

Knovel Library: Preparing your Technical Users

Inforum 2007

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Knovel Corporation
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Knovel Features

- ④ Knovel is the worlds leader with the most exhaustive aggregated collection of engineering and science content and tool set.
- ④ Knovel has 1200 titles and works with over 40 publishers and learned societies to provide comprehensive and reliable content.
- ④ Knovel includes additional features
 - equation plotters
 - graph digitizers
 - interactive tables
 - export of data from all interactive content, WYSIWYG

Full-Text Search



The screenshot shows the Knovel website's search interface. At the top, there is a navigation bar with links for Knovel Home, Product Info, Knovel Products, Demos, Contacts, and Help Center. Below this is a secondary navigation bar with links for My Knovel, Advanced Search, Search Results, Subject Areas, Publishers, and Preferences. The main search area features a search input field with a "Search" button. Below the input field, there is an example search query: "polyphenylene oxide" AND chemical resist*. There are also dropdown menus for "All Text" and "All Subject Areas". Below these are radio buttons for "Entire Knovel Library" (selected) and "My Subscription". To the right of the search area, there is a "Welcome!" message and a link to "Explore Knovel Library Features". Below the search area, there is a "Browse Subject Areas in:" section with two tabs: "Entire Knovel Library" (selected) and "My Subscription". Under the "Entire Knovel Library" tab, there is a list of subject areas, each with a right-pointing arrow and a star icon. The subject areas are: Adhesives, Coatings, Sealants & Inks; Aerospace & Radar Technology; Biochemistry, Biology & Biotechnology; Ceramics & Ceramic Engineering; Chemistry & Chemical Engineering; AICHE/CCPS Industrial Safety Supplement; Civil Engineering & Construction Materials; Electrical & Power Engineering; Electronics & Semiconductors; Sensors Technology Supplement; Environment & Environmental Engineering; Food Science; General Engineering & Engineering Management; Systems Engineering Supplement; Mechanics & Mechanical Engineering; Metals & Metallurgy; Oil & Gas Engineering; Oil & Gas Supplement; Pharmaceuticals, Cosmetics & Toiletries; Plastics & Rubber; Plastics & Rubber Supplement; Safety & Industrial Hygiene; and Textiles. At the bottom of the page, there is a footer with links for Corporate Home, Home, Product Info, Contacts, and Help Center, and a copyright notice: Copyright © 2007 Knovel Corporation.

Full-Text Search Title Hits

[My Knovel](#) | [Advanced Search](#) | [Search Results](#) | [Subject Areas](#) | [Publishers](#) | [Preferences](#)

Modify Search Criteria or [Reset](#) to Perform a New Search.

Example: "polyphenylene oxide" AND chemical resist*

[Advanced Search](#)
[Search Tips](#)

All Text
All Subject Areas

Entire Knovel Library
 My Subscription

Search Query: ("fiber reinforcement")

No. of Titles Retrieved: 143

Browse Search Results in: [Entire Knovel Library](#) | [My Subscription](#)

[All Titles](#) | [New Titles](#) | [Updated Titles](#) | [Premium Titles](#) | [Titles with Productivity Tools](#) | [Databases](#)

Sort by: Relevancy | Subject | Title Name | Popularity

Titles	Relevancy
Military Handbook - MIL-HDBK-754(AR): Plastic Matrix Composites with Continuous Fiber Reinforcement	100%
ANTEC 2006 Plastics: Annual Technical Conference Proceedings NEW	37%
Concrete and Masonry Databook	37%
Magnesium Technology - Metallurgy, Design Data, Applications	37%
Injection Molding Handbook (3rd Edition) [x]	37%
Plastics Design Handbook	37%
Fiber Reinforced Ceramic Composites	37%
ANTEC 2001 Plastics: The Lone Star, Volume 3: Special Areas	37%
Plastic Applications Database ★ [grid]	25%
Marks' Standard Handbook for Mechanical Engineers (10th Edition) [grid] [x]	16%
Handbook of Composites (2nd Edition) Updated	13%
Handbook of Plastics Joining	13%
ANTEC 2005 Plastics: Annual Technical Conference, Volume 3: Special Areas	12%
Polymers - An A-Z Reference [x]	12%

Full-Text Search

[Advanced Search](#) | [Search Results](#) | [Subject Areas](#) | [Publishers](#) | [Preferences](#)

Modify Search Criteria or [Reset](#) to Perform a New Search.

Example: "polyphenylene oxide" AND chemical resist*

All Text ▼

All Subject Areas ▼

Entire Knovel Library
 My Subscription
 This Title Only

Search

[Advanced Search](#)

[Search Tips](#)


Search Query: ("fiber reinforcement")

Search Results in this Title: 9 Data Hit(s)

No. of Titles Retrieved: 143

Browse Search Results:

Show: Hits Only Hits in Context Popular Hits Table of Contents



Marks' Standard Handbook for Mechanical Engineers (10th Edition)

Edited by: Avallone, E.A.; Baumeister, T., III © 1996 McGraw-Hill | [Title Details](#) | [Citation](#) | [Ordering Info](#)

Description: Fully updated to reflect current industry standards and practices, this edition of the classic handbook known simply as "Marks" offers more than 100 essential mechanical engineering topics - from the mechanics of solids and fluids to machine elements, from electrical and electronics engineering to environmental control, and from industrial engineering to instruments and controls.

