

DRAFT TANZANIA STANDARD

(Draft for comments only)

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Wind turbines - Part 13: Measurement of mechanical loads

TANZANIA BUREAU OF STANDARDS

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1. National Foreword

This draft Tanzania Standard is being prepared by the Renewable Energy Technical Committee, under the supervision of the Electrotechnical Divisional Standards Committee (EDC)

This draft Tanzania Standard is an adoption of the International Standard **IEC 61400-13:2015**, *Wind turbines - Part 13: Measurement of mechanical loads*, which has been prepared by the International Electrotechnical Commission (IEC).

2. Terminology and conventions

Some terminologies and certain conventions are not identical with those used in Tanzania Standards; Attention is drawn especially to the following:

- 1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use "full point" on the baseline as the decimal marker.
- 2) Where the words "International Standard(s)" appear, referring to this standard they should read "Tanzania Standard(s)".

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3. Scope

This draft Tanzania Standard describes the measurement of fundamental structural loads on wind turbines for the purpose of the load simulation model validation. The standard prescribes the requirements and recommendations for site selection, signal selection, data acquisition, calibration, data verification, measurement load cases, capture matrix, post-processing, uncertainty determination and reporting. Informative annexes are also provided to improve understanding of testing methods.

The methods described in this document can also be used for mechanical loads measurements for other purposes such as obtaining a measured statistical representation of loads, direct measurements of the design loads, safety and function testing, or measurement of component loads. If these methods are used for an alternative objective or used for an unconventional wind turbine design, the required signals, measurement load cases, capture matrix, and post processing methods should be evaluated and if needed adjusted to fit the objective.

These methods are intended for onshore electricity-generating, horizontal-axis wind turbines (HAWTs) with rotor swept areas of larger than 200 m². However, the methods described may be applicable to other wind turbines (for example, small wind turbines, ducted wind turbines, vertical axis wind turbines).