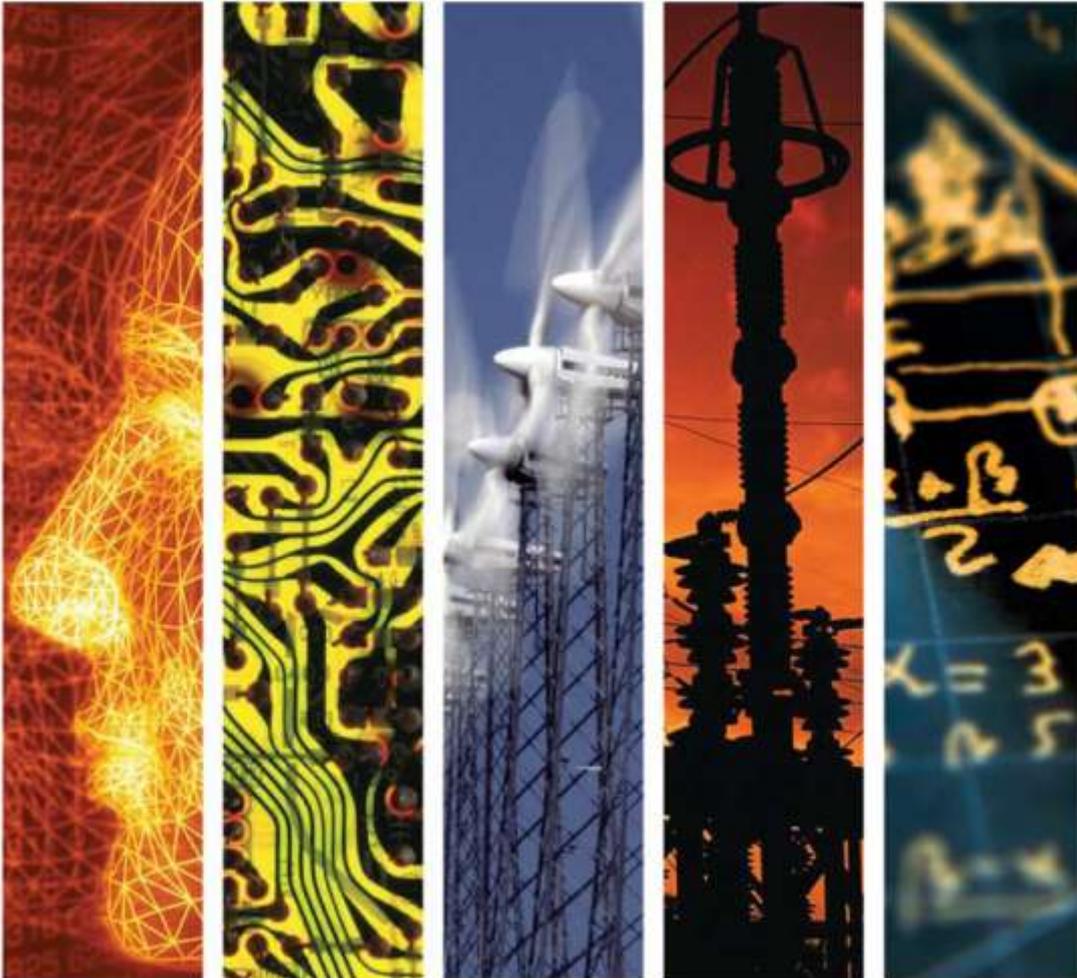


# User Guide

## Proquest Dialog



[www.theiet.org/inspec](http://www.theiet.org/inspec)

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N.B. Descriptions in this user guide are related to the Inspec Database on Proquest Dialog . As a result some Proquest Dialog functionality which is not applicable to Inspec may not be represented.

## **Inspec and Inspec Archive Database Overviews**

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### **Inspec**

Inspec is the leading English language information service providing access to the world's scientific and technical papers in physics, electrical engineering, electronics, communications, control engineering, computing and information technology. It is part of a service which can trace its roots back to 1898 when "Science Abstracts" was first published by the Institution of Electrical Engineers.

Inspec contains literature dating back to 1969, and each year thousands of journals and conference publications are scanned for relevant information to be included. In 2012 approximately 4500 scientific & technical journals and some 2000 conference publications were scanned. At the time this user guide was produced Inspec contained over 13 million bibliographic records (2012 figures) and it is growing at a rate of approx. 760,000 records each year (2012 figures).

Although Inspec provides a comprehensive index to literature in physics, electrical and electronic engineering, computer science and information technology, it also has significant coverage in interdisciplinary areas such as materials science, oceanography, nuclear engineering, geophysics, biomedical engineering and biophysics.

Each record in the Inspec database contains an English-language title and descriptive abstract, together with full bibliographic details which include the journal or other publication title, the author's name and affiliation and the language of the original document. All of these may be searched, as well as Inspec's extensive range of subject classification and indexing systems.

In addition to searching Inspec for information for your research projects, it can also be used for:

- current awareness
- finding new product information
- technological forecasting
- competitive intelligence
- patent-related searching

The data in the Inspec Database belongs to the Institution of Electrical Engineers and is protected by international copyright laws.

## **Inspec Archive**

The Inspec Archive Database contains the historical scientific records produced for the Science Abstracts series of journals from 1898 - 1968. The Science Abstracts series were the precursor to Inspec and they continue to be published in parallel to Inspec. Initially only available in print they were digitized and are now searchable online via Proquest Dialog

Subject coverage for the Inspec Archive Database is:

- All aspects of physics (originally published as Physics Abstracts),
- Electrical and electronic engineering (introduced as a separate journal in 1903, and originally published as Electrical and Electronic Abstracts),
- Computing and control engineering (introduced as a separate journal in 1966, and published initially as Control Abstracts, later renamed to Computer and Control Abstracts).

The Inspec Archive contains:

- Over 873,700 records,
- Tables, graphs and figures from the original source document in many cases,
- The original value-added indexing and classifications,
- Enhancements in the form of the nearest equivalent current Inspec Thesaurus Terms and Inspec Classification Codes,
- Conference proceedings, books, journals, reports and dissertations,
- Longer abstracts than today varying in length from half a page to several pages including diagrams and complex mathematical proof because hard copy originals were less accessible.

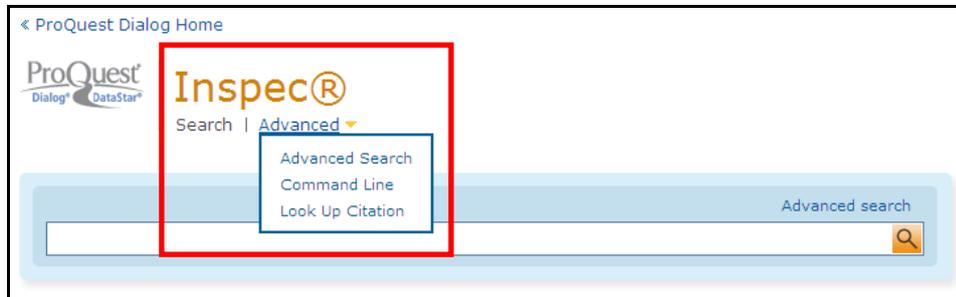
The fully searchable electronic Inspec Archive Database is far more usable, flexible, durable and more readily available than the 176 volumes (and over 140,000 pages) of the printed Science Abstracts series of journals. It has never been easier to locate references to historic research or engineering breakthroughs from hundreds of scientists and engineers such as Albert Einstein, Guglielmo Marconi, Max Planck, Ernest Rutherford, and Marie Curie. Not only does the Inspec Archive Database give access to the work of famous scientists, it also gives access to the often forgotten works (sometimes known as "Sleeping Beauties") that may be of use in assessing the validity of current patents. An idea suggested decades ago that did not develop then, may be of relevance today.

## Database Implementation Overview

A description of the main, Inspec related features of ProQuest Dialog follows.