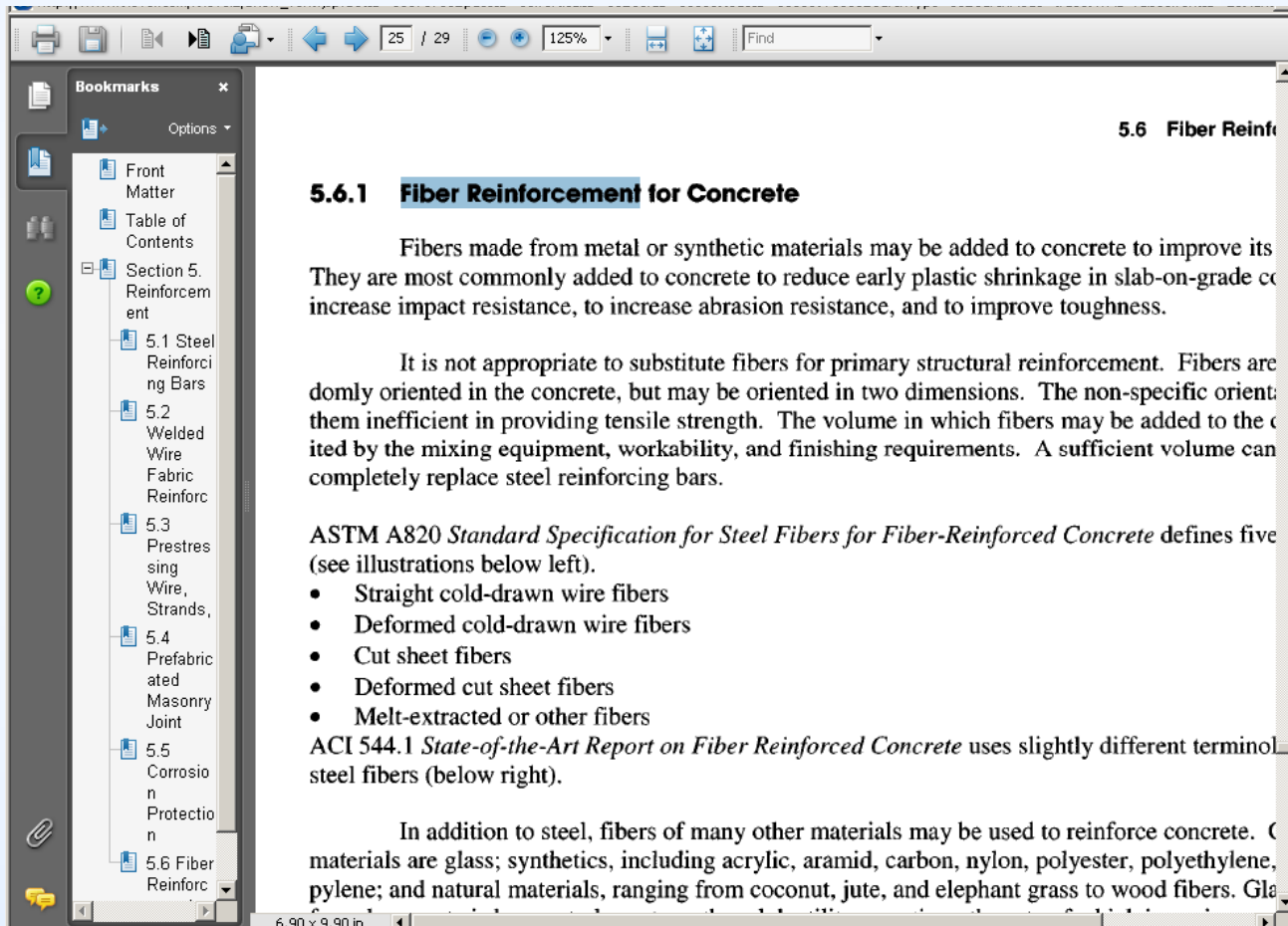
Sections Retrieved	Relevancy	Data (Records)	Text (Pages)
6.13.1 Mechanical Properties of Typical Fibers	100%	Table (9)	

Pages: 1

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Text Hit With Highlighting




The screenshot shows a PDF viewer interface. On the left is a 'Bookmarks' sidebar with a tree view containing: Front Matter, Table of Contents, Section 5. Reinforcement (expanded), 5.1 Steel Reinforcing Bars, 5.2 Welded Wire Fabric Reinforcement, 5.3 Prestressing Wire, Strands, 5.4 Prefabricated Masonry Joint, 5.5 Corrosion Protection, and 5.6 Fiber Reinforcement. The main document area shows the title '5.6 Fiber Reinforcement' at the top right. Below it is the section header '5.6.1 Fiber Reinforcement for Concrete', where the words 'Fiber Reinforcement' are highlighted in blue. The text below reads: 'Fibers made from metal or synthetic materials may be added to concrete to improve its strength. They are most commonly added to concrete to reduce early plastic shrinkage in slab-on-grade concrete, to increase impact resistance, to increase abrasion resistance, and to improve toughness.' A paragraph follows: 'It is not appropriate to substitute fibers for primary structural reinforcement. Fibers are randomly oriented in the concrete, but may be oriented in two dimensions. The non-specific orientation is inefficient in providing tensile strength. The volume in which fibers may be added to the concrete is limited by the mixing equipment, workability, and finishing requirements. A sufficient volume can completely replace steel reinforcing bars.' A sub-section header 'ASTM A820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete defines five types of steel fibers (see illustrations below left):' is followed by a bulleted list: '• Straight cold-drawn wire fibers', '• Deformed cold-drawn wire fibers', '• Cut sheet fibers', '• Deformed cut sheet fibers', and '• Melt-extracted or other fibers'. The next paragraph states: 'ACI 544.1 State-of-the-Art Report on Fiber Reinforced Concrete uses slightly different terminology for steel fibers (below right):' followed by another paragraph: 'In addition to steel, fibers of many other materials may be used to reinforce concrete. Common materials are glass; synthetics, including acrylic, aramid, carbon, nylon, polyester, polyethylene, polypropylene; and natural materials, ranging from coconut, jute, and elephant grass to wood fibers. Glass fibers are used in concrete to improve strength and durability. They are most commonly used in concrete to improve strength and durability. They are most commonly used in concrete to improve strength and durability.'

