

# Inspec<sup>®</sup> Quick Reference Card

Produced by the Institution of Engineering and Technology (IET), *Inspec*<sup>®</sup> is the leading English-language database providing access to the world's scientific and technical literature in physics, electrical engineering, electronics, communications, control engineering, computers and computing, and information technology. With *Inspec*, you can uncover research information in specialized areas such as materials science, oceanography, nuclear engineering, geophysics, biomedical engineering, and biophysics. Updated weekly, *Inspec* includes over 10.8 million records dating from 1898 to the present, with approximately 400,000 records added each year. The database includes over 4000 scientific and technical journals, 2200 conference proceedings, as well as selected books, reports and dissertations.

## 1 Search

Search by Topic, Author, Publication Name, Year Published, Address, Controlled Index terms, Classification code, Numerical Data, Chemical Data, Astronomical Object, Meeting Information, or other Identifying codes. Use the drop down menu for each search box to choose the area of your search. You can limit your search by original language of publication, document type, or media type.

- 2 Use the drop down menu to change the relationship between each search field to AND, OR, or NOT.
- 3 Add additional fields for a more complex search.
- 4 Change the time frame and data limits of your search.

### SEARCH OPERATORS

Search using AND, OR, NOT, and SAME (same sentence) to create logical search statements. Nest search operators inside parentheses. Search exact or truncated phrases inside quotations marks.

### TRUNCATION SYMBOLS

Use truncation to retrieve plurals and variant spellings.

- \* = zero to many characters
- ? = one character
- \$ = zero or one character

The screenshot shows the ISI Web of Knowledge Inspec search interface. At the top, there are navigation links: Sign In, My EndNote Web, My ResearcherID, My Citation Alerts, and My Journal List. The main header reads "ISI Web of Knowledge<sup>SM</sup> Take the next step". Below this is a navigation bar with "All Databases", "Select a Database", "Inspec", and "Additional Resources". The search area includes a search bar with the text "wind farm" or "wind energy" in the Topic field. Below the search bar are three rows for search criteria:
 

- Row 1: AND relationship, Topic field with "wind farm" or "wind energy" (Example: "heavy water" AND neutron)
- Row 2: AND relationship, Author field with "DiCarlo A \* OR Di Carlo A \*" (Example: DiCarlo A \* OR Di Carlo A \*)
- Row 3: AND relationship, Publication Name field with "Journal of Optical Technology OR Optical Engineering" (Example: Journal of Optical Technology OR Optical Engineering)

 A blue arrow points from the "Publication Name" field to a dropdown menu. The dropdown menu lists search fields: Topic, Title, Author, Publication Name (highlighted), Year Published, Address, Controlled Index, Controlled Index (includ), Classification, Numerical Data, and age [year].
   
 Callout 1 points to the search bar. Callout 2 points to the AND relationship dropdown. Callout 3 points to the "Add Another Field >>" button. Callout 4 points to the "Timespan:" section, which includes "All Years" (updated June 09, 2008), a date range selector (From 1898-1910 to 2008), and "Databases: Inspec-1898-present".

SEARCH

NAVIGATE

REFINE

PERSONALIZE

SAVE

# Full Record

## 1 Title

Titles are indexed as they appear in the source document. Foreign language titles are translated into US English and the original title is retained below the translation.

## 2 Authors

All author names are indexed and searchable.

## 3 Source Information

Journal title, volume, issue, pagination, and publication date display here. The ISSN/ISBN appears below the Author Address information.

## 4 Abstract

The English language author abstract of the source document appears here. Foreign Language abstracts are not retained.

## 5 Document Type

The Document Type tells you whether this record corresponds to a journal article, a book, book chapter, conference paper, patent, report, or dissertation.

## 6 Language

The original language of the source document displays here.

## 7 Controlled and Uncontrolled Indexing

Controlled indexing terms are preferred terms from the Inspec Thesaurus. Uncontrolled indexing terms are free language terms which are not found in the Inspec thesaurus, assigned by Inspec indexers to provide additional descriptors for the document.