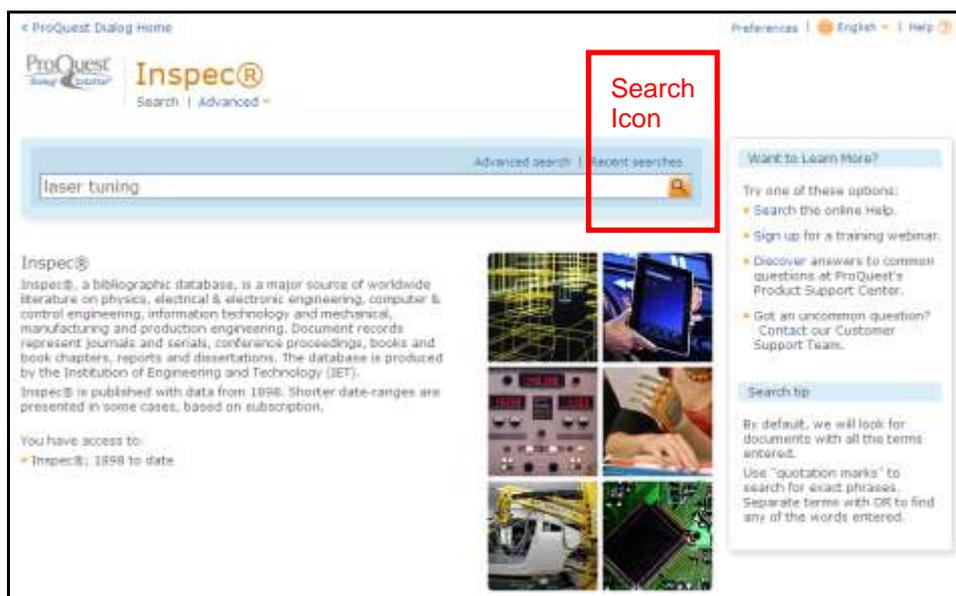
### Search Options

ProQuest Dialog provides a number of search options, as well as tools for facilitating focused searches in Inspec. Whether it is subject information being sought or it is bibliographic information, the appropriate option can be selected by clicking on the available links.



**Search** – Suitable for novice users and for quick searches, this comprises a single box for entering search terms. Help features and search tips can be accessed.

To begin a search simply enter search terms and click on the orange search icon. An “Advanced search” feature provides 3 further options (These are “Advanced Search”, “Command Line” and “Look Up Citation”) Each of which are described below.



**Look up Citation** – For Searching within bibliographic information (e.g. journal titles, publishers, documents etc.). Desired display options for results can be selected using the drop down menus at the bottom of the screen.

The screenshot shows the 'Look Up Citation' search page on the ProQuest Inspec platform. The page header includes the ProQuest logo and 'Inspec® Search | Advanced'. Below the header, there are navigation links for 'ProQuest Dialog Home', 'Preferences', 'English', and 'Help'. The main heading is 'Look Up Citation', with sub-links for 'Other search options: Advanced Search | Command Line'. A prompt asks the user to 'Fill in any of the following information to quickly locate a document.' The form contains several input fields: Document title, Author (with a 'Look up authors' link), Publication title (with a 'Look up publications' link), ISSN (with a note 'Use of hyphens is optional'), ISBN (with a note 'Use of hyphens is optional'), Volume, Issue, Start page, Date range (with a dropdown for 'All dates' and a 'Year' field), DOI, and Document ID. A 'Display options' section at the bottom features a 'Sort by' dropdown set to 'Relevance' and an 'Items per page' dropdown set to '20'. A 'Search' button and a 'Clear form' link are located at the bottom right. A 'Search tools' sidebar on the right explains the search syntax, stating: 'Search tips: To broaden your search, truncate (shorten) a search term and start a closing asterisk (\*). For example, **physiol\*** will find **physiology** and **physiologist**.'

**Advanced Search** – A form based option comprising multiple search boxes. Information in different fields can be searched in a single query and combined using Boolean logic operators.

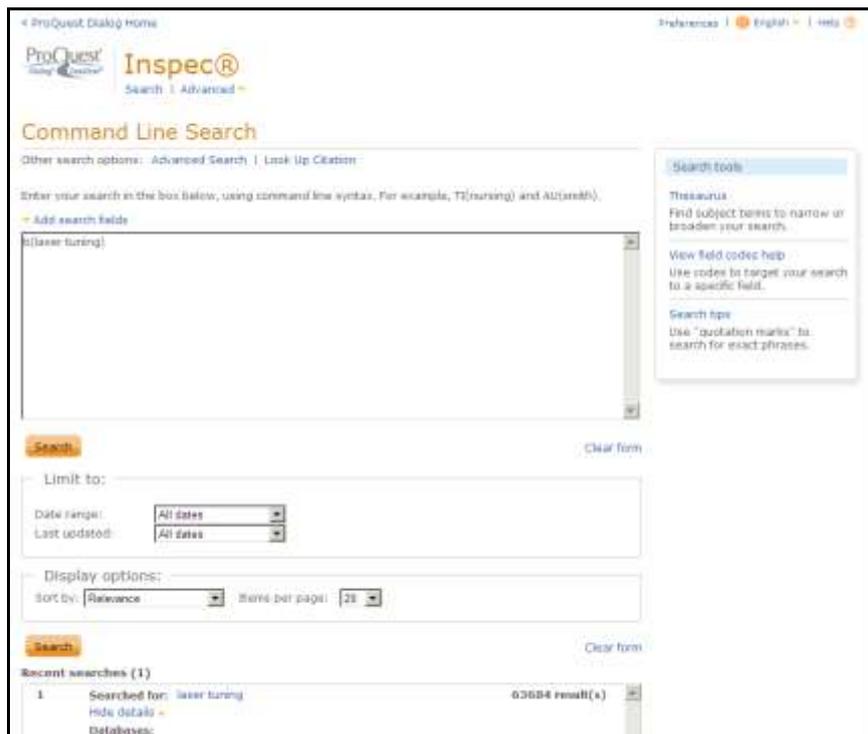
A variety of refining options are available which can be accessed by clicking on “More options”.

Sort options for search results follow.

Search tools, such as the Inspec thesaurus, can be accessed using the links on the right hand side of the screen.

The screenshot displays the ProQuest Inspec Advanced Search page. At the top, it shows the ProQuest logo and the Inspec® logo. The main heading is "Advanced Search". Below this, there are three search rows, each with a text input field, a dropdown menu for field selection (currently set to "All fields + text"), and a dropdown menu for Boolean logic (currently set to "AND"). There are "Add a row" and "Remove a row" links, and "Search" and "Clear form" buttons. A "Limit to:" section includes a checkbox for "Abstract included", "Date range:" and "Last updated:" dropdown menus (both set to "All dates"), and a "More options" link. A "Display options:" section includes a "Sort by:" dropdown menu (set to "Relevance") and an "Items per page:" dropdown menu (set to "20"). On the right side, there is a "Search tools" sidebar with links for "Thesaurus", "View field codes help", "Search tips", and "Search by industry". The "Search by industry" section lists various industries with corresponding icons: Aerospace & Defense, Automotive, Energy & Environment, Engineering & Technology, Pharmaceutical & Biomedical, and Telecommunications & Computing. At the bottom right, there is a link for "Authoritative answers". The footer contains links for "Contact Us", "Privacy Policy", "Accessibility", "Stamps", and "End Session", along with a copyright notice for ProQuest LLC.

**Command Line Search** – A traditional command language based option comprising single search box into which the search query can be entered. The Proquest Dialog command language is straightforward to learn and once familiarised with, searches can be carried out quickly and efficiently



**Search History** – From “Advanced search” and “Command line” options, previous searches carried out during the session are displayed in the “Recent searches” section at the bottom of the screen. From here it is possible to rerun, save and combine searches. Unless saved, these searches will **not** be accessible after the current session has ended. Any searches saved from previous sessions can be accessed by clicking on the “My research” link in the blue bar at the top of the screen. From there it is possible, among other things, to edit saved searches, set up alerts and create RSS feeds.