Fielded / Advanced Search

- ④ Fielded search supports searching up to three (3) data fields simultaneously
- ④ Fields linked by Boolean operators NOT, AND, OR
- ④ Fielded search may be accessed by clicking on either of the “Advanced Search” links on any page in the Knovel Library

Accessing Fielded Search



Knovel[®] Logged in as: Deborah Samkoff ([My Subscription](#)) [Log In](#) [Log Out](#)

[Knovel Home](#) [Product Info](#) [Knovel Products](#) [Demos](#) [Contacts](#) [Help Center](#)

[My Knovel](#) [Advanced Search](#) [Search Results](#) [Subject Areas](#) [Publishers](#) [Preferences](#)

Advanced Search

Search

Example: "polyphenylene oxide" AND chemical resist*

All Text

All Subject Areas

Entire Knovel Library My Subscription

Browse Subject Areas in: [Entire Knovel Library](#) [My Subscription](#)

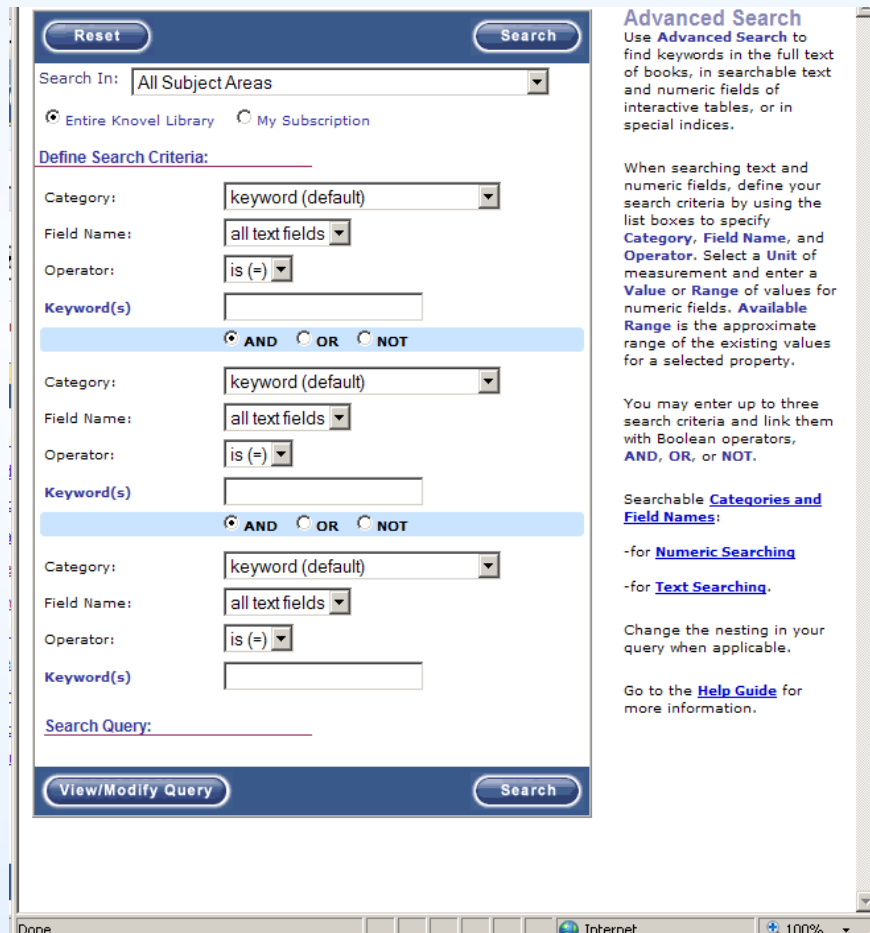
[All Titles](#) [New Titles](#) [Updated Titles](#) [Coming Soon](#) [Titles with Productivity Tools](#) [Databases](#) [Premium Titles](#) [Supplements](#) [Collections](#)

- ▶ [Adhesives, Coatings, Sealants & Inks](#)
- ▶ [Aerospace & Radar Technology](#)
- ▶ [Biochemistry, Biology & Biotechnology](#)
- ▶ [Ceramics & Ceramic Engineering](#)
- ▶ [Chemistry & Chemical Engineering](#)
- ▶ [AIChE/CCPS Industrial Safety Supplement](#) ★
- ▶ [Civil Engineering & Construction Materials](#)
- ▶ [Electrical & Power Engineering](#)
- ▶ [Electronics & Semiconductors](#)
- ▶ [Sensors Technology Supplement](#) ★
- ▶ [Environment & Environmental Engineering](#)
- ▶ [Food Science](#)
- ▶ [General Engineering & Engineering Management](#)
- ▶ [Systems Engineering Supplement](#) ★
- ▶ [Mechanics & Mechanical Engineering](#)
- ▶ [Metals & Metallurgy](#)
- ▶ [Oil & Gas Engineering](#)
- ▶ [Oil & Gas Supplement](#) ★
- ▶ [Pharmaceuticals, Cosmetics & Toiletries](#)
- ▶ [Plastics & Rubber](#)
- ▶ [Plastics & Rubber Supplement](#) ★
- ▶ [Safety & Industrial Hygiene](#)
- ▶ [Textiles](#)

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Fielded Search Input Window



The screenshot shows a web-based search interface with a dark blue header and footer. The main content area is white. At the top, there are 'Reset' and 'Search' buttons. Below them is a 'Search In:' dropdown menu set to 'All Subject Areas'. There are two radio buttons: 'Entire Knovel Library' (selected) and 'My Subscription'. The 'Define Search Criteria:' section contains three identical search criteria blocks. Each block has a 'Category:' dropdown (set to 'keyword (default)'), a 'Field Name:' dropdown (set to 'all text fields'), an 'Operator:' dropdown (set to 'is (=)'), and a 'Keyword(s)' text input field. Between the blocks are blue bars with radio buttons for 'AND', 'OR', and 'NOT'. At the bottom of the criteria section is a 'Search Query:' text input field. The footer contains 'View/Modify Query' and 'Search' buttons. On the right side, there is a 'Advanced Search' section with a title and a paragraph of text. Below that is another paragraph of text. Further down is a section titled 'Searchable Categories and Field Names:' with two links: '-for Numeric Searching' and '-for Text Searching.'. At the bottom of the right side is a paragraph of text and a link to the 'Help Guide'.

Advanced Search
Use **Advanced Search** to find keywords in the full text of books, in searchable text and numeric fields of interactive tables, or in special indices.

