

ICS 27.180
CCS P 61

NB

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

NB/T 11655-2024

**Inspection and evaluation quality standard for civil engineering
construction of offshore wind power projects**

海上风电场土建工程施工质量检验与评定标准

Issued on: September 24, 2024

Implemented on: March 24, 2025

Issued by: National Energy Administration of the PRC

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Foreword

This document was issued on 24 September 2024 by the National Energy Administration of the PRC and takes effect on 24 March 2025.

It is a NB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

It is classified under ICS 27.180, Chinese classification P 61.

This standard was prepared in accordance with the requirements of the Notice of the General Department of the National Energy Administration on issuing the 2017 plan for the formulation and revision of industry standards in the energy field and the plan for the translation and publication of English versions, document Guo Neng Zong Tong Ke Ji [2017]

No. 52. The drafting group carried out extensive investigation and research, carefully summarised practical experience, and prepared this standard on the basis of wide consultation.

The main technical content of this standard is: general provisions; terms; basic requirements; steel structure engineering; concrete structure engineering; outfitting engineering; pile foundation engineering; foundation and topside installation; corrosion prevention engineering; scouring prevention; and the fabrication and installation of accessory components.

This standard is administered by the National Energy Administration, was proposed by and is under the routine administration of the General Institute of Hydropower and Water Resources Planning and Design, and the Sub-committee on Wind Farm Construction and Installation of the Wind Power Standardization Technical Committee of the Energy Industry (NEA/TC 1/SC 2) is responsible for the interpretation of the specific technical content.

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1 Scope

NB/T 11655-2024 is the Chinese standard for inspecting and grading the construction quality of the civil and structural works of an offshore wind farm - the fixed foundations of the turbines, the offshore substation, the offshore converter station and the meteorological mast. It exists because offshore construction quality has to be judged before the sea closes over it. A weld on a jacket leg, the concrete cover on a reinforcement cage, the coating thickness on a splash zone, the seating of a transition piece: once these are installed there is no economical way to go back and look, so the acceptance decision has to be made at the right moment, against a written criterion, and recorded. This document supplies those criteria. It works on the inspection lot, dividing every check into dominant items - those that decide safety, occupational health, environmental protection and the principal function - and general items, and it fixes what qualified means: every dominant item must pass, and for general items with a permissible deviation at least 80 percent of the check points must satisfy the requirement, with no failing point worse than 1.5 times the permissible deviation, tightened to 1.2 times for steelwork. The scope of what it covers is the whole offshore civil scope in sequence: steel structure engineering, from material acceptance through welding, fasteners, fabrication and installation; concrete structure engineering, with formwork, reinforcement, concrete, prestressing and precast components; outfitting, including fire and heat insulation, fire doors and windows, interior finishes and the escape and lifesaving appliances; pile foundation engineering, treated separately for the monopile, the jacket pile,

the pile cap foundation and the rock-socketed pile; foundation and topside installation, covering jacket installation, monopile transition piece installation, suction bucket penetration, gravity-based foundation installation, the lift of the offshore substation topside and the connection grouting; corrosion prevention, with steel painting, concrete protection and cathodic protection; scour prevention by riprap, sand quilt and bags, stabilized soil and concrete mattress; and the fabrication and installation of the accessory components that make the structure workable - berthing components, steel ladders, cable tubes and the internal and external platforms. It was issued on 24 September 2024 by the National Energy Administration and takes effect on 24 March 2025.

1.0.1 This standard is formulated in order to standardise the inspection and evaluation of the construction quality of the sub-item works and inspection lots of the civil engineering works of an offshore wind farm.

1.0.2 This standard applies to the inspection and evaluation of the construction quality of the fixed foundation civil and structural works of the offshore facilities of newly built, reconstructed and extended offshore wind farms, namely the wind turbine generator units, the offshore substation, the offshore converter station and the meteorological mast.

1.0.3 The organizations taking part in the project - the owner, the supervision organization, the investigation organization, the design organization, the construction organization and the inspection and testing organization - shall establish and improve the engineering quality management system in accordance with the relevant national and industry provisions, and shall carry out the quality management of the construction work properly.

1.0.4 In addition to complying with this standard, the inspection and evaluation of the construction quality of the civil engineering works of an offshore wind farm shall also comply with the provisions of the relevant current national standards.

2 Terms

2.0.1 dominant item

An inspection item that plays a decisive part in the safety, the occupational health, the environmental protection and the principal function of the works.

2.0.2 general item

An inspection item other than a dominant item.

2.0.3 sampling inspection

The inspection carried out on a certain number of samples drawn at random by inspection lot, according to a specified sampling plan, from the materials, components, equipment or inspection items arriving on site.

2.0.4 evidential testing