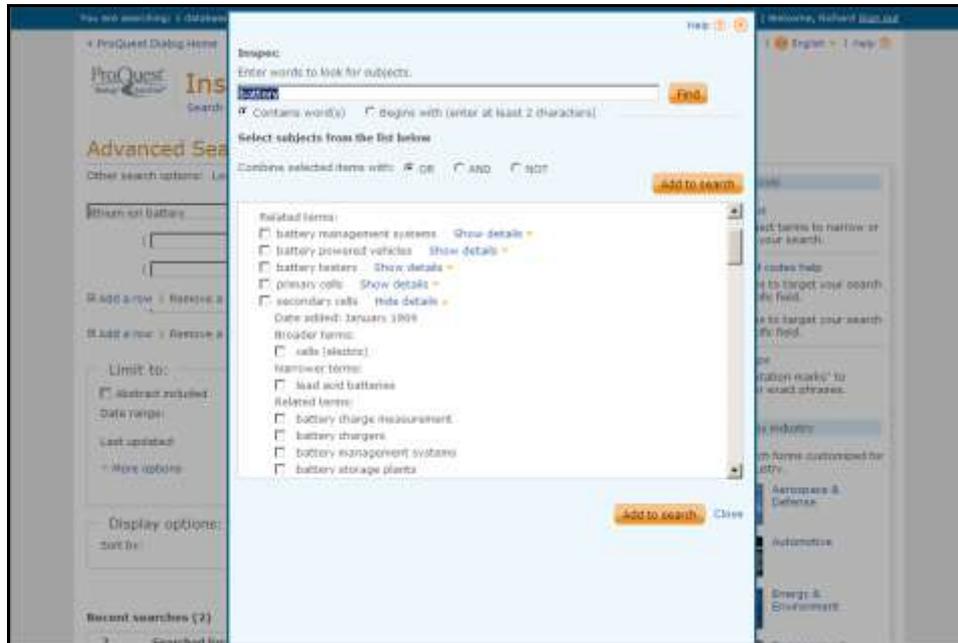


N.B. The “Recent searches” information will not be present until at least one search has been executed during a session.

## Search Tools

The Inspec Thesaurus contains over 9000 searchable words and phrases known as subject headings which standardise the way that technology is described. These represent an extremely effective way of searching for the most relevant information using language which is independent of the authors own descriptions. Their use improves the accuracy of the search results.

The thesaurus is accessed from “advanced search” and “Command line” search by clicking on the appropriate link in the “Search tools” menu on the right hand side of the screen.



## Searching Inspec

---

### Logging on

#### Login Screen

ProQuest  
Dialog

### Log in

Username:

Password:

Remember me

**Get more out of ProQuest with a My Research account!**

**Log in and create a My Research account to:**

- Get a username/password sign-in that provides anywhere, anytime access to ProQuest Dialog.
- Save documents and searches across your ProQuest Dialog sessions.
- Organize your saved documents with folders.
- Set preferences that stay in effect every time you use ProQuest Dialog.

**Already have a My Research username/password? Use them to log in.**

[Need help accessing ProQuest Dialog?](#)

**Students and researchers:**

- Try one of the other access options provided on this page.
- Check with your library reference desk or help desk for instructions on connecting to ProQuest remotely.

[Not sure if your browser meets ProQuest's minimum browser requirements? Check your browser settings.](#)

[Authoritative answers](#)

[Contact us](#)

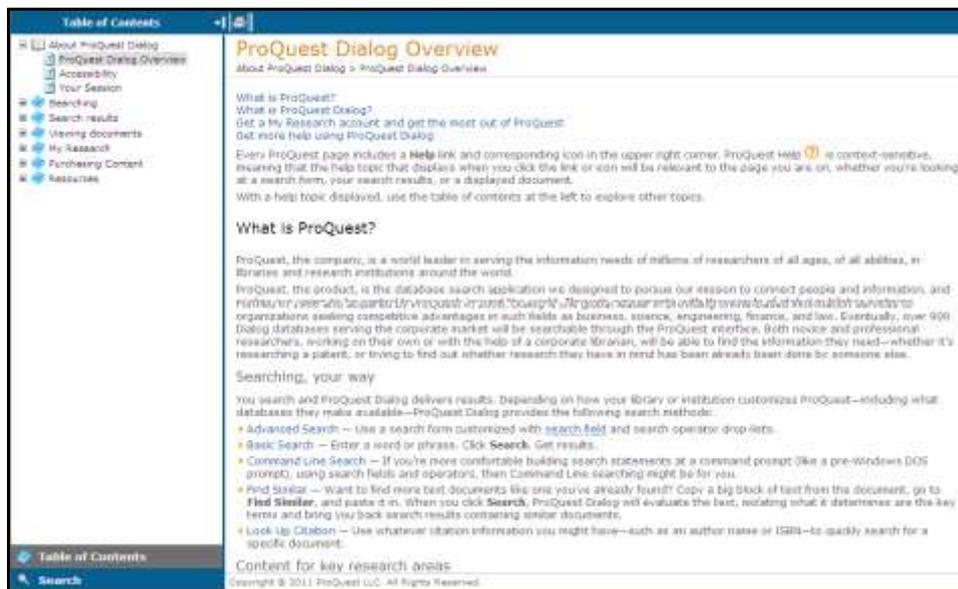
Copyright © 2011 ProQuest LLC. All rights reserved. - [Terms and Conditions](#)

The Login Screen to Proquest Dialog can be found at:-

<http://search.proquestdialog.com/professional/login>

## Help

Help on Proquest Dialog is always available online. The full help file can be accessed by clicking on the Help link in the top right hand corner of the screens.



Additional help can be found in the “Search tools” menu in “Advanced search” and “Command line” search. Click on the link to access this help.



## **Subject Searching**

The following illustrations use the Advanced Search option

Start a subject search by thinking of some suitable keywords, which broadly define the scope of the intended search. Examine the results of the search for information that can be added to subsequent searches.

ProQuest Dialog DataStar Inspec® Search | Advanced

### Advanced Search

Other search options: [Look Up Citation](#) | [Command Line](#)

laser tuning All fields + text

AND ( ) or ( ) All fields + text

AND ( ) or ( ) All fields + text

[Add a row](#) | [Remove a row](#) [Search](#) [Clear form](#)

1) Start by typing a suitable keyword, keywords, or a phrase into the Search box. Boolean logic and Proximity Operators, as well as truncation symbols can be included if required to help broaden or narrow the scope of the search (see below).

2) Select the required fields in which to search. For example the “All Fields + Text” field, or the “Document title” field;

Selecting “All Fields + Text” means that all the descriptive parts of the Inspec record are searched.

Selecting “Document Title” means that the title alone is searched giving results that are highly focussed on the subject area being searched. Titles are short and tend to describe the most important themes contained in a document. N.B. as titles are short when compared to the record as a whole, it is possible that some documents may be missed.

4) Select limits if required.

5) Click on Search.

## **Boolean Operators**

The following Boolean operators are available for use in a search query. Depending on the operators used, a search can be broadened or narrowed in scope.

**OR** - finds records that contain at least one of the terms searched. It is used to broaden a search. For example, when searching for computers or networks, results would include all records where the search field contains either the word computers or the word networks or both words.

**AND** - finds records that contain all the terms searched and thus is used to narrow a search. For example, computers and networks would include all records where the record contains both the word computers and the word networks.

**NOT** - finds records that contain one term but not another. It is used to narrow a search by excluding specific terms. For example, computers not networks would include all records where the search field contains the word computers but not the word networks.

## **Proximity Operators**

Proximity operators can be used to perform a search for 2 or more words that occur up to a specified number of words apart.

**Near/n** - Look for records that contain two search terms, in any order, separated by up to 'n' words, where 'n' is a positive whole number.