When searching text and numeric fields, define your search criteria by using the list boxes to specify **Category**, **Field Name**, and **Operator**. Select a **Unit** of measurement and enter a **Value** or **Range** of values for numeric fields. **Available Range** is the approximate range of the existing values for a selected property.

You may enter up to three search criteria and link them with Boolean operators, **AND**, **OR**, or **NOT**.

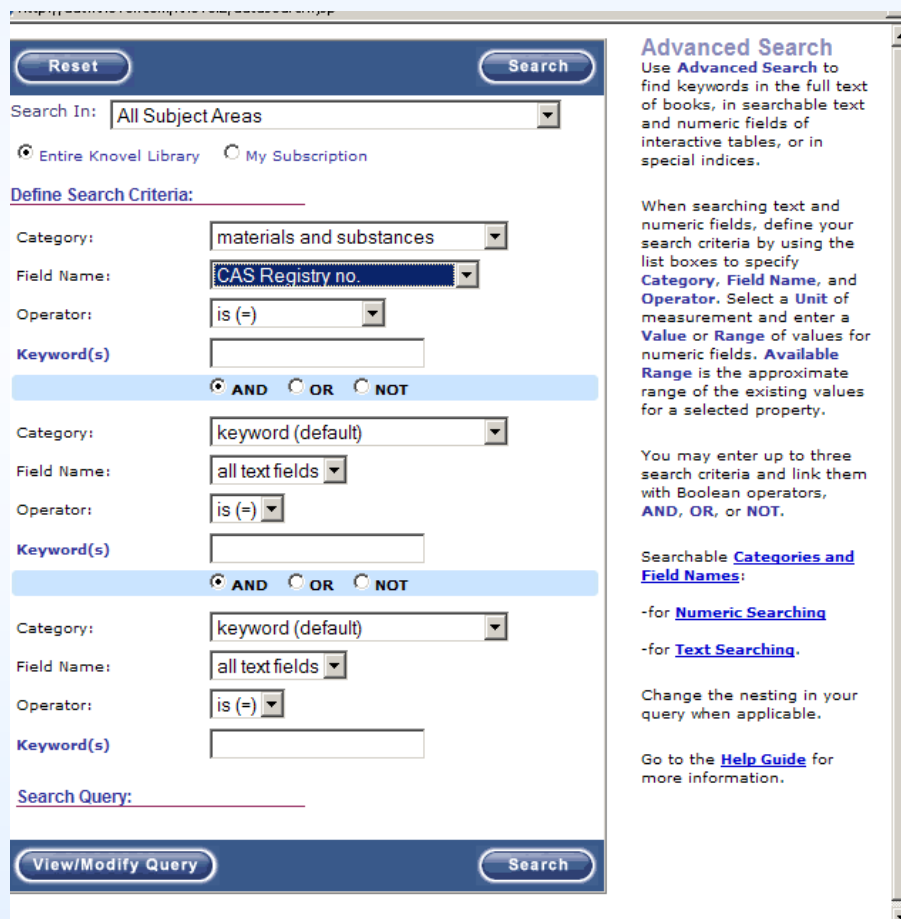
Searchable **Categories and Field Names**:

- for [Numeric Searching](#)
- for [Text Searching](#).

Change the nesting in your query when applicable.

Go to the [Help Guide](#) for more information.

Fielded Search Query Input



Reset **Search**

Search In:

Entire Knovel Library My Subscription

Define Search Criteria:

Category:

Field Name:

Operator:

Keyword(s)

AND OR NOT

Category:

Field Name:

Operator:

Keyword(s)

AND OR NOT

Category:

Field Name:

Operator:

Keyword(s)

Search Query: _____

View/Modify Query **Search**

Advanced Search

Use **Advanced Search** to find keywords in the full text of books, in searchable text and numeric fields of interactive tables, or in special indices.

When searching text and numeric fields, define your search criteria by using the list boxes to specify **Category**, **Field Name**, and **Operator**. Select a **Unit** of measurement and enter a **Value** or **Range** of values for numeric fields. **Available Range** is the approximate range of the existing values for a selected property.

You may enter up to three search criteria and link them with Boolean operators, **AND**, **OR**, or **NOT**.

Searchable **Categories and Field Names**:

- for **Numeric Searching**
- for **Text Searching**.

Change the nesting in your query when applicable.

Go to the **Help Guide** for more information.

Fielded Search Table Hits

Knovel Library Home Product Info Knovel Products Demos Contacts Help Center

Advanced Search Search Results Subject Areas Publishers Preferences

Modify Advanced Search Criteria or Perform a New Basic Search.

Search

Example: "polyphenylene oxide" AND chemical resist*

All Text

All Subject Areas

Entire Knovel Library
 My Subscription
 This Title Only

Advanced Search Search Tips

Search Query: (material or substance name = stainless steel) and (corrosion rate <= 10 mpy) and (alyl alcohol)
 Search Results in this Title: 10 Data Hit(s)
 No. of Titles Retrieved: 1

Browse Search Results:

Show: Hits Only Hits in Context Popular Hits Table of Contents

Corrosion Data Survey Online

Corrosion Survey Database (COR-SUR)

By: NACE International, The Corrosion Society © 2002 NACE International | [Title Details](#) | [Citation](#) | [Ordering Info](#)

Description: This database is a collection of the results from numerous literature references reporting the effects of exposing 87 metal and nonmetal materials to over 1500 different exposure media at various temperatures and concentrations resulting in 28,000 pairs of exposed material and medium. The results are presented in searchable tables, and can be browsed by material or exposure medium.

