Calibrating a wind turbine model using diverse datasets

This paper presents a model calibration investigation using a wide range of available data. The wind turbine under investigation was the V52 research turbine located at Denmark Technical University (DTU) Risø campus. The data included drawings and static and dynamic tests for both the entire wind turbine and the isolated blades. Each set of data was used to calibrate some aspect of the final model. There are three main parts of this paper. First, the different data sources are outlined, including an overview of the experimental procedures and the key results. Second, the model calibration procedure for each set of experimental data is explained. Third, recommendations for the calibration procedure are presented for future researchers and the key outcomes of our calibration investigation are discussed.

General information
Publication status: Published
Organisations: Department of Wind Energy, Wind turbine loads & control, University of Southern Denmark
Corresponding author: Rinker, J. M.
Contributors: Rinker, J. M., Hansen, M. H., Larsen, T. J.
Number of pages: 10
Publication date: 2018
Peer-reviewed: Yes

Publication information
Journal: Journal of Physics: Conference Series
Volume: 1037
Issue number: 6
Article number: 062026
ISSN (Print): 1742-6596
Ratings:
BFI (2018): BFI-level 1
Scopus rating (2018): CiteScore 0.51 SJR 0.221 SNIP 0.454
Original language: English
Electronic versions:
Rinker_2018_J._Phys._3A_Conf._Ser._1037_062026.pdf
DOIs:
10.1088/1742-6596/1037/6/062026

Bibliographical note
Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI.
Source: FindIt
Source ID: 2435910049
Research output: Contribution to journal » Conference article – Annual report year: 2018 » Research » peer-review