**Pre** – Look for records where the search terms are next to each other and are in the specified order (i.e. a phrase). When two or more query words separated by a space are entered in a search then it is assumed that they are adjacent and the automatically inserts the adjacency operator between the words. This **assumed proximity** means that the search “computer networks”, for example, is identical to the search “computer Pre networks”.

**Pre/n** – Look for records where the search terms are in the order specified in the search and are separated by up to 'n' other words, where n=a positive whole number.

(e.g. computer Pre/2 networks will find records which contain the word networks within two words of computers e.g. computer communication networks, computer network servers would all be retrieved).

## **Truncation**

**Unlimited truncation** “ \* ” – Truncate a search term to retrieve words which are the same but have alternative endings. Left hand, Right-hand and internal truncation is possible.. (e.g. searching elect\* retrieves records containing elect, electrical, electricity, electronics, electronically etc.; T\*th retrieves records containing teeth, tooth, tenth etc.; \*ory retrieves records containing hickory, story, history etc.).

**Limited Truncation** “2[\*N]” “To specify a specific upper limit for term expansion, use term[\*N]. The default range is 0-10 characters. E.g. colo[\*1]r retrieves records containing colour and color.

**Wildcards** “ ? ” – serves as a substitute for one letter. It can be used at the end of a word or in the middle of it To specify a specific upper limit for term. Multiple wildcards can be used. E.g. t??th retrieves records containing tooth, teeth and tenth, among others.

colo?r retrieves both colour and color;

t??th retrieves both tooth, teeth, tenth etc.

ioni?ation retrieves ionisation or ionization.

Computer? retrieves both computer and computers

## Search Results

Search Results appear in the Results Manager. There are 3 columns.

Refining options appear on the left hand side.

Actual results are in the central column. They initially appear in the titles display format in groups of 10 per page. This can be changed using the options in the Results Manager. Each reference has links to the Inspec Abstract and complete reference.

To print, e-mail or search results use the options in the Results Manager

## Search History

Search history is an important search and navigation tool. It can be used to review current searches and to build up complex searches by combining previously run queries.



**INSPEC Sample Records**

The following display formats are available. Select the desired one using from the Titles Display format (see below) or the Results Manager.

The screenshot shows a ProQuest Inspec record page. At the top, there are navigation links for 'ProQuest Dialog Home', 'References', 'English', and 'Help'. The main header includes the Inspec logo and a search bar. Below this, the record is titled 'Citation/Abstract' with a 'Back to results' link. A toolbar offers options like 'Add to selected items', 'Save to My Research', 'Email', 'Print', 'Cite', 'Export', 'Save as file', and 'Tags'. A 'More like this' section with 'See similar items' is also present.

The record details are as follows:

**Cavity length optimisation in acousto-optically mode-locked argon-ion lasers**  
 Ruddle, L. S.; Singworth, R., *Journal of Physics E (Scientific Instruments)*, 18, 2, (Feb 1985), 111-5.  
 Other formats: [Email citation](#) [Turn off full highlighting](#)

**Abstract (summary)** [Translate](#)

The optimisation of the cavity length of acousto-optically mode-locked argon-ion lasers is described. Measurement of the discharge current as the cavity is adjusted indicates that the correct length can be identified. The generation of the second harmonic of the argon-ion laser for the same purpose is also discussed.

**Indexing (details)** [Cite](#)

Classification	A4235F: Inert gas lasers, B4230C: Gas lasers, A4205B: Design of specific laser systems, A4264D: Laser resonators and cavities, A4264F: Laser beam modulation, pulsing and switching, mode locking and tuning
IPC classification	H01S3/08 Mode locking; Mode suppression; H01S3/10 Controlling the intensity, frequency, phase, polarization or direction of the emitted radiation, e.g. switching, gating, modulating or demodulating
Identifier (keyword)	cavity length optimisation, Argon laser, Ar ion pulse, acousto-optically mode locked laser, discharge current measurement, second harmonic
Title	Cavity length optimisation in acousto-optically mode-locked argon-ion lasers
Authors	Ruddle, L. S.; Singworth, R.
Language	English
Language of abstract	English
Document treatment	n. Experimental
Document type	Journal Paper
Publication title	Journal of Physics E (Scientific Instruments)
Volume	18
Issue	2
Page range	111-5
ISSN	0022-3735
CODEN	JPHSAS
Publication type	Journal Paper
Publisher	UK
Notes	0022-3735/85/020121+03\$02.25, 0022-3735/85/020121+03\$02.25
Subject	PHYSICS, Electrical and Electronic Engineering
DOI	10.1088/0022-3735/18/2/009
Publication date	Feb 1985
Journal announcement date	0022-3735/85/020121+03\$02.25, 0022-3735/85/020121+03\$02.25
Publication note	0022-3735/85/020121+03\$02.25, 0022-3735/85/020121+03\$02.25
Source attribution	3npacs, © Publisher specific
Accession number	2431322
Document URL	<a href="http://search.proquest.com/professional/docview/627674204?accountid=134774">http://search.proquest.com/professional/docview/627674204?accountid=134774</a>
Copyright	1985 IEEE
Last updated	2011-02-07
Database	3npacs

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[Add tags](#)  
[Back to top](#)

[Authoritative answers](#)

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Complete Reference (All Fields)

☐ Add to selected items    🔍 Save to My Research    ✉ Email    🖨 Print    📄 Cite    📄 Export/Save    🏷 Tags

**Connectors between aluminum and copper conductors, II. By friction welding**  
Kobayashi, T.; Saito, E.; Kasahara, T.; Shinoda, T.; Nakane, F.; et al. Showa Wire and Cable Review 24. 1 (1974): 77-88.

☐ **Indexing (details)**    ☐ Cite

<b>Title</b>	Connectors between aluminum and copper conductors, II. By friction welding
<b>Author</b>	Kobayashi, T.; Saito, E.; Kasahara, T.; Shinoda, T.; Nakane, F.; Odhiai, S.; Kōmno, H.; Sekine, T.
<b>Language</b>	Japanese
<b>Language of abstract</b>	English
<b>Publication title</b>	Showa Wire and Cable Review
<b>Volume</b>	24
<b>Issue</b>	1
<b>Pages</b>	77-88
<b>Publication type</b>	Journal Paper
<b>ISSN</b>	0387-2181
<b>CODEN</b>	SODRPF
<b>Publisher</b>	Japan
<b>Subfile</b>	Electrical and Electronic Engineering
<b>Publication date</b>	1974
<b>Document type</b>	Journal Paper
<b>Accession number</b>	742819
<b>Document URL</b>	<a href="http://search.proquest.com/professional/docview/824505839?accountid=134774">http://search.proquest.com/professional/docview/824505839?accountid=134774</a>
<b>Copyright</b>	1975 IEE
<b>Database</b>	Inspec® (1898 - current)

Other formats  
Citation/Abstract  
More like this  
See similar documents

Brief Citation

## Inspec Archive Sample record

In addition it is possible to produce a tailor made record by selecting desired fields to be displayed in the Results Manager.

### Zeeman-effect and the dependence of electron-mass on the velocity

Pauli. Zeitschrift fur Physik 31. 5-6 (1925): 373-385.

#### Abstract (summary) [Translate](#)

On the assumption that the electrons of the K layer contribute essentially to the impulse-moment and to the magnetic-moment of the atom, we ought to expect an influence of electron-mass variations with velocity upon the Zeeman-effect in chemically homologous elements, particularly in the alkali metals; the Zeeman-effect would then depend notably on the atomic number. From the absence of such differences, and also on other grounds, it is concluded that the above assumption cannot be supported.

