overhead transmission lines
 GB/T 26218.1 Selection and size determination of high-voltage insulators used under polluted conditions Part 1: Definitions, information and general principles GB/T 32673
 Technical Guidelines for Inspection of Overhead Transmission Line Faults GB/T 35695
 Technical Guidelines for Prevention and Control of Bird-related Faults in Overhead Transmission Lines GB/T 35706 Technical Guidelines for Plotting Distribution Map of Ice Zones in Power Grid GB 50064 Design Code for Overvoltage Protection and Insulation Coordination of AC Electrical Equipment GB 50233 Code for Construction Acceptance of 110kV~750kV Overhead Transmission Lines GB 50545 110kV~750kV design code for overhead transmission lines GB 50665 Design Code for 1000kV Overhead Transmission Line GB 50790 ± 800 kV DC Overhead Transmission Line Design Code DL/T 288 Technical Guidelines for Helicopter Inspection of Overhead Transmission Lines DL/T 289 Helicopter inspection operation sign for overhead transmission lines DL/T 409 Electric Safety Work Regulations (Part of Power Line) DL/T 626 Inspection Regulations for Deteriorated Suspension Insulators DL/T 627 Room temperature curing silicone rubber anti-pollution flashover coating for insulators DL/T 815 Composite outer metal oxide arrester for AC transmission line DL/T 887 Tower power frequency grounding resistance measurement DL/T 1000.3 Guidelines for the use of insulators for overhead lines with a nominal voltage higher than 1000V Part 3: Rod-type suspension complexes for AC systems Combined insulator DL/T 1069 Guidelines for repairing the ground conductor of overhead transmission lines DL/T 1122 Technical Guidelines for Insulation Configuration of Overhead Transmission Lines DL/T 1248 Overhead transmission line condition inspection guide DL/T 1249 Technical Guidelines for Operation State Evaluation of Overhead Transmission Lines DL/T 1367 Technical Guidelines for Transmission Line Inspection DL/T 1482 Technical Guidelines for UAV Inspection Operation of Overhead Transmission Lines DL/T 1570 Overhead transmission line bird-related fault risk classification and distribution map drawing DL/T 5130 Technical regulations for design of steel pipe poles for overhead transmission lines DL/T 5235 ± 800 kV and below DC overhead transmission line engineering construction and acceptance regulations DL/T 5300 1000kV Overhead Transmission Line Project Construction Quality Inspection and Evaluation Regulation Order of the President of the People's Republic of China No. 24 "The Electricity Law of the People's Republic of China" April.2015 Order No. 239 of the State Council of the People's Republic of China "Regulations on the Protection of Power Facilities" January.2011 Order No. 10 of the National Development and Reform Commission of the People's Republic of China "Implementation Rules for the Regulations on the Protection of Electric Power Facilities" June.2011

3 Terms and definitions

The following terms and definitions defined in GB/T 2900.51 and GB/T 4365 apply to this document.

Residential area

Densely populated areas such as industrial enterprise areas, ports, docks, railway stations, towns, and villages belong to the public environment.

Nonresidential area

Areas other than the above-mentioned residential areas are all non-residential areas. Although people, vehicles or agricultural machinery often arrive, but there is no house or house the scarce areas are also non-residential areas.

Residential residences A building where people live for a long time, including rooms or platforms. It also includes hospitals, kindergartens, Schools, office buildings and other buildings where people live or work for a long time.

Area of minute meteorological phenomena Refers to a local area within a large area. Due to special changes in terrain, location, slope, temperature, humidity, etc., there are differences A more special local meteorological area in a large area that has a serious impact on the safe operation of the line.

Area of micro-topography it is a small area in a large terrain area. According to the classification of micro-topography, there are mainly passway type, mountain watershed type, and water vapor increase Type, terrain uplift type, canyon air duct type, etc.

Adverse geological area Areas where there is a risk of geological disasters such as landslides, mudslides, quicksand, ground subsidence, surface cracks or ground subsidence, or due to underground mining operations the area where karma causes or may cause the surface to move and deform.

Earth electrode line the line connecting the neutral bus of the converter station with the grounding electrode feeder.

Line inspection

In order to grasp the operating status of the line, discover defects or hidden dangers in the line body, auxiliary facilities and line protection Provide basis for road overhaul, maintenance and condition evaluation (assessment), and conduct observation, inspection and recording of the line at close range. According to different According to the needs, line inspections can be divided into three types. normal inspections, fault inspections, and special inspections.

Regular inspection

The inspection of the line in a certain period, including line equipment (referring to line body and auxiliary equipment) and line protection area (line Road channel).

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Fault inspection