## 8 Classification Codes

Alphanumeric hierarchical codes assigned to Inspec documents.

## 9 Addresses

The address for the reprint author as identified by the source article is indexed and searchable. In the event that a reprint author is not identified, the first listed address is indexed and searchable.

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<< Back to results list Record 2 of 32 Record from Inspec®

### 1 Thermodynamic analysis of wind energy

Full Text Links Print Email Add to Marked List Save to EndNote Web more options

**2 Author(s):** Sahin, A.D.; Dincer, I.; Rosen, M.A.

**3 Source:** International Journal of Energy Research Volume: 30 Issue: 8 Pages: 553-66 Published: 25 June 2006

**4 Abstract:** Wind energy is assessed thermodynamically, from resource and technology perspectives. The thermodynamic characteristics of wind are considered. Wind speed is affected by air temperature and pressure and has an effect on wind turbine performance, based on wind chill effect and Bernoulli's equation. The wind chill effect leads to temperature differences that suggest enthalpy and entropy components must be considered in a thermodynamic analysis. The wind pressure effect based on Bernoulli's equation affects the entropy of wind. These components have not previously been considered in evaluations of wind turbine efficiency for electricity generation. A new efficiency formula for wind energy systems is described, which provides important information about the system. It is seen that average differences between energy and exergy efficiencies are approximately 40% at low wind speeds and up to approximately 55% at high wind speeds.

**5 Accession Number:** 9103408

**6 Document Type:** Journal Paper

**7 Language:** English

**8 Treatment:** Practical

**9 Controlled Indexing:** enthalpy; entropy; wind power; wind turbines

**Uncontrolled Indexing:** wind energy; thermodynamic analysis; wind speed; air temperature; air pressure; wind turbine; wind chill effect; Bernoulli's equation; enthalpy; entropy; electricity generation

**Classification Codes:** A8610D Wind energy; A5130 Thermal properties of gases; B8210 Energy resources

**Author Address:** Sahin, A.D.; Dept. of Meteorol., Istanbul Tech. Univ., Turkey

**Publisher:** Wiley, UK

**Number of References:** 27

**CODEN:** IJERDN

**ISSN:** 0363-907X

**SICI:** 0363-907X(20060625)30:8L:553:TAWE;1-K

**DOI:** 10.1002/er.1183

**Cited by: 6**

This article has been cited 6 times (from Web of Science).

Dewulf J, Van Langenhove H, Muys B, et al. Exergy: Its potential and limitations in environmental science and technology. ENVIRONMENTAL SCIENCE & TECHNOLOGY 7 2221-2232 APR 1

Hepbasli A. A key review on exergetic analysis and assessment of renewable energy resources for a sustainable future. RENEWABLE & SUSTAINABLE ENERGY REVIEWS 3 593-661 APR 1

Kanoglu M, Dincer I, Rosen MA. Performance analysis of gas liquefaction cycles. INTERNATIONAL JOURNAL OF ENERGY RESEARCH 1 35-43 JAN 1

[ view all 6 citing articles ]

Create Citation Alert

**Related Records:**

Find similar records based on shared references (from Web of Science).

[ view related records ]

**References: 27**

View the bibliography of this record (from Web of Science).

If your institution has access to Web of Science, you may see additional information in the blue sidebar.

Click the **Cited By** number to move to the articles that have cited this article in Web of Science. The bibliographic information for the three latest articles to cite this article will automatically display with the full record.

Click **View Related Records** to find articles that have cited the same earlier materials.

Click **Create Citation Alert** to be notified when the article is cited by any new Web of Science record. Citation Alerts will remain active for one year, but can be renewed at any time.

# Using the Inspec Thesaurus

## Thesaurus

Use the Inspec Thesaurus to locate controlled terms to add to your search.

By clicking the "H" next to a term, you can view the full thesaurus entry for a term. This may include broader or narrower terms, related terms, prior terms, and related classification codes.