- Other formats
- Brief citation
- More like this
- See similar documents

#### Indexing (details) [Cite](#)

Classification	Light (major); A4200: Optics
Title	Zeeman-effect and the dependence of electron-mass on the velocity
Author	Pauli, W.
Language	English
Document type	Journal Paper
Publication title	Zeitschrift fur Physik
Publication date	1925
Volume	31
Issue	5-6
Pagination	373-385
Publication type	Journal Paper
Publisher	Inspec; Germany
Subfile	Physics
Publication date	1925
Source attribution	Inspec, © Publisher specific
Accession number	1925A01410
Document URL	<a href="http://search.proquest.com/professional/docview/828526336?accountid=134774">http://search.proquest.com/professional/docview/828526336?accountid=134774</a>
Copyright	2004 IEE
Last updated	2011-02-08
Database	Inspec® (1898 - current)

#### Tags [About tags](#) | [Go to My Tags](#)

Be the first to add a shared tag to this document.

Inspec Archive Record

### **Command Line Syntax**

Instead of using the Advance Search option, many Dialog commands may be entered directly into the Search box (Command line). The field to be searched can be specified as follows:

SU.(“aircraft”)

searches for aircraft as a Keyword (Thesaurus Term)

DTYPE(“conference paper”)

searches for conference papers in the Publication Types field

DTX(“economic”)

searches for papers which were assigned the Treatment Code “economic”.

All field descriptors are listed in the Inspec Prosheet which can be found on the Proquest Dialog website [www.dialog.com/prosheets/inspec\\_prosheet.pdf](http://www.dialog.com/prosheets/inspec_prosheet.pdf)

### **Post-qualification of Sets**

Each search that has been executed is assigned a set number. To modify one of these searches, rather than type out the whole query again, the set number can be used.

You can specify adjacency in post-qualification statements,

<b>Search Topic</b>	<b>#</b>	<b>Search results</b> (Jan 2012)
SU.(“aircraft”)	S1	66722
IF(“Display*”)	S2	75993
S1 and S2	S3	2877

## **Inspec Thesaurus**

The Inspec Thesaurus is a subject key to the Inspec Database which provides a powerful search aid. The 2012 edition contains approximately 18,755 terms of which some 9,722 terms are preferred terms (Subject Headings). Each Inspec record is typically assigned 5-6 Subject Headings from the Inspec Thesaurus. Subject Headings are always assigned at the most specific level.

Each Subject Heading has a number of terms associated with it. Some of these have a direct relationship with the Subject Heading. (i.e. Broader or Narrower Terms) whilst others deal with related topics (i.e. Related Terms). A Typical example of a Subject Heading entry in the Thesaurus (cold-cathode tubes) is shown below.

Terms under the “Use term for” heading are called Lead-ins. These are a part of the thesaurus but are not searchable themselves, Their purpose is to direct the user to the most appropriate Preferred Term (i.e. the Subject Heading). In this case cold-cathode tubes.

cold-cathode tubes

### **Use term for:**

- counting tubes
- dekatrons

### **Narrower terms:**

- ⊕  phototubes

### **Broader terms:**

- ⊕  electron tubes

### **Related terms:**

- ⊕  positive column

## **Finding Thesaurus Terms**

Finding appropriate Thesaurus Terms for a search requires the adoption of one of several methods:

- Browse the Thesaurus either in Advanced or Command line search.
- Look up terms in Command line search.
- Use search results from a trial search – display records either in ‘Complete Reference’ format or a format which includes the ‘Subject Headings’ field use the Results Manager to select the required format.
- Initiate a new search by clicking on any of the ‘Subject Headings’ displayed in the records retrieved by the original search.

## Online Thesaurus

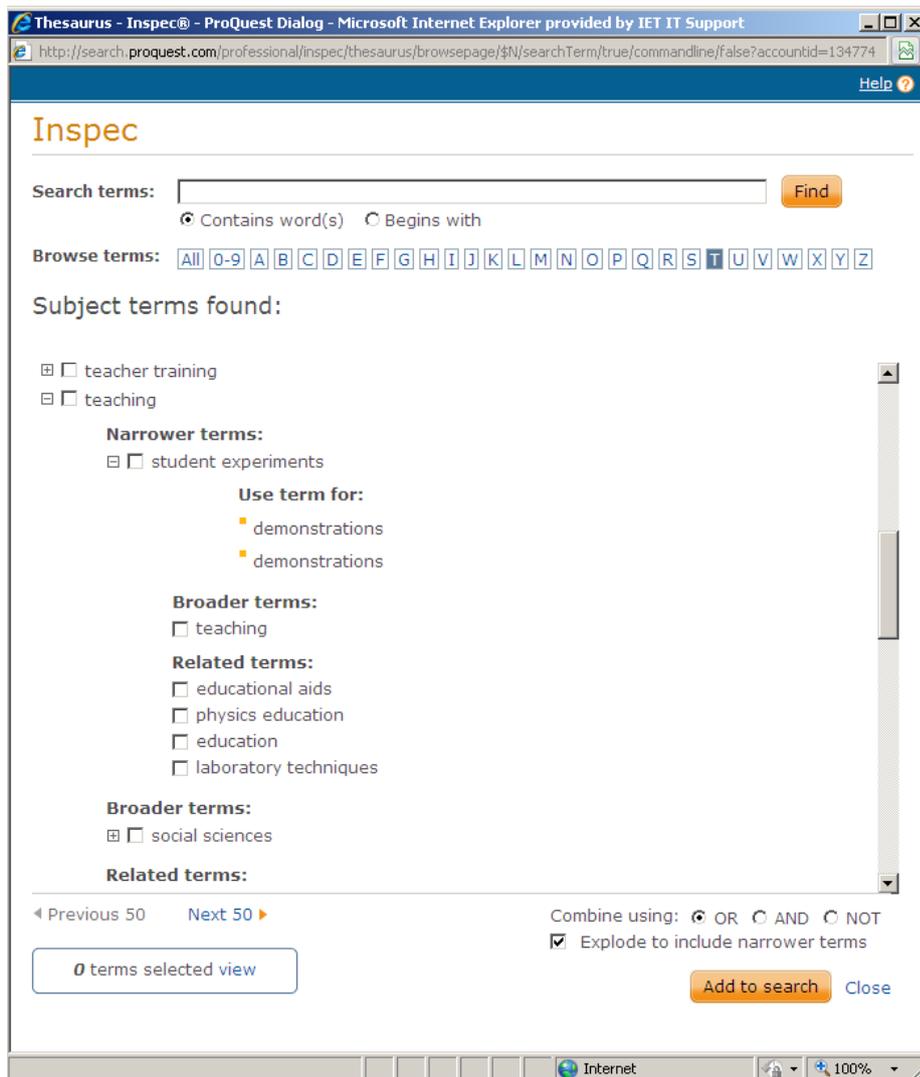
The thesaurus appears as in the picture below.

Enter one or more search terms into the search box at the top of the screen and click on the Search button to run the search.

Suggested thesaurus terms will be displayed in the context of their hierarchy. Click on the terms of interest for more details.