Sections Retrieved	Relevancy	Data (Records)	Text (Pages)
Austenitic Cr-Ni Stainless Steel (18-8; 304/ 304L/ 347): Corrosion Data	100%	Table (2)	
Austenitic Cr-Ni-Mo Stainless Steel (17-12-3; 316L/ 317L): Corrosion Data	100%	Table (2)	
Cr Stainless Steel (12Cr): Corrosion Data	100%	Table (2)	
Cr Stainless Steel (17Cr): Corrosion Data	100%	Table (2)	
Superferritic Stainless Steel (26-1): Corrosion Data	100%	Table (2)	

Pages: 1

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Table Hit Filtered by Search Query Criteria

Superferritic Stainless Steel (26-1)

Table: Superferritic Stainless Steel (26-1) Pages: 1 Jump to: [GO](#)

Table Type: Interactive Table Display: Data Found | [All Data](#)

Search Query: (material or substance name = stainless steel) and (corrosion rate <= 10 mpy) and (allyl alcohol)

Total Number of Search Hits: 2

Total Number of Rows: 576

Number of Hidden Columns: 5

Select Rows
 Filter Data in Table
 A-Z Sort Z-A Table
 Show/Hide Columns
 Change Column Order
 Print Table
 Export Table
 View Table Notes
 Back To Table of Contents
 Unit Converter
 Help

<input checked="" type="checkbox"/>	no.	material or substance name	exposure medium	exposure medium CAS RN	exposure medium formula	conc. (%)	temp. (°F)	corrosion rate (mpy)	reference	no.
<input type="checkbox"/>	7	Superferritic Stainless Steel (26-1)	allyl alcohol	107-18-6	C ₃ H ₆ O	>5	25 – 225	<2	207,215,219	7
<input type="checkbox"/>	8	Superferritic Stainless Steel (26-1)	allyl alcohol	107-18-6	C ₃ H ₆ O	100	25 – 325	<2	207,215,219	8

Corrosion Survey Database (COR-SUR)
© 2002 NACE International

Interactive Table

6.13.1 Mechanical Properties of Typical Fibers

Table: 6.13.1 Mechanical Properties of Typical Fibers

Table Type: Interactive Table

Search Query: ("fiber reinforcement")

Total Number of Search Hits: 9

Total Number of Rows: 9

Number of Hidden Columns: 3

Pages: 1 Jump to: [GO](#)

Display: Data Found | [All Data](#)

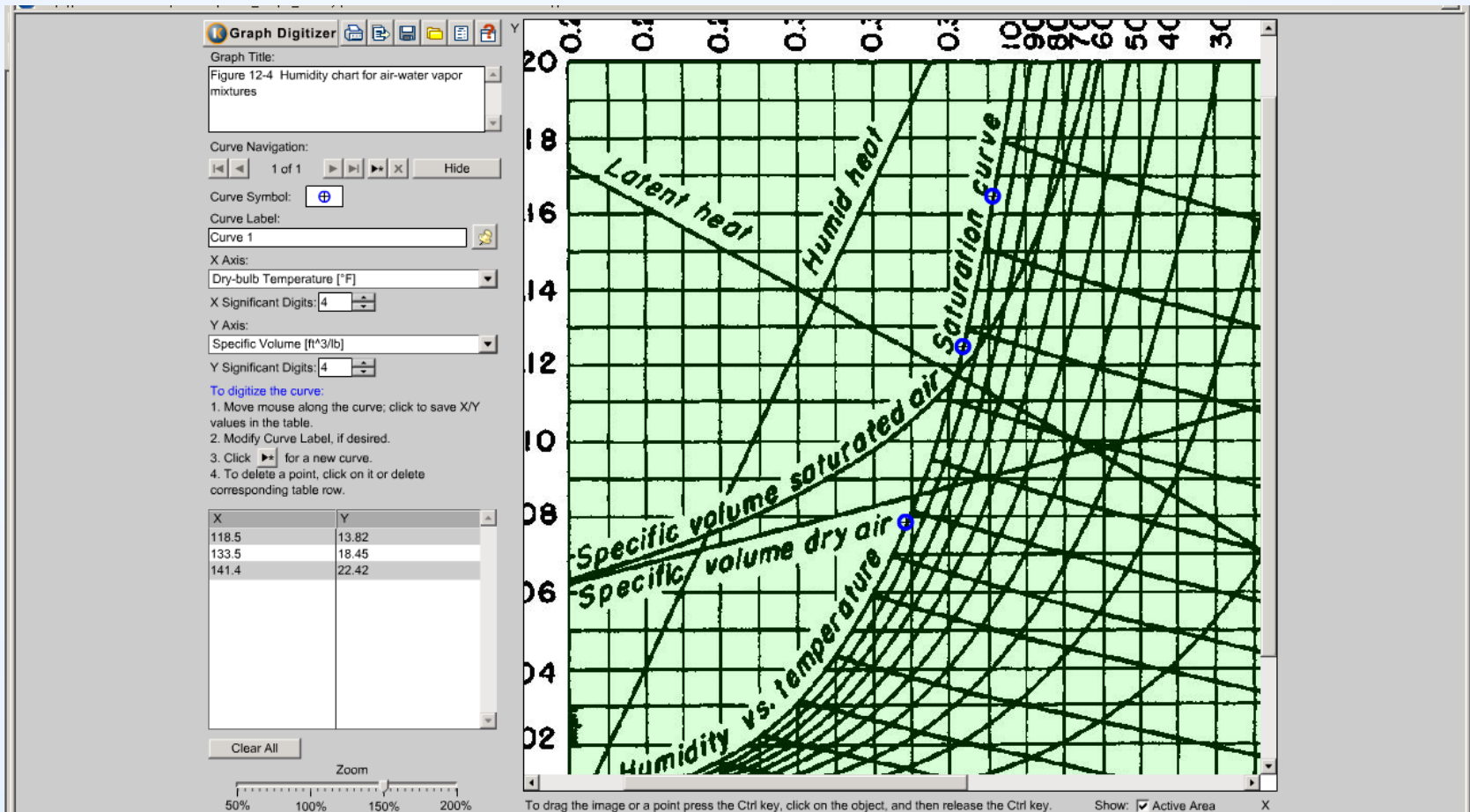
Select Rows
 Filter Data in Table
 A-Z Sort Table
 Show / Hide Columns
 Change Column Order
 Print Table
 Export Table
 View Associated Text
 Back To Table of Contents
 Unit Converter
 Help

