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AMENDMENT 1

Wind energy generation systems -
Part 1: Design requirements

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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Amendment 1 to IEC 61400-1:2019 has been prepared by IEC technical committee 88: Wind energy generation systems.

The text of this Amendment is based on the following documents:

Draft	Report on voting
88/1109/FDIS	88/1133/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Amendment is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications/.

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– reconfirmed,
– withdrawn, or
– revised.

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2 Normative references

Delete:

IEC 61400-3, *Wind energy generation systems - Part 3: Design requirements for offshore wind turbines*

Add the following new references:

IEC 61400-3-1, *Wind energy generation systems - Part 3-1: Design requirements for offshore wind turbines*

IEC 61400-6, *Wind energy generation systems - Part 6: Tower and foundation design requirements*

3 Terms and definitions

Add, after 3.77, the following new definitions:

3.78
damage equivalent load
constant amplitude cyclic load, S_{eq} derived from the load spectrum and a given S-N curve exponent that results in an equivalent fatigue damage for a given reference number of load cycles, N_{ref}, as the real load spectrum under the assumption that the damage can be determined on basis of the load cycles from a linear S-N curve with a given negative inverse slope, m

Note 1 to entry: Let the discrete load spectrum be specified by the number of cycles n_i for the load S_i, i = 1,2, …, n_s. Then the equivalent load can be calculated from the equation

$$S_{eq} = \left(\frac{\sum_{i=1}^{n_s} n_i S_i^m}{N_{ref}} \right)^{1/m} \quad (40)$$

3.79
reference loads, pl.
loads that had been utilised for detailed structural verification of the wind turbine components