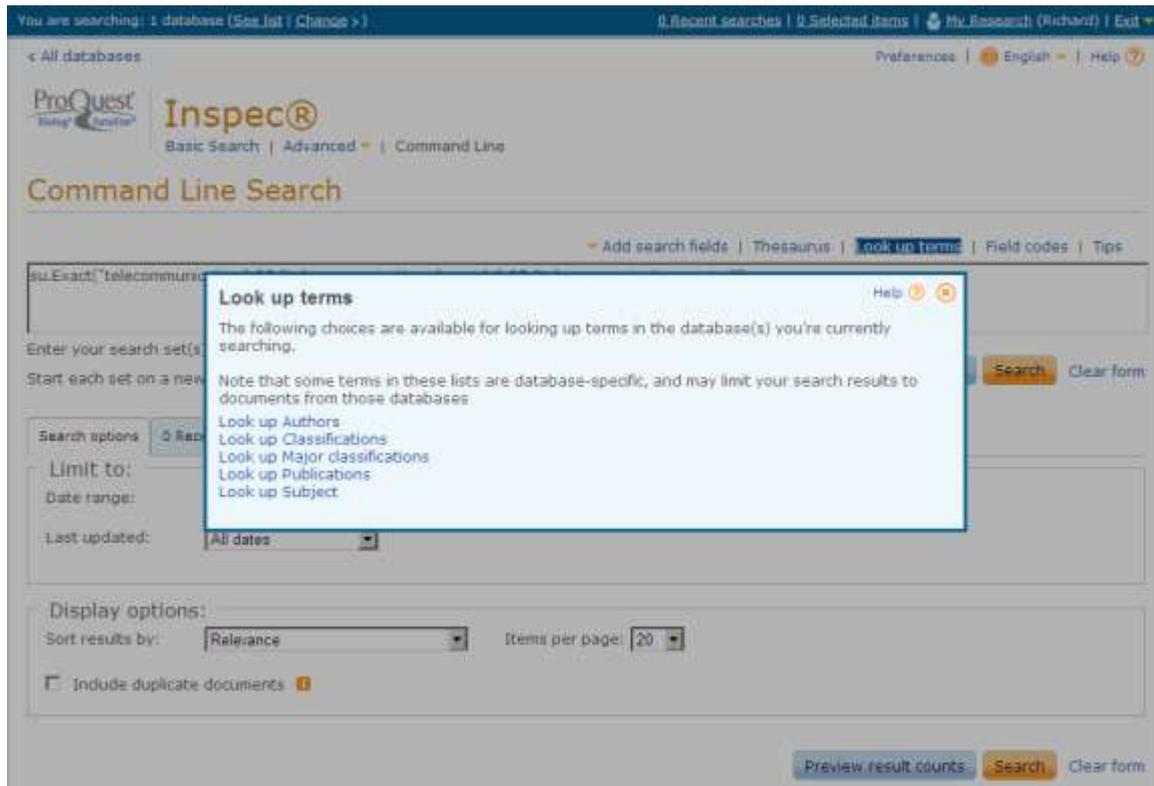
Select the desired terms. If more than one is required search them using AND or OR Boolean operators.

Use Explode to broaden your original search. Not only is the selected term searched but all its narrower terms are as well.



**Look up term**

In the “Command Line Search” Screen, click on “Look up terms” then select “Look up Subject” from the list of options.



Search for terms by entering words relevant to your subject



N.B. When searching from phrase indexes such as Author, Journal Name or Subject Headings, it is advisable to display the searched term first and then select and search it. This is because the precise phrase must be selected. Click the check-box on the left of a term to select it.

## Supplementary Headings

Supplementary Headings are words or phrases which express all the significant concepts described in a document (both implicit and explicit). They may contain additional significant concepts that are not contained in the Author Title or Abstract but are found in the full text document. Supplementary Terms are not standardised like subject Headings. A typical display of a Supplementary Terms Field in a record is shown below.

Supplementary terms are particularly useful for the searching of:

- Subjects that are new and for which no appropriate Subject Heading is available.
- Organic chemical substances (this type of substance are not covered by Chemical Indexing).
- Inorganic substances in records added to the database prior to 1987, which is the introduction date for Chemical Indexing.
- Words that have both common and technical meaning ( e.g. terminal)
- Acronyms and manufacturers brand names

## International Patent Classification Codes

Inspec has now mapped its own indexing schemes to the WIPO IPC scheme, enabling IPC codes to be assigned to relevant records. The Inspec implementation of IPC codes is a valuable tool for the prior art searcher, allowing the ready clustering of relevant non-patent literature within the same familiar code structure used for patents. This functionality can be used for Inspec records all the way back to 1969. Initial trials indicate

- that about 75% of Inspec records contain IPC codes, and that the average record with these codes has two assigned to it.
- The IPC scheme and Inspec do not cover exactly the same conceptual territory or approach.
- Consequently the level of precision of the IPC symbols applied varies depending on the relationships between the schemes and specific subjects themselves.
- To assist searches, a list of IPC codes used in Inspec is available to download. The list also contains the hierarchical context to help understand the codes and their text.
- <http://www.theiet.org/publishing/inspec/about/records/IPC.cfm>
- WIPO has kindly granted the IET the right to use IPC codes but these codes remain the copyright of the World Intellectual Property Organization.
- A typical display of the IPC code field (CP) in an Inspec record is as follows:

IPC are searched using the Command Line Search. Using the following format;

IPC(b62d 65/00) - Designing, manufacturing, e.g. assembling, facilitating disassembly, or structurally modifying motor vehicles or trailers, not otherwise provided for

The screenshot shows the ProQuest Inspec search interface. At the top, there are logos for ProQuest Dialog and Inspec, with navigation links for Basic Search, Advanced, and Command Line. The search bar contains the query 'IPC(b62d 65/00)'. Below the search bar, it indicates '13495 Results' and offers options to create alerts, RSS feeds, save searches, and download results. A toolbar provides actions like 'Save to My Research', 'Email', 'Print', 'Cite', and 'Export/Save'. The main results area shows three items:

- 1** [Cooke's tour \[automotive\]](#)  
Professional Engineering 20. 20: 24. Mechanical Engineering Publications Ltd. (Nov 7, 2007)  
Found in: Inspec® (1898 - current)  
Brief citation Citation/Abstract
- 2** [Racing start \[Mercedes-Benz AMG\]](#)  
Professional Engineering 20. 13: 32. Mechanical Engineering Publications Ltd. (Jul 11, 2007)  
Found in: Inspec® (1898 - current)  
Brief citation Citation/Abstract
- 3** [Electronica en el automovil vision a corto plazo](#)  
Mundo Electronico 385: 50-4. CETISA-Bookareu Editores S.A. (Apr 2007)  
Found in: Inspec® (1898 - current)  
Brief citation Citation/Abstract

On the right side, there is a 'Sort results by:' dropdown menu set to 'Relevance' with a 'Sort' button. Below it, a 'Narrow results by' section lists filters for Publication title, Record type, Subject, Classification, Language, and Publication date.

## **Inspec Classification**

The Inspec Classification (INSPCC) is a powerful tool which enables a search to be limited to predetermined sections of the Inspec Database.

The Inspec Classification is divided into five sections. Codes begin with

A, B, C, D or E, where:

A = Physics

B = Electrical Engineering and Electronics

C = Computers and Control Engineering

D = Information Technology

E Manufacturing and Production Engineering

A typical section from the Inspec Classification is as follows:

<b>b5210</b>	<b>Electromagnetic wave propagation</b>
	(inc. diffraction, scattering and reflection)
b5210C	Radiowave propagation
b5210E	Light propagation
b5210H	Electromagnetic wave propagation in plasma

All codes starting with b52... are also indexed as b52. As a result, it is not necessary to use truncation to retrieve a group of codes starting with b52. If the required code is longer than three characters, truncation needs to be used.

Eg.

'b5210.cc.' will retrieve only records which deal with electromagnetic wave propagation in general, whereas 'b5210#.cc.' will also retrieve all records which deal with radiowave propagation, light propagation and electromagnetic wave propagation in plasma.

At least one classification code is assigned for the main subject matter of each record, and additional codes may be assigned for subjects of secondary importance.

Codes are always assigned to the most specific level possible and, depending on the subject matter, can be assigned from one or more of the five sections of the Database. Cross-classification is common between the sections A, B and C, but not between any of these sections and section D. The reason for this is that sections A, B and C are strongly scientific and technical in nature.

whereas the D section covers more commercial and management aspects of applied technology.