<input checked="" type="checkbox"/>	no.	material or substance name	fiber diameter (μm)	density (g/cm ³)	ultimate tensile strength (GPa)	tensile modulus (GPa)
<input type="checkbox"/>	1	E-glass fiber reinforcement	8 – 14	2.54	3.45	72.4
<input type="checkbox"/>	2	S-glass fiber reinforcement	8 – 14	2.49	4.58	86.2
<input type="checkbox"/>	3	Polyethylene fiber reinforcement	10 – 12	0.97	2.7	87
<input type="checkbox"/>	4	Aramid (Kevlar 49) fiber reinforcement	12	1.44	3.62	130
<input type="checkbox"/>	5	HS carbon, T300 fiber reinforcement	7	1.74	3.54	230
<input type="checkbox"/>	6	AS4 carbon fiber reinforcement	7	1.8	4	228
<input type="checkbox"/>	7	1M7 carbon fiber reinforcement	5	1.8	5.41	276
<input type="checkbox"/>	8	GY80 carbon fiber reinforcement	8.4	1.96	1.86	572
<input type="checkbox"/>	9	Boron fiber reinforcement	50 – 203	2.6	3.44	407

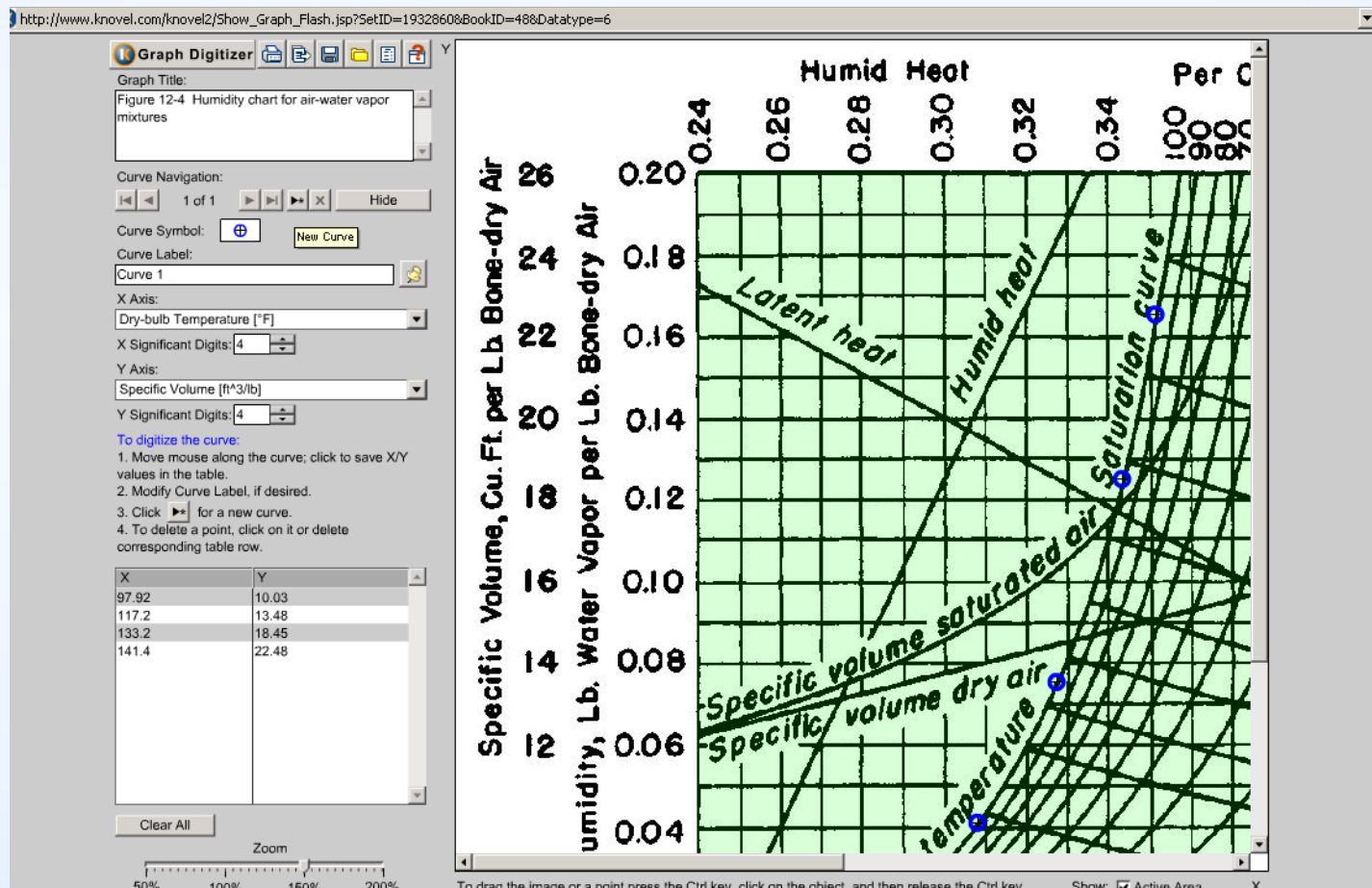
Marks' Standard Handbook for Mechanical Engineers (10th Edition)