By clicking the "T" icon next to a term, you may view the term within a hierarchy.

### Inspec Thesaurus

Use the Find feature to locate terms to add to your query.

Enter text to find terms containing or related to the text.

*Example:* automat\* to find application generators and automa

wind tur\*

Find

Results Page 1 (Terms 1 - 7 of 7)

[ 1 ]

KEY: Add = add to query H = view in hierarchy T = view thesaurus de

- Add H T aerodynamics
- Add H T atmospheric movements
- Add H T hybrid power systems
- Add H T turbines
- Add H T wind power
- Add H T wind power plants
- Add H T wind turbines

### Wind turbines

KEY: Add = add to query H = view in hierarchy T = view thesaurus details

Thesaurus Term: Add H **wind turbines**

Used For: Darrieus turbines

Broader Term(s): Add H T turbines

Related Term(s): Add H T hybrid power systems  
Add H T wind power  
Add H T wind power plants

Top Term(s): Add H T machinery

Related Classification Code(s): B8245  
E2130  
E2310

### Browse Inspec Thesaurus Hierarchy

KEY: Add = add to query T = view thesaurus de

- Add machinery T
  - Add gears T
  - Add electric machines T
  - Add rollers (machinery) T
  - Add coin operated equipment T
  - Add fans T
  - Add washing machines T
  - Add compressed air systems T
  - Add machine components T
  - Add printing machinery T
  - Add turbomachinery T
    - Add turbines T
      - Add hydraulic turbines T
      - Add wind turbines T
      - Add steam turbines T
      - Add gas turbines T

# Refine and Analyze

## 1 Refine your Results

Use Refine to mine a set of up to 100,000 results to find the top 100 Classifications, Subject Areas, Source Titles, Document Types, Authors, Controlled Index Terms, Treatment Types, and Languages.

## 2 Sort Results

Sort up to 100,000 records by

- Latest Date (default)
- Relevance
- Publication Year
- Source Title
- First Author

## 3 Analyze Results

Like Refine, with Analyze you can mine a set of up to 100,000 results. With Analyze you can output the results to Microsoft® Excel to create your own graphs.

## 4 Output Records or Save to Endnote Web

Output records, add to your Marked List, or save to EndNote Web. Quickly print, e-mail or save to a temporary marked list (500 records maximum), or save permanently to EndNote Web (10,000 max). Click "more options" to save a range of records, adjust your saved fields, or export directly to ResearchSoft reference software (EndNote, Reference Manager, and ProCite) you have installed on your desktop.

The screenshot displays the ISI Web of Knowledge interface for a search on 'wind energy'. The search results page shows 5,717 results. The interface is divided into several sections:

- Search and Navigation:** Includes 'All Databases', 'Select a Database', 'Inspec', and 'Additional Resources'. Search options include 'Search', 'Advanced Search', 'Search History', and 'Marked List (0)'. The search topic is 'wind farm' or 'wind energy'.
- Results Summary:** Shows 'Results: 5,717' and 'Page 1 of 572'. Sorting is set to 'Latest Date'.
- Refine Results (Step 1):** A sidebar menu for refining results. It includes sections for 'Classifications' (e.g., Wind Power Plants, Wind Energy), 'Document Types' (e.g., Journal Paper, Conference Paper), 'Authors', 'Source Titles', 'Subject Areas', 'Treatment Types', 'Countries/Territories', 'Controlled Index', and 'Languages'. A search box and 'Search' button are also present.
- Results List (Step 2):** A list of search results with checkboxes. Each entry includes the title, author(s), meeting information, source, and publication date. For example, the first result is 'The round robin site assessment method: a new approach to wind energy site assessment' by Lackner, M.A., Rogers, A.L., and Marwell, J.F., published in Renewable Energy in September 2008.
- Output Records (Step 4):** A section at the bottom for managing the results. It includes 'Step 1' (Selected records on page, All records on page, or a range of records) and 'Step 2' (Authors, Title, Source, plus Abstract, or Full Record). A 'Step 3' box provides options for exporting: 'Print', 'E-mail', 'Add to Marked List', 'Save to EndNote Web', 'Save to EndNote, RefMan, ProCite', and 'Save to other Reference Software'.