## **Outline of the Inspec Classification**

### **A - Physics**

- A0 General
- A1 The physics of elementary particles and fields
- A2 Nuclear physics
- A3 Atomic and molecular physics
- A4 Fundamental areas of phenomenology
- A5 Fluids, plasmas and electric discharges
- A6 Condensed matter: structure, thermal and mechanical properties
- A7 Condensed matter: electronic structure, electrical, magnetic, optical props.
- A8 Cross-disciplinary physics and related areas of science and technology
- A9 Geophysics, astronomy and astrophysics

### **B - Electrical Engineering & Electronics**

- B0 General topics, engineering mathematics and materials science
- B1 Circuit theory and circuits
- B2 Components, electron devices and materials
- B3 Magnetic and superconducting materials and devices
- B4 Optical materials and applications, electro-optics and optoelectronics
- B5 Electromagnetic fields
- B6 Communications
- B7 Instrumentation and special applications
- B8 Power systems and applications

### **C - Computers and Control**

- C0 General and management topics
- C1 Systems and control theory
- C3 Control technology
- C4 Numerical analysis and theoretical computer topics
- C5 Computer hardware
- C6 Computer software
- C7 Computer applications

### **D - Information Technology for Business**

- D1 General and management aspects
- D2 Applications
- D3 General systems and equipment
- D4 Office automation – communications
- D5 Office automation – computing

### **E – Manufacturing and Production Engineering**

- E0 General topics in manufacturing and production engineering
- E1 Manufacturing and production
- E2 Engineering Mechanics
- E3 Industrial sectors

## **Treatment Codes**

The purpose of treatment codes (DTX) is to indicate what type of approach the author(s) have adopted to the subject they are describing (e.g. theoretical, experimental, review etc.) There are nine Treatment Codes available and they can be used to limit search results to abstracts written in a particular style. For example if reviews of technology are being sought, carry out the subject search then limit the results using General or review Treatment Code.

<b>Treatment Codes</b>
application (a)
bibliography (b)
economic (e)
general or review (g)
new development (n)
practical (p)
product review (r)
theoretical or mathematical (t)
experimental (x)

Treatment codes can be searched in the DTX field

e.g. DTX(economic)

### **Chemical Indexing**

Inspec's Chemicals field (CI) is a controlled indexing system for inorganic substances and material systems. It is designed to overcome a number of problems which arise in searching for chemical substances in uncontrolled index terms. These include:

- Non-stoichiometric compounds or alloys which may be represented in several ways, e.g. GaAlAs or Ga<sub>x</sub>Al<sub>1-x</sub>As.
- Chemical formulae that have the same spellings as common English
- words, e.g., GaP (gap).
- Some chemicals have the same letters and are differentiated by the use of upper and lower case, e.g., Co (cobalt) or CO (carbon monoxide).

*Role indicators* – Each chemical substance which is significant for the record is assigned one of three basic role indicators:

<b>role</b>	<b>Definition</b>	<b>Examples</b>
El	Element	Si; He; Fe
bin	binary (two components)	GaAs; He-Ne laser; FeMn alloy
Ss	system (three or more components)	H <sub>2</sub> SO <sub>4</sub> ; He-Ne-Ar laser; GaAlAs;

Some substances may be assigned one or more special roles which are of significance to solid-state physics. These are:

<b>int</b>	Interface system
<b>sur</b>	surface or substrate
<b>ads</b>	Adsorbate
<b>dop</b>	Dopant

The system automatically assigns the appropriate basic role and breaks the substances into their basic components.

**Examples of Chemical Substance Indexing**

H<sub>2</sub>SO<sub>4</sub>                    H2SO4-ss SO4-ss H2-ss O4-ss H-ss S-ss O-ss  
P doped Si                Si:P-bin Si-bin P-bin Si-el P-el P-dop  
Cu-Al alloy                CuAl-bin Cu-bin Al-bin  
Si-Au interface           Si,Au-int Si-int Au-int Si-el Au-el  
GaAlAs                    GaAlAs-ss Ga-ss Al-ss As-ss  
Ga<sub>x</sub>Al<sub>1-x</sub>As                GaAlAs-ss Ga-ss Al-ss As-ss  
                                  Ga<sub>0.25</sub>Al<sub>0.75</sub>As Ga0.25Al0.75As-ss                Ga0.25-ss Al0.75-ss Ga-ss Al-ss  
                                  As-ss

The user has a choice to search by combining the components together using the adj operator or, where a precise formula is known, by searching for the complete substance. For search examples see pg. 34.

It is also possible to search directly for the following groups:

Al2O3	BrO3	Fe2O4	MoO4	P2O7	TaO3
Al5O12	ClO3	Fe3O4	NbO3	P4O12	TiO3
AsO4	CO3	Fe5O12	Nb2O5	SeO3	VO3
As2O3	CrO3	Ga5O12	Nb2O7	SeO4	VO4
Bi2O3	CrO4	GeO2	NO2	SiO2	V2O5
BO3	Cr2O3	GeO3	NO3	SiO4	WO3
BO4	Cr2O7	IO3	PO3	SO3	WO4
B2O3	FeO3	MgO3	PO4	SO4	ZrO3
B3O6	Fe2O3	MnO4	P2O5	S2O3	

### **Numeric Data Indexing**

Numeric data indexing (NI) overcomes problems due to the variety of ways in which authors may express a particular value. For example, to find all the references to power stations generating between 20 and 30 MW, values in this range may be expressed as 29.2 MW, 27500 kW, 25 megawatts, 29 MWatt, etc., making it impossible to achieve comprehensive retrieval.

Inspec's numeric data indexing standardises the format:

power of 25 megawatts:	power 2.5E+07 W
range of 30 Hz to 18 kHz:	frequency 3.0E+01 to 1.8+04 Hz

Values are expressed in floating point format, e.g., 1.8E+04 for 18,000 and 9.5E-01 for 0.95. Each numerical index term has the following format:

#### **Quantity Value (to Value) Unit**

where:

- **quantity** = the physical quantity, e.g., temperature, wavelength;
- **unit** = the SI type, e.g. metre (M), hertz (Hz), kelvin (K).
- **value** = the actual value or range expressed in floating point format

A quick guide to numerical quantities and units is presented on pg.38, while search examples are shown on pg. 34.

### **Astronomical Object Indexing**

Astronomical Object designations (ASI) have been indexed in a separate field since 1995. This allows named or numbered objects to be retrieved more efficiently. The designations are of the following types:

- **Name-based acronyms.** For example, LMC is an acronym for the Large Magellanic Cloud. Objects in constellations, such as R Sct, appear with the IAU-approved three-letter abbreviation for the constellation.
- **Catalogue-based acronyms.** A designation containing an acronym for the catalogue followed by the catalogue entry number. This number may be sequential, such as NGC 204, or it may represent an approximate location in the sky, usually in terms of right ascension and declination (such as PSR 1913+16) or Galactic coordinates (such as G 345.01+1.79).
- **Positional information only.** For example, 013022+30233.

#### Notes:

- Inspec follows the guidelines produced by the International Astronomical Union. A thesaurus-type document entitled "Nomenclature of Astronomical Catalogue Designations" is available upon request from Inspec.
- For search examples using Astronomical Object Indexing, see pg. 35.

