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DOMA® Mechanical and Plant Engineering (DOMA)

This database contains references with abstracts, keywords and descriptors on materials. It provides information from German and international scientific and practical technical literature like journals, conference proceedings, reports, dissertations, as well as non-conventional literature.

The abstracts are in German and/or English. The search may be conducted with German or English terms.

Scope

- Chip-type machining processes, forming processes, machine tools
- Welding, soldering, adhesive bonding
- Computer-integrated manufacturing, computer-aided technologies (Cax), rapid prototyping
- Metal and plastic fabrication
- Coating techniques
- Mechanical transmissions, machine components and accessories
- Hydraulics, pneumatics, materials handling technology
- Tribology
- Turbines, pumps, compressors
- Combustion engines, automotive engineering
- Robots, manipulators, human-machine systems
- Mechatronics, microsystem technology
- Mining and quarrying machinery and equipment, road construction
- Printing machines, graphical technique
- Packaging machinery and technology
- Heating, ventilation and air conditioning (HVAC), refrigeration, combined heat and power generation
- Production planning, production logistics, stock-keeping
- Occupational health and safety, ergonomics
- Measurement techniques and test methods, control engineering
- Recycling technique, soil decontamination, air quality management, water treatment technique

Language

German, English

File Data

Number of records: 3.173.747

Years covered: from 1970

Update: weekly

Producer

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Database

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Title

Numerical prediction of wind turbine noise.
Numerische Vorhersage von Windturbinengeräuschen.

Descriptors

Windturbine; Windkraftanlage; Geräuscentwicklung; numerische Strömungssimulation; Lärminderung; Fernfeld; Laufschaufelprofil; Theorie-Experiment-Vergleich

Abstract

This paper develops and validates the first principle based numerical method for predicting the noise radiated from the rotating Horizontal-Axis Wind Turbine (HAWT) blades. The noise radiated to the farfield was predicted by the code based on Ffowcs Williams-Hawkings (FW-H) equation, using both original non-permeable formulation and permeable formulation. A commercially available CFD solver, ANSYS CFX 11.0, was used to calculate the flow parameters on and around the blade surface that are required for FW-H codes. A capability of the solver for modelling the flow field around the wind turbine blades was validated by comparing with the experimental results of NREL phase VI wind turbine blades. The FW-H codes were validated using acoustic results of UH-1H helicopter rotor in hover and Hartzell aircraft propeller in forward motion, which were measured in anechoic wind tunnel facility. Then the developed FW-H acoustic codes were applied to calculate the noise radiated from NREL Phase VI wind turbine blades.

Author

Tadamasa, A.; Zangeneh, M.

Institution

University College London, GB

Source

Renewable Energy: An International Journal * Band 36 (2011) Heft 7, Seite 1902-1912 (11 Seiten, 18 Bilder, 20 Quellen)

Serial Codes

ISSN: 0960-1481

Zeitschriftencode: 9224 = Renewable Energy: An International Journal

Classification

3EE Power plants, nuclear reactors

3BBS Fluid dynamics

3BAS Simulation methods, simulation models

3BBB Acoustics of solids, liquids and gases

Language

EN English

Availability

<http://dx.doi.org/10.1016/j.renene.2010.11.036>

Document Number

20110302502

Treatment Codes

T Theoretical

G General Review

Publication Type

J Journal

Publication Form

ED Digital Object Identifier (DOI)

Publication Year

2011

Update

2011-05-16

Database Fields [TOP](#)

Title	TI
Author	AU
Institution	CO
Thesaurus	TH
Descriptors	DE
Classification	CC

Source	SO
Serial Codes	SC
Conference Details	CF
Language	LG
Publication Type	PT
Publication Form	PF
Abstract	TX
Material Terms	MT
Material Index	MI
Chemical Index	CI
Free Terms	FT
Treatment Codes	TC
Fulltext	AV
Document Number	NO
Publication Year	YR
Update	UP
Country of Institution	COC
Conference Series No = Konferenzseriennummer	CSN
Country of Conference	CFC
WTI Journal Code = WTI-Zeitschriftencode	FJC

Search Tips [TOP](#)

Thesaurus

The search with descriptors from the "Thesaurus Engineering and Management" in the search field "General Search" automatically includes any available German terms and narrower terms, as well as German and English synonyms.

With the "Thesaurus Search" (see grey menu bar) it is possible to preselect search terms for a more efficient search in the database.