# Personalize

## 1 Create Personal Profile

Any *Inspec* user can create a personal *ISI Web of Knowledge* profile to take advantage of powerful personalization options. You can create a private user profile from the *ISI Web of Knowledge* home page (Click "Home" in the top tool bar to find the *ISI Web of Knowledge* homepage.) The user profile allows you to create:

- \* Unlimited saved searches and search alerts
- \* An **Endnote Web** library of up to 10,000 references

## 2 Save Searches and Create Search Alerts

Save any search of up to 20 sets as a Search History or an Alert. Alerts will be based on the last set in your history. You can choose the frequency and form of the alert. Alerts will remain active for 24 weeks but can be renewed at anytime. If an alert expires, it will remain as a saved search strategy in your personal profile until you delete it. Searches can also be saved as RSS feeds; simply click the **XML** icon after clicking Save History.

- \* Click "Renew" to set a new expiration date for any alert.
- \* Click "Settings" to turn alerts on or off.
- \* Click "Open" to run the saved search
- \* Click XML to set an RSS Feed

ISI Web of Knowledge<sup>SM</sup> Take the next step

All Databases | Select a Database | Inspec | Additional Resources

Search | Advanced Search | Search History | Marked List (0)

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Search History

Set Results #2 AND #1 Save History / Create Alert Open Saved History Combine Sets Delete Set

Set	Results	Description	Combine Sets	Delete Set
#3	233	#2 AND #1 Databases=INSPEC Timespan=All Years	<input type="checkbox"/>	<input type="checkbox"/>
#2	3,874	Topic=("turbine generator") Databases=INSPEC Timespan=All Years	<input type="checkbox"/>	<input type="checkbox"/>
#1	5,717	Topic=("wind farm" or "wind energy") Databases=INSPEC Timespan=All Years	<input type="checkbox"/>	<input type="checkbox"/>

AND OR Select All Combine Delete

ISI Web of Knowledge<sup>SM</sup> Take the next step

Signed In | My Endnote Web | My Citation Alerts | My Journal List | My Saved Searches | Log Out | Help

<< Back Open / Manage Saved Searches

Open from the ISI Web of Knowledge Server:  
Use this box to open histories that were saved to your private account on our Server.

Display histories from: All Products Go

History Name	Product	Description	RSS Feed	Alerting	Modify Settings	Delete	Open/Run History
wind	Inspec		XML	Status: On Expires: 27 Nov 2008 Renew	Settings	<input type="checkbox"/>	Open ▶
zoo	Web of Science		XML	Status: On Expires: 27 Nov 2008 Renew	Settings	<input type="checkbox"/>	Open ▶

# Manage

## EndNote Web

Save up to 10,000 records in your EndNote Web library. EndNote Web also allows you to add and format references in a document and search other online databases and library catalogs. References imported from ISI Web of Knowledge resources will remain marked with an EndNote Web icon and you can link back to the full record and view up-to-date citation information. EndNote Web also allows you to add and format citations to documents you are writing and perform searches of other online databases. Once you have created your EndNote Web library you can access your library at any time, either from your Web of Knowledge profile or by going to [www.myendnoteweb.com](http://www.myendnoteweb.com) and using your ISI Web of Knowledge user ID and password.

