

ICS 13.020
CCS Z 04

HJ

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

HJ 705-2020

Replacing HJ 705-2014

**Technical Specifications for Environmental Protection
Acceptance of Construction Projects
(English Translation)**

Issued on: December 14, 2020

Implemented on: March 1, 2021

Issued by: Ministry of Ecology and Environment

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1 Scope of application

This standard specifies the content and methods of the environmental protection acceptance survey for the completion of power transmission and transformation construction projects.

This standard is applicable to AC transmission and transformation construction projects with voltage levels of 110kV and above, and DC transmission construction projects with voltage levels of ± 100 kV and above.

Set up the environmental protection acceptance survey for the completion of the project.

2 Normative references

The content of this standard refers to the terms in the following documents. For undated reference documents, their valid versions are applicable to this standard.

GB 3096 Acoustic Environmental Quality Standard GB 12348 Environmental Noise Emission Standard at the Boundary of Industrial Enterprises GB 39220 HVDC project synthetic electric field limit and its monitoring method HJ 19 Technical Guidelines for Environmental Impact Assessment Ecological Impact HJ 24 Technical Guidelines for Environmental Impact Assessment of Construction Projects HJ 681 Electromagnetic environment monitoring method for AC transmission and transformation engineering (trial implementation) HJ 1113 Technical requirements for environmental protection of power

transmission and transformation construction projects HJ/T 394 Technical Specification for Environmental Protection Acceptance of Construction Project Completion Ecological Impact Category

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1 Electric power transmission and distribution construction project

A construction project that transforms the characteristics of electrical energy (mainly voltage and current) and transmits it from the power supply location to the power demand location.

The power transmission and transformation construction projects referred to in this standard can be divided into AC transmission and transformation construction projects and DC transmission construction projects, of which AC transmission and transformation construction the projects include power transmission lines and substations (or switch stations, series compensation stations), and DC transmission construction projects include power transmission lines, converter stations and ground electrode systems.

System.

3.2 Transmission line

A facility composed of wires, insulating materials, poles, etc. used to transmit electricity between two points in a power system, usually in the form of overhead transmission lines, cables Lines, gas insulated metal enclosed transmission lines.

3.3 Substation

A part of the power system, its function is to change the voltage level, collect and distribute electric energy, mainly including transformers, busbars, line switch equipment, Equipment required for the safety and control of buildings and power systems.

3.4 Switching substation

Substations with switchgear, usually including busbars, but without power transformers.

3.5 Series compensator station

Power facilities that realize series compensation of power system transmission lines. A complete set of series compensation devices and related auxiliary facilities and buildings are installed in the station.

Structures.

3.6 Converter substation

A transformer substation installed with an inverter and mainly used to convert AC to DC or DC to AC. Generally installed in one location One or more converters, and the corresponding buildings, transformers, reactors, filters, reactive power compensation equipment, control, monitoring, protection, measurement it consists of measuring equipment and auxiliary equipment.

3.7 Earth electrode system

In the direct current transmission construction project, it is specially designed and constructed to realize normal operation or operation with earth or sea water as the current loop the general term for a group of devices. It is mainly composed of a ground electrode circuit, a ground electrode feeder line and a ground electrode.

3.8 Electromagnetic environment-sensitive target

Objects that need to be focused on in the electromagnetic environment impact assessment and monitoring. Including residential buildings, schools, hospitals, office buildings, factories, etc.

Work or study building.

3.9 Power frequency electric field

The electric field produced by a charge that changes periodically over time at 50 Hz. The physical quantity that measures the strength of the power frequency electric field is the electric field strength, and its unit is volts Per meter (V/m), kilovolts per meter (kV/m) is commonly used in engineering.

3.10 Power frequency magnetic field

A magnetic field generated by a current that changes periodically over time at 50 Hz. The physical quantity to measure the strength of the power frequency magnetic field can be either magnetic induction or the magnetic field strength is used in Tesla (T) and ampere per meter (A/m). In engineering, the unit of magnetic induction is usually micro Tesla (μT).

3.11 Total electric field

The electric field generated by the electric field generated by the charge on the DC charged conductor and the field generated by the space charge caused by the corona of the conductor. Measure the combined electric field strength the physical quantity of degree is the electric field intensity, and its unit is volts per meter (V/m), and kilovolts per meter (kV/m) is commonly used in engineering.

3.12 Environmental protection facilities

Refers to the installations, equipment, and engineering facilities required for the prevention and control of environmental pollution and ecological damage and environmental monitoring.

3.13 Environmental protection measures

Refers to management or technical measures taken to protect the environment to prevent or reduce adverse effects on the environment.

4.1.1 Principles of Acceptance Investigation

4.1.1.1

Based on the approved environmental impact assessment documents and their approval documents, engineering design documents, ecological environment planning materials, and project construction costs the basic requirements are the construction materials and completion materials. According to HJ 1113, the project construction content, environmental protection facilities and environmental protection measures shall be verified. check.

4.1.1.2

The principles of objectivity, truthfulness, systematic and comprehensive, and prominent focus should be adhered to.

4.1.2 Acceptance survey method

The acceptance survey should adopt a combination of data study, project review, on-site investigation, and environmental monitoring, and make full use of advanced technology. Segments and methods.

4.2 Classification of acceptance survey

The power transmission and transformation construction project that prepares the environmental impact report shall prepare the environmental protection acceptance survey report on the completion of the construction project; prepare the environmental impact report for the reported power transmission and transformation construction projects, a survey report on the environmental protection acceptance of the completed construction project shall be prepared. For the format of the acceptance survey report (table), please refer to Appendix A and Appendix B.