© 1996 McGraw-Hill

Interactive Graph With Curve Digitized



Interactive Graph: New Curve Button



Exported Graph, With Digitized Points

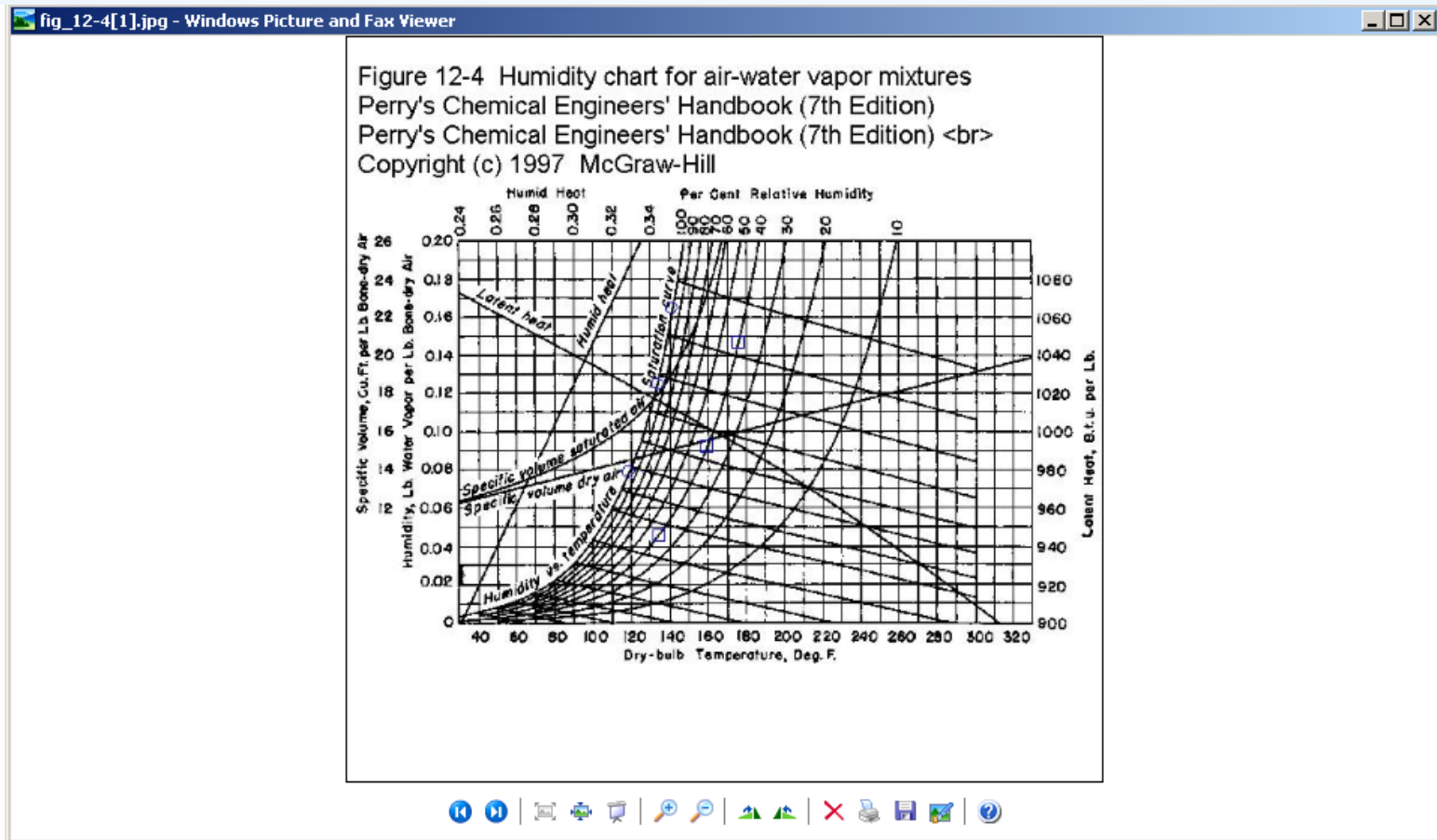



Table Hit With Equation Plotter

Table 2-6 Vapor Pressure of Inorganic and Organic Liquids

Table: Table 2-6 Vapor Pressure of Inorganic and Organic Liquids
 Table Type: Interactive Table
 Search Query: ("vapor pressure" and toluene)
 Total Number of Search Hits: 1
 Total Number of Rows: 231

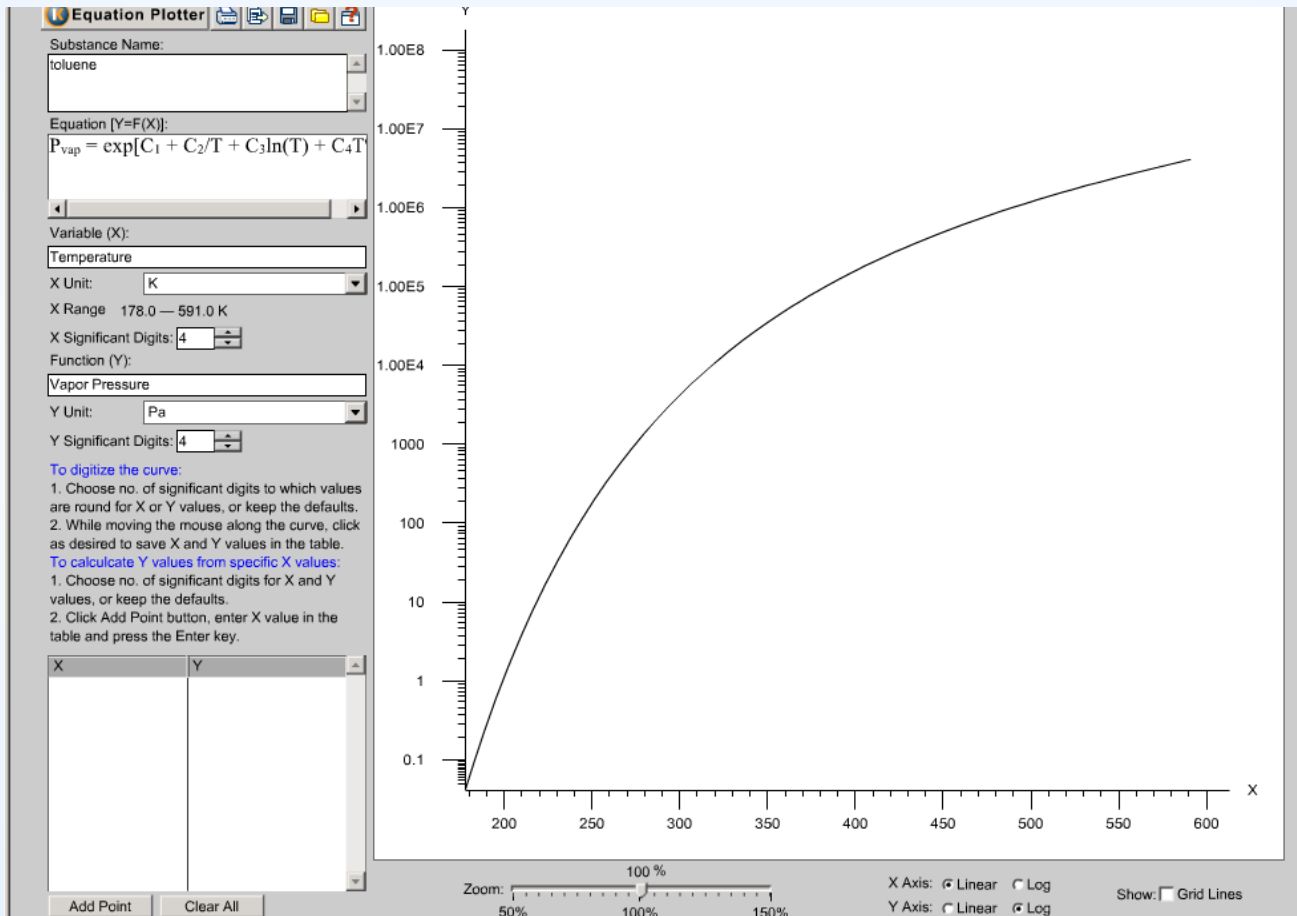
Pages: 1 Jump to: **GO**
 Display: Data Found | [All Data](#)