## Getting Help

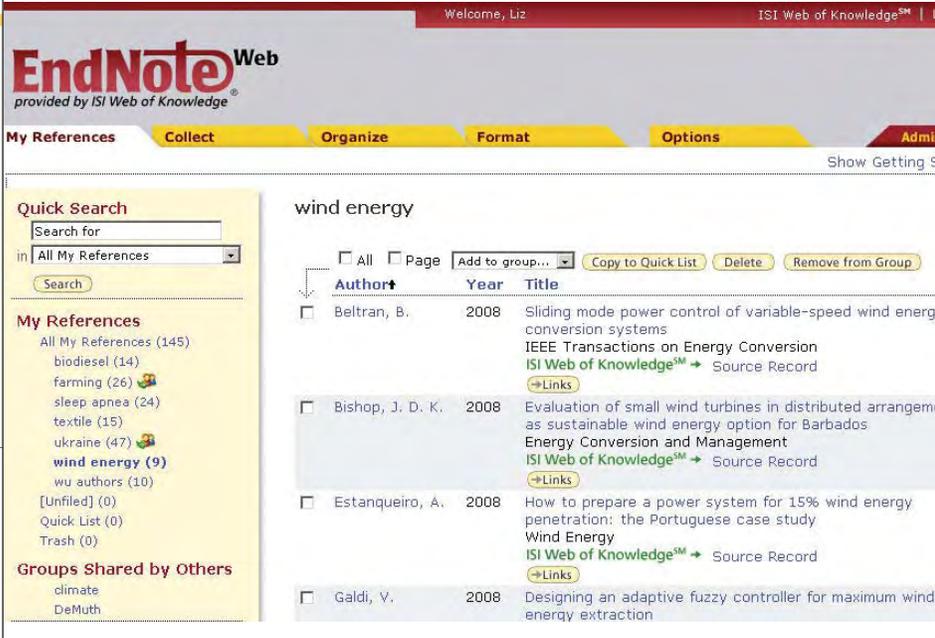
Click the **Help** button on any page to get detailed help on features as well as detailed search tips and examples.

Contact the Technical Help Desk for your region at:  
[scientific.thomsonreuters.com/support/techsupport](http://scientific.thomsonreuters.com/support/techsupport)

Contact the education team at:  
[scientific.thomsonreuters.com/support/training/contacttraining](http://scientific.thomsonreuters.com/support/training/contacttraining)

To view a recorded training module, visit:  
[scientific.thomsonreuters.com/support/recorded-training](http://scientific.thomsonreuters.com/support/recorded-training)

Interested in more tips and tricks?  
For ongoing Web-based training, visit:  
[scientific.thomsonreuters.com/support/training/webtraining](http://scientific.thomsonreuters.com/support/training/webtraining)



The screenshot displays the EndNote Web interface. At the top, there is a navigation bar with tabs for 'My References', 'Collect', 'Organize', 'Format', 'Options', and 'Admin'. Below this, a 'Quick Search' box is visible, with a search term 'wind energy' entered. The search results are displayed in a table with columns for 'Author', 'Year', and 'Title'. The results list several references related to wind energy, including works by Beltran, B., Bishop, J. D. K., Estanqueiro, A., and Galdi, V., all from 2008. Each reference entry includes a checkbox, the author's name, the year, and the title, along with a '+Links' button and a 'Source Record' link.

<input type="checkbox"/>	Author	Year	Title
<input type="checkbox"/>	Beltran, B.	2008	Sliding mode power control of variable-speed wind energy conversion systems IEEE Transactions on Energy Conversion ISI Web of Knowledge <sup>SM</sup> → Source Record <a href="#">+Links</a>
<input type="checkbox"/>	Bishop, J. D. K.	2008	Evaluation of small wind turbines in distributed arrangements as sustainable wind energy option for Barbados Energy Conversion and Management ISI Web of Knowledge <sup>SM</sup> → Source Record <a href="#">+Links</a>
<input type="checkbox"/>	Estanqueiro, A.	2008	How to prepare a power system for 15% wind energy penetration: the Portuguese case study Wind Energy ISI Web of Knowledge <sup>SM</sup> → Source Record <a href="#">+Links</a>
<input type="checkbox"/>	Galdi, V.	2008	Designing an adaptive fuzzy controller for maximum wind energy extraction