*Attention: The Thesaurus Search Engine is available in every single database. But as not all general data bases have a Thesaurus search function available, we are not able to provide this option when **OneSearch** is used for interdisciplinary data base research.*

Search in specific fields

The "General Search" includes the following fields: Title, Abstract, Author, Institution, Source, Serial Codes (ISSN and ISBN), Conference Details, Thesaurus, Free Terms and Publication Year. In all other cases the respective field has to be selected. In the "Expert Search" every field can be selected from the dropdown-list, or you can directly enter the field tag (in capital letters, #tags see above) followed by colon and the search term, e.g. the classification CC:3BFB. The direct search with field tag is possible in all search types (Quick Search, Advanced Search and Expert Search).

Field Author (AU)

In the database TEMA and its parts (e.g. DOMA, WEMA, ZDE, BEFO etc.) it is sufficient to enter the first letters of first or last name of an author into the Author Field (in "Advanced Search" or "Expert Search"). You will then be given a list of matching entries, from which you can select the appropriate name.

Alternatively names may be searched with truncation (*), e.g. `hoyer*` returns `hoyer-ina`, `hoyer-n-j`, `hoyer-norbert`, `hoyerberg`, `hoyermann` etc.

For a more precise search, please truncate at the initial of the first name, e.g. `"hoyer n*"` returns only authors with last name Hoyer, whose first names start with "N", as Hoyer, Niklas or Hoyer, Norbert. or Hoyer, N. Search names within quotation marks, e.g. `"hoyer norbert"` OR `"hoyer n*"` (last name - first name) and always use the Author Field. This way of searching is possible in all databases. Truncation is recommended, since first names are often abbreviated in the literature quoted.

Field Institution (CO)

This field supplies the author affiliation. Wherever possible, these institutions have been standardised and can be used for refining the search result. Changes in company names should be taken into account (e.g. `DaimlerChrysler` -> `Daimler`). The country of the institution is searchable with the tag `COC` (in capital letters) and the two-character ISO-Country-Code, e.g. `COC:cn` finds institutions from China.

Classification Field (CC)

In "Advanced Search" and "Expert Search" the subjects can be selected from a list (see link below search fields) giving the top level of the WTI-classification. Several selected items are combined with the operator `OR`. The selection of an item also includes the more precise subclasses into the search. If you enter the code directly, e.g. `CC:3BFB`, only the specified class is found, unless you truncate the class: `CC:BF*` includes the subclasses.

In the "General Search" the field tag `CC` has to be used. Instead you can select the field from the dropdown-list in the "Expert Search".

For a list of the codes see [WTI Classification](#)

Additionally you can refine your search result after a search in other search fields with the link "Classification" on the right hand side of the titlelist. Several selected subjects are combined with the operator `AND`, that is: all must apply. This list is sortable either by number of hits or alphabetically by codes.

Field Source (SO)

Publication titles may be searched as phrases (strings), e.g. `"laser in medicine and surgery"`.

Field Serial Codes (SC)

ISSN and ISBN are searched with hyphens without text, e.g. `978-3-18-092009-2`.

The WTI-Journal-Code is searchable e.g. as `FJC:770` (see [WTI Journal List](#) [in German]).

Field Conference Details (CF)

Since 1993 the conference details have been standardised. Since then conference series numbers have been assigned to conferences regularly scanned. These numbers may be searched e.g. as `CSN:14` or `CSN:12349` (Numbers see [Conferences](#) [in German]).

The Conference Series Numbers are to be searched without the leading zeros. CSN has to be entered in capital letters. The conference number is displayed in field Serial Codes. Conferences published before 1993 may be searched as usual with phrases or with operators.

Publication Form (PF)

This field helps identify electronic publications. It is available since 1991. Search with the codes: EC for CD-ROM/DVD,

ED for records with link (DOI, Digital Object Identifier) to the publisher, where the publication is available, or

EL for online documents, that are often for free in the internet.

Search e.g. PF:ed

With PF:e* all electronic publications are found.

Instead you can refine your search result with **Publication Type** "Electronic Publication" in the right column of the Results list, which includes all of the codes above.

Field Treatment Codes (TC)

This field is available since 1993, which means that selecting a code from this list excludes older records from the search result.

Field Document Number (NO)

The document number is a permanent identifier for a specific record. Search e.g. NO:20090101598.

Update

February 2019