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Occupational safety and health acceptance specification for wind power projects

风电场工程劳动安全与工业卫生验收规程

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Occupational safety and health acceptance specification for wind power projects

1 General provisions

1.0.1 In order to standardize and guide the special completion acceptance of labor safety and industrial hygiene of wind farm projects, this Specification is hereby formulated, in accordance with national laws, regulations, rules, standards, other requirements.

1.0.2 This Specification is applicable to the special completion acceptance of labor safety and industrial hygiene of newly built, rebuilt and expanded grid-connected onshore wind farm projects and offshore wind farm projects.

1.0.3 The scope of the special completion inspection and acceptance of the labor safety and industrial hygiene of the wind farm project, includes the safety protection facilities of the wind turbines involved in the wind farm project and the supporting voltage boosting equipment, current collection lines, booster stations, other auxiliary facilities of the wind farm.

1.0.4 The special completion acceptance of the labor safety and industrial hygiene, of the wind farm project, is divided into three stages: application for acceptance and data pre-review, on-site inspection and joint review, review and acceptance.

1.0.5 For the special completion acceptance of the labor safety and industrial hygiene, of the wind farm project, the acceptance committee, which is composed of the presiding organization for acceptance and the safety supervision department where the project is located, shall carry out the acceptance work.

1.0.6 The project owner shall report the use of engineering safety facilities and major engineering incidents (accidents), to the presiding organization of acceptance, within 2 years, after the special completion acceptance of the labor safety and industrial hygiene.

1.0.7 The inspection acceptance of labor safety and industrial hygiene, of wind farm projects, shall not only comply with this Specification, but also comply with the current relevant national standards.

4 Acceptance procedure

4.1 Organization of acceptance

4.1.1 The acceptance presiding organization is responsible for organizing the completion acceptance of the labor safety and industrial hygiene. The acceptance presiding organization, together with the government safety supervision department and other organizations, form an acceptance committee AND an acceptance expert group. The acceptance committee is responsible for verifying the acceptance appraisal; the acceptance expert group conducts on-site inspections.

4.1.2 The acceptance committee is composed of the chairman, vice-chairmen, members. The chairman of the acceptance committee is generally assumed by the representative of the acceptance presiding organization; the vice-chairman is the representative of the safety supervision department of the people's government where the project is located and the representative of the project owner’s superior department. The members include the representatives from the participated project construction organization AND the operation organization, as well as the acceptance expert team leader, etc.

4.2 Application acceptance

4.2.1 When the project has the completion acceptance conditions for labor safety and industrial hygiene, the project owner shall submit the completion acceptance application for labor safety and industrial hygiene, to the acceptance presiding organization, according to the acceptance procedures (see Appendix A); meanwhile submit the following documents and materials, with one copy of the electronic version (CD-ROM) attached:

1 Acceptance application report and application form (3 copies). The format of the application form is as shown in Appendix B of this Specification.

2 Design self-inspection report, supervision self-inspection report, construction and installation self-inspection report, construction and operation self-inspection report (3 copies each), for the completion acceptance of labor safety and industrial hygiene.

3 Safety acceptance evaluation report (draft for review) (10 copies), which is prepared by a correspondingly qualified safety evaluation agency.

4.2.2 The project owner shall prepare the following documents and materials for reference (original if necessary), at the same time:

1 Safety pre-evaluation report and its review opinions.

determine the member units of the acceptance committee; organize experts in related disciplines, to establish an acceptance expert group.

2 The acceptance presiding organization shall prepare an acceptance work outline, before the on-site inspection; copy the acceptance work outline to each member unit of the acceptance committee. The main content of the acceptance work outline is as shown in Appendix C of this Specification.

4.4.2 On-site inspection and review:

1 The acceptance expert group conducts an on-site inspection; conducts a technical review of the safety acceptance evaluation report (draft for review); proposes on-site inspection opinions AND preliminary opinions on the safety acceptance evaluation report review.

2 After the labor safety and industrial hygiene facilities of the wind farm project have passed the expert on-site inspection, the project owner shall carry out rectification, in accordance with the on-site inspection opinions of the inspection and acceptance of safety and industrial hygiene; submit a formal written rectification report, to the acceptance presiding organization. When necessary, the acceptance presiding organization shall review the implementation of on-site rectification by the project owner.

If the labor safety and industrial hygiene facilities of the wind farm project fail the on-site inspection and acceptance by experts, the project owner shall make rectifications, in accordance with relevant national regulations AND the on-site inspection opinions of the completion acceptance of labor safety and industrial hygiene; perform safety acceptance evaluation again, before following the procedures to apply for the completion acceptance of labor safety and industrial hygiene.

3 If the safety acceptance evaluation report (draft for review) has passed the technical review, the evaluation agency will revise and improve the report, based on the preliminary comments of the safety acceptance evaluation report review; then submit the safety acceptance evaluation report (filed draft), to the acceptance presiding organization, for review.

