Main changes in Bureau Veritas Guidance Note NI572 for the Classification and Certification of Floating Offshore Wind Turbine (January 2019 edition), regarding the previous edition (October 2015) are described as follows.

Rules History

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General – Section 1

Recognized documents
- Update of the list of recognized standards and rules

Definitions
- Unmanned unit definition added – Section 1, [2.2.1]
- Support structure definition added – Section 1, [2.2.4]
- Sub-structure definition updated – Section 1, [2.2.5]
- Yaw misalignment definition added – Section 1, [2.2.12]

Service notations

Service notation:
- Service notation “FOWT” in replacement of “Offshore special type unit (FOWT)” – Section 1, [3.1.2]
General Arrangement – Section 2

Clearance – Air Gap
- New requirements on rotor clearance and platform clearance – Section 2, [1.2] & [1.3]

Access means
- New requirements on limitation of access – Section 2, [2.1.5] & [2.1.6]
- New requirements on escape routes – Section 2, [2.2]

Access platform
- New requirements on control system at the platform – section 2, [3]

Corrosion – Section 4

General
- Atmospheric zone definition added
- Splash zone definition added
- Submerged zone definition added

Corrosion protection
- New requirements on corrosion protection considering maintenance plan – Section 4, [1.2]

Design conditions and loads – Section 5

Operating conditions
- Introduction of transient conditions – Section 5, [2.2.3]

Marine conditions
- Introduction of sea ice conditions – Section 5, [2.4.3.d])

Operational loads
- Introduction of power cable loads, mooring loads, loads resulting from handling appliances in operation – Section 5, [3.3.1]
- Clarification of vessel impact loads – Section 5, [3.3.3]

External loads
- Introduction of snow loads, ice loads, dynamic mooring loads and dynamic power cable loads – Section 5, [3.4.2]

Accidental loads
- Introduction of active control ballast system fault and control and protection system fault – Section 5, [3.5.1]

Load cases
- Clarification of design load cases Normal (N), Accidental (A), Transit, Installation and Maintenance (IMR) and Fatigue (F) – Section 5, [4]

Stability – Section 6

Application
- Clarification of application of intact stability for manned and unmanned FOWT – Section 6, [1.1.2]
- Clarification of application of damaged stability for manned and unmanned FOWT – Section 6, [1.1.3]
**Loading conditions**
- Clarification of loading conditions to consider for stability assessment – Section 6, [2.1.1]
- Clarification of wind heeling lever considering wind acting on the substructure, the tower and the rotor – Section 6, [2.3]
- Clarification of current heeling lever considering current on the floating substructure – Section 6, [2.4]

**Stability calculations**
- Clarification of stability analysis – Section 6, [3.1.2]
- New guidance for stability constrained by mooring lines or tendons – Section 6, [3.1.3]
- Introduction of alternative stability criteria consideration – Section 6, [3.1.4]

**Intact stability**
- Introduction of intact stability criteria for in lightweight conditions, in transit, installation and maintenance conditions and in operation and parked conditions – Section 6, [4]

**Damaged stability**
- Introduction of parameters for damage extent – Section 6, [5.1]
- Introduction of damage stability criteria for in lightweight conditions, in transit, installation and maintenance conditions and in operation and parked conditions – Section 6, [5]

**Structure design – Section 7**

**Structural strength**
- Introduction of Von Mises equivalent stress for analyses based on FEM – Section 7, [3.1.3.c]
- Clarification of partial safety factors for loads – Section 7, [3.1.4, table1]
- Clarification of material and resistance partial safety factors – Section 7, [3.1.4, table 2]

**Ultimate limit state (ULS)**
- Clarification of buckling criteria in line with NI615 when LRFD format is used – Section 7, [4.3.5]

**Fatigue limit state (FLS)**
- Clarification of corrosion consideration for fatigue calculation – Section 7, [5.1.7]
- New consequence of failure of elements subjected to crucial damage to be considered for fatigue factors – Section 7, [5.2.2]

**Other structures – Section 9**

**Access system structure**
- New requirements for secondary application structure of the access system – Section 9, [1.1]

**Supporting structure of mooring system**
- Introduction of requirements for turret mooring system in line with NR445, PtD, Ch1, Sec8 – Section 9, [2.1]
- Introduction of requirements for spread mooring system in line with NR445, PtD, Ch1, Sec8 – Section 9, [2.2]

**Supports for hull attachments and appurtenances**
- Introduction of requirements for structure supporting the attachments and appurtenances in line with NR445, PtD, Ch1, Sec8 – Section 9, [3.1]

**Lifting appliances foundations**
- Introduction of requirements for lifting appliances foundations in line with NR445, PtE, Ch1, Sec4 – Section 9, [3.2]
Helicopter deck
- Introduction of requirements for helicopter deck in line with NR445, PtB, Ch3, Sec4 – Section 9, [4.1]

Hull outfit
- Introduction of requirements for bulwarks and guard rails in line with NR445, PtB, Ch9, Sec2 – Section 9, [5.1]
- New requirements for towing foundations – Section 9, [5.2]

Station keeping – Section 10

Definitions
- Mooring lines systems definition added – Section 10, [1.2.1]
- Tendon legs systems definition added – Section 10, [1.3.1]
- Dynamic positioning systems definition added – Section 10, [1.4.1]
- Non-redundant station keeping system definition added – Section 10, [2.3.2, note1]

Marine systems – Section 12

Bilge system
- New requirements for void compartments – Section 12, [2.1.3]
- Clarification of design of bilge system – Section 12, [2.2]

Ballast system
- New requirements for ballast system – Section 12, [3.1]

Electrical installations
- New requirements for electrical system in accordance with IEC publications – Section 12, [4.1]
- New requirements for offshore structure marking in accordance with IALA recommendations – Section 12, [4.2]
- New requirements for lightning and earth protection – Section 12, [4.3]

External conditions – Appendix 2

Wind conditions
- Factor for normal turbulence formulation modified (1.28 x 1.44 replaced by 5.12) to take into account offshore conditions – Appendix 2, [2.2.4 a) 2)]
- System periods less than 7s can be disregarded in the operating gust representation – Appendix 2, [2.2.4 b)]

Turbine – Mechanical components – Appendix 4
- New guidance on mechanical components of wind turbine – Appendix 4