## Subject Search Examples

### Eg. 1 Cockpit displays

This example illustrates the use of Thesaurus Terms (Subject Headings)

Concept	Search Hints:	#	Search statement	Results Jan 2012
Cockpit displays	Under “Advanced Search” type the phrase ‘cockpit display?’ into the search box and select the default search fields (i.e. Title, Abstract, Key Phrase Identifiers and Subject Heading Words). Use of inverted commas forces the search engine to look for the exact phrase	1	“cockpit display?”	604
	identify appropriate Thesaurus Term by examining Subject Headings in the Search Results. Alternatively browse through the thesaurus	2	SU (“aircraft displays”)	1372
head-up displays	associated term (found via Thesaurus)	3	SU(“head-up displays”)	820
Helmet-mounted displays	associated term (found via Thesaurus)	4	SU(“helmet mounted displays”).	1539
aircraft or head-up or helmet mounted displays	Combine S2, S3 and S4.	5	S2 or S3 or S4	3243

**Eg. 2 Data analysis in biomedical environment & power industry**

This example illustrates the use of Inspec Classification Codes in navigating a search for a general topic such as data analysis to very different subject fields

<b>Concept</b>	<b>Search Hints</b>	<b>#</b>	<b>Search Statement</b>	<b>Hits</b> Jan 2012
data analysis	In Advanced Search search for "data analysis" in the default fields – Title, Abstract, Key Phrase Identifiers and Subject Headings. Use of inverted commas forces the search engine to look for the exact phrase	S1	"data analysis"	55680
	repeat the search after identification of suitable Subject Headings	S2	SU("data analysis")	39601
Biomedical environment	search for the term biomedic* in the default fields; examine classification codes assigned to the retrieved records	S3	Biomedic*	334142
	a87, b75 and c7330 are identified as relevant classification codes (use INSPCC field when searching 'cascaded' codes	S4	INSPCC(a87 OR b75 OR c7330 )	187676
data analysis in biomedical environment	Combine relevant sets	S5	S2 and S4	4608
power industry	identify relevant classification codes (search in default fields for advanced search and examine search results <b>or</b> browse through classification on p. 17)	S6	power	1646357
	B8 and c7410b codes	S7	INSPCC(b8 or c7410b)	78089
data analysis in power industry	combine relevant sets	S8	S2 and S7	401

**Fig. 3 Relative economics of coal-fired & nuclear power stations**

This e.g. illustrates the use of the Subject Heading Words and Treatment Codes

<b>Concept</b>	<b>Search Hints</b>	<b>#</b>	<b>Search Statement</b>	<b>Results</b> Jan 2012
Power stations	start in default subject fields	S1	power station?	166620
coal-fired power stations	limit S1 to records with 'coal' appearing in IF field	S2	S1 and IF(coal)	7985
nuclear power stations	limit S1 to records with nuclear appearing in IF fields	S3	S1 and IF(nuclear)	25338
economics of coal & nuclear power stations	combine the two above sets and limit to documents with a treatment type Economic	S4	S2 and S3 and DTX(Economic)	5
	alternatively, search for 'economic*' in Basic Index	S5	Economic*	383439
	combine sets using economic? as a Subject Heading Word	S6	S2 and S3 and S5	12

### Chemical Search Examples

Search topic	Search statement
Element in any role	CI("si")
Element with special role (e.g. dopant)	CI(si-dop)
Specific compound, alloy or mixture: HgCdTe In <sub>0.36</sub> in a system FeMn alloy He-Ne laser	CI(hgcdte-ss) CI(in0.36-ss) CI(femn-bin) CI(Hene-bin)
Compound with precise formula (e.g. sulphuric acid, H <sub>2</sub> SO <sub>4</sub> )	CI(h2so4-ss)
Groups of compounds (e.g. niobates)	CI(nbo3-ss)

### Numerical Search Examples

Quantity	search type	numerical value	search statement
Temperature	Quantity	Temperature	NI(Temperature)
	point value	4K	NITE("4.0e+00")
Size	point value	60mm	NISI(6.0E-02)

**Notes:**

- Numerical data must be enclosed in double quotes
- Positive and negative values within the exponential number are not distinguished. For example, both 60 mm (6.0E-02m) and 600m (6.0E+02m) will be retrieved in the above example – use identifier to verify the required set (i.e. search additionally for "60 mm".id. or "60mm".id. if you are searching for the value of 60 mm or alternatively search for "600 m".id. or "600m".id. if this is appropriate for you search.)

**Astronomical Search Examples**

Search Examples	Search Statement	Search Hints
Markarian galaxies	ASI(mrk*)	before 1995: IF(mrk or mkn) or IF(markarian or markaryan)
X-ray source which starts '3A 0322'	ASI(3a 0322*)	search for the string as indicated
Objects with positional designations	ASI(1608*)	retrieves objects in both hemispheres
	ASI(1608-52)	retrieves objects in a small patch of the sky (southern hemisphere)

**Treatment Codes/Record Types (search examples and types)**

Treatment - DTX	Document Type - DTYPE
DTX("practical") or DTX(tr)	DTYPE(Report)
application (a)	Book
bibliography (b)	book chapter
economic (e)	conference paper
general or review (g)	conference proceedings
new development (n)	Dissertation
practical (p)	journal paper
product review (r)	Patent
theoretical or mathematical (t)	Report
experimental (x)	report section
<u>Note</u> : one record may have two or more codes assigned (or none)	<u>N.B.</u> : patent coverage was discontinued in 1976

**Bibliographic Searching**

<b>Field</b>	<b>label</b>	<b>Search Hints/ Notes</b>	<b>Examples</b>	<b>Search statement</b>
Author	AU	browse through the Author Index, then select & search (preferred to searching directly)	M Zahn	AU("zahn m")
Author Affiliation	AF	search for the name of the organisation or town	Aston University AT&T	AF(aston) AF("at t")
Country of Publication	PB	search directly in the command line	France	PB(france)
Language	LA	search directly in the command line <b>or</b> use limit facilities (p. 8)	French	LA(french)
Year	YR	Limit search to certain years using the date range options in Advanced Search. Alternatively search in Command Line using YR	1998-1999	YR("1998" or "1999")
Document type  publication type	DTYPE	browse through the Publication Type Index Display via <b>or</b> search directly in the command line <b>or</b> use limit facilities (for list of publication types see p. 25 )	journal article	DTYPE(journal paper)
journal name	PUB	browse through the Journal Name Index Display, then select and search (preferred to searching directly) search in command line using adjacency operators	IEEE Spectrum (journal)	PUB("ieee spectrum")
conference information	CFTI  CG	conference title  conference location  conference start date	IBC Conference  Amsterdam  1996	CFTI(lbc)  CG(Amsterdam)  EVDT(1996-07-30)
accession number	AN	unique number is assigned to each record entering the INSPEC Database	six millionth record on the database	AN(6000000)

Field	label	Search Hints/Notes	Examples	Search statement
Document number		<p>publisher's unique document-specific identity number</p> <p>use quotations in searching replace non-alphanumeric characters with spaces</p>	S0001-4966(96)00112-9	("s0001 4966 96 00112 9")
report number	DISNUM	<p>use adjacent operators</p> <p>use quotations for searching number(s)</p>	ANSI/IEEE Std 802.11, 1999 Edition	DISNUM(ansi ieee 1999)
CODEN	CD	<p>assigned to journal records;</p> <p>can change over the lifetime of a journal</p>	APOPAI (Applied Optics)	CD(apopai)
ISSN	ISSN	<p>assigned to journal records;</p> <p>can change over the lifetime of a journal</p>	0003-6935	ISSN(0003-6935)
Update Code	LUPD	<p>eight-digit code indicating the year, the month and the week of the update;</p> <p>can be selected from Update Code Index Display (via )</p> <p>or search in command line</p> <p>latest update is a limit function on the main search screen (p. 8 )</p>	First update in May of 1998	LUPD(19980501)

**Quick Guide to Numerical Quantities and Their Units**

Quantity	Unit	Quantity	Unit
Age	Yr	Loss	dB
Altitude	M	magnetic flux density	T
apparent power	VA	Mass	Kg
bandwidth	Hz	memory size	Byte
bit rate	bit/s	noise figure	dB
byte rate	Byte/s	picture size	Pixel
capacitance	F	Power	W
computer execution rate	IPS	Pressure	Pa
computer speed	FLOPS	printer speed	Cps
conductance	S	radiation absorbed dose	Gy
Current	A	radiation dose equivalent	Sv
Depth	M	radiation exposure	C/kg
Distance	M	Radioactivity	Bq
efficiency	Percent	reactive power	VAr
electrical conductivity	S/m	Resistance	Ohm
electrical resistivity	Ohm	Size	M
electron volt energy	eV	stellar mass	Msol
Energy	J	storage capacity	Bit
frequency	Hz	Temperature	K
Gain	dB	Time	S
galactic distance	Pc	Velocity	m/s
geocentric distance	M	Voltage	V
heliocentric distance	AU	Wavelength	M
		word length	Bit