If the safety acceptance evaluation report (draft for review) fails the technical review, the evaluation agency shall re-evaluate AND report to the acceptance presiding organization, for review.

4.5 Review and acceptance

4.5.1 After confirming that the project owner has completed the rectification as required, AND the evaluation agency revised and completed the safety acceptance evaluation report (filed draft), according to the preliminary opinions of the safety acceptance evaluation report, it shall organize the member units

of the acceptance committee, to convene the completion acceptance meeting for the labor safety and industry hygiene.

4.5.2 The project owner shall provide the following materials for reference, at the completion acceptance meeting:

1 On-site inspection and rectification report of the completion acceptance of labor safety and industrial hygiene.

2 Safety acceptance evaluation report (filed draft).

3 The design self-inspection report, supervision self-inspection report, construction and installation self-inspection report, building and operation self-inspection report, for the completion acceptance of labor safety and industrial hygiene, after modification, based on the opinions of the on-site inspection expert group.

4.5.3 The acceptance committee discussed and formed the completion acceptance certification, for labor safety and industrial hygiene of the wind farm project. The format is as shown in Appendix D of this Specification. The acceptance certification shall have clear conclusions. The acceptance conclusion must be approved by more than two-thirds of the acceptance committee members. The members of the acceptance committee shall sign the appraisal. If there is any objection to the acceptance conclusion, the objection opinions shall be clearly recorded and signed on the acceptance certification.

4.5.4 Under any of the following circumstances, the completion acceptance inspection for labor safety and industrial hygiene is unqualified:

1 Failure to select a construction organization, which has corresponding qualifications, for construction.

2 Failure to construct in accordance with the engineering safety facility design documents OR the construction quality does not meet the requirements of the engineering safety facility's design documents.

3 The construction of engineering safety facilities does not meet the relevant technical standards on national construction.

4 Failure to select a safety evaluation agency, which has corresponding qualifications, for safety acceptance evaluation, OR failure to pass the safety acceptance evaluation.

5 Safety facilities and production safety conditions do not comply with relevant safety production laws, regulations, rules and national standards or industry standards or technical specifications.

5 Main contents of acceptance

5.0.1 The on-site inspection of labor safety and industrial hygiene facilities mainly includes the following contents:

1 Safe production conditions, installation and use of safety facilities.

2 Conventional protective facilities and measures for wind farm projects, including geological disaster prevention measures related to labor safety and industrial hygiene, flood (tide) water and waterlogging prevention measures, weather disaster prevention measures, approach and on-site traffic safety facilities, etc.

3 Engineering fire protection and explosion-proof measures.

4 Measures for lightning protection and electrical damage.

5 Measures to prevent mechanical injuries, lifting injuries, falling from height.

6 Safety control measures for harmful factors in the working environment, including: noise prevention, vibration prevention, dust prevention, pollution prevention, corrosion prevention, electromagnetic radiation prevention, daylighting and lighting, indoor air quality, temperature and humidity, toxic and hazardous substances control measures, configuration of labor protection equipment for workers, etc.

7 Safety monitoring and testing facilities.

8 Inspection and testing of special equipment and mandatory inspection equipment and facilities.

9 Safety colors and safety signs.

10 The setting of auxiliary rooms.

11 The establishment of safety production management organization OR the deployment of safety production management personnel.

12 The development and implementation of the safety management system and emergency response plan.

13 Qualifications of employees receiving safety education and training AND special operations personnel.

14 Anti-terrorism prevention facilities, emergency prevention and disposal measures.

6 Compilation requirement and content of acceptance file

6.0.1 The design self-inspection report, supervision self-inspection report, construction and installation self-inspection report, construction operation self-inspection report of the completion acceptance, for the labor safety and industrial hygiene, shall be prepared by the design, supervision, construction, building operation organizations, respectively. Each organization shall be responsible for the accuracy of the information provided. For the preparation format requirements of the acceptance self-inspection report, see Appendix E of this Specification.

6.0.2 The preparation requirements and main contents of the acceptance self-inspection report are as follows:

1 See Appendix F, for the preparation requirements and main content of the design self-inspection report.

2 See Appendix G, for the main content of the supervision self-inspection report.

3 See Appendix H, for the main content of the construction and installation self-inspection report.

4 See Appendix J, for the main content of the building and operation self-inspection report.

6.0.3 The content and depth of the safety acceptance evaluation report shall meet the requirements of the current industry standard NB/T 31027 "Code for preparation of safety assessment report upon completion of wind power projects".

6.0.4 The preparation of acceptance materials shall be organized by the project owner. The relevant units shall submit them on time, as required. The project owner shall check the completeness and standardization of the submitted acceptance documents.