Select Rows
 Filter Data in Table
 A-Z Sort Z-A Table
 Show / Hide Columns
 Change Column Order
 Print Table
 Export Table
 View Associated Text
 Back To Table of Contents
 Unit Converter
 Help

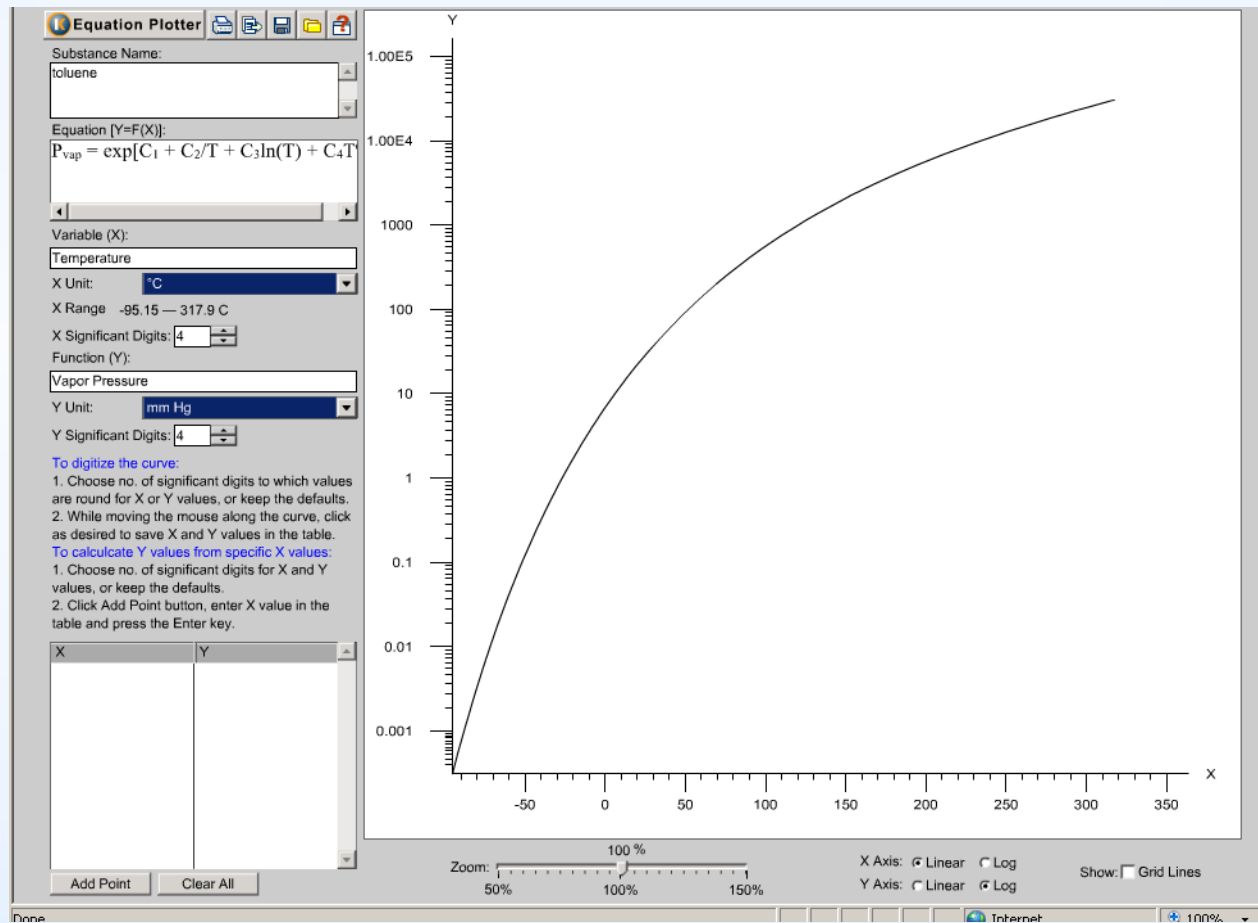
<input checked="" type="checkbox"/>	no.	equation plotter	material or substance name	mol. formula	CAS no.	C1	C2	C3	C4	C5	min. temp. (K)	vapor pressure @ min. temp. (Pa)	max. temp. (K)	vapor pressure @ max. temp. (Pa)	no.
<input type="checkbox"/>	68		toluene	C ₇ H ₈	108-88-3	80.877	-6902.4	-8.7761	5.8034E-06	2	178.18	4.2348E-02	591.8	4.1012E+06	68

Perry's Chemical Engineers' Handbook (7th Edition)
 © 1997 McGraw-Hill

Equation Plotter Window