6.0.5 The acceptance materials include technical documents AND materials for reference. Relevant units shall ensure the authenticity of the materials submitted by them; assume corresponding responsibilities.

6.0.6 The drawings, data, achievement documents, for acceptance, shall be prepared as required. Except for the drawings, the specifications of the acceptance documents should be the international standard A4 (210 mm × 297 mm). The originals in the text shall be stamped with the company’s seal; it shall

Appendix F

Design of self-reporting requirements and main contents

F.0.1 The basic requirements for the preparation of the design self-inspection report are as follows:

1 Explain the safety technology and safety facilities, which have been adopted in the engineering design, to ensure the long-term safe operation of the project; summarize the experience and lessons of the project, through the implementation of the project.

2 Make a corresponding evaluation of the safety status of the project, from the perspective of engineering design; point out the potential safety hazards; propose preventive countermeasures and measures to be taken.

F.0.2 The main contents that shall be included in the design self-inspection report are as follows:

1 Design basis:

1) Relevant requirements of the state, industry, local, project authorities.

2) The main technical standards adopted in the design.

3) The scope of engineering protection design.

2 The safety design and evaluation of the prevention of main hazardous and harmful factors:

1) The safety design and evaluation of the prevention of the main hazardous and harmful factors, in the site selection and general layout, of the wind farm.

2) Safety design and evaluation of the prevention of hazardous and harmful factors, such as wind turbines, power collection lines, booster stations.

3) Safety design and evaluation of the prevention of main hazardous and harmful factors, during production and operation.

It includes the engineering safety measures, which are adopted in the aspects, such as production process, production equipment installations, fire prevention and explosion protection of main buildings, equipment defects, protection defects, signal defects, sign defects, electrical hazards (exposure of live parts, leakage, lightning, static

Appendix G

Main contents of construction and operation of self-inspection report

G.0.1 Briefly describe the quality and safety assurance system of the supervision organization, as well as its implementation.

G.0.2 The basic situation of the quality supervision and control (including the quality of permanent equipment), in the process of civil engineering construction and equipment installation.

G.0.3 The acceptance evaluation level of each organization (sub-organization) engineering and concealed engineering, as well as the rectification and treatment of remaining issues.

G.0.4 The implementation and handling of major quality and safety accidents, major design changes, which occurred during the construction process, as well as the evaluation of the rectification effect of possible remaining quality and safety hazards.

G.0.5 The review of safety technical measures or special construction plans in the construction organization design, as well as the implementation of existing problems. Whether the safety technical measures or the special construction plan meet the compulsory standards for engineering construction.

G.0.6 Description of the construction and implementation of the safety technology and safety facilities, which are proposed in the engineering design, as well as possible remaining safety issues.

G.0.7 Description of the handover acceptance inspection of relevant safety technology and safety facilities, which are organized by the supervision organization, especially the acceptance inspection data of the unit (sub-unit) work, which needs to pass a complete trial operation period.

G.0.8 Clear statement on whether the construction is carried out in accordance with the safety facility design documents of the construction project; whether the construction quality meets the requirements of the safety facility design documents of the construction project.

G.0.9 Clear statement on whether the construction of the safety facilities of the construction project meets the requirements of the relevant national construction technical standards.

Appendix J

Main contents of construction and operation of self-inspection report

J.0.1 Project overview and trial operation conditions.

Brief introduction of the wind farm project's construction and wind turbine's trial operation conditions, preparation process, staffing, education and training; participation in the entire process of supervision, construction, installation, commissioning, trial operation; description of the accidents and consequences (personal injury and equipment and property loss) of the buildings (structures), equipment, power grid, from the putting into operation for power generation, as well as the technical measures for accident prevention.

J.0.2 Inspection of the implementation of the "Regime of three concurrences" of engineering safety facilities.

Inspect and explain the implementation of the national and local requirements for the "Regime of three concurrences" of construction project safety facilities, in the construction of wind farms. Explain the implementation of the safety pre-assessment report (filed draft) and review opinions of wind farm construction projects, the design section of "labor safety and industrial hygiene" in the wind farm project feasibility study report, as well as the implementation of the main countermeasures and recommendations, which are proposed in the safety acceptance evaluation report.

J.0.3 The implementation of rectification and improvement of other problems in the acceptance.

Introduce the problems, which are found in the acceptance of engineering fire protection and other special projects, as well as the implementation of rectification.

J.0.4 Safety inspection of the status of trial operation.

Based on the actual experience of trial operation management, since the wind turbines are gradually put into production and power generation, carry out comprehensive inspection of the project site selection and general plan layout, accident-control measures for production building (structure) and equipment, prevention of the hazardous factors in the production and operation process, work environment (hazardous factors or industrial hygiene in the production work place) conditions of the production plant, engineering safety monitoring system, special equipment safety, safety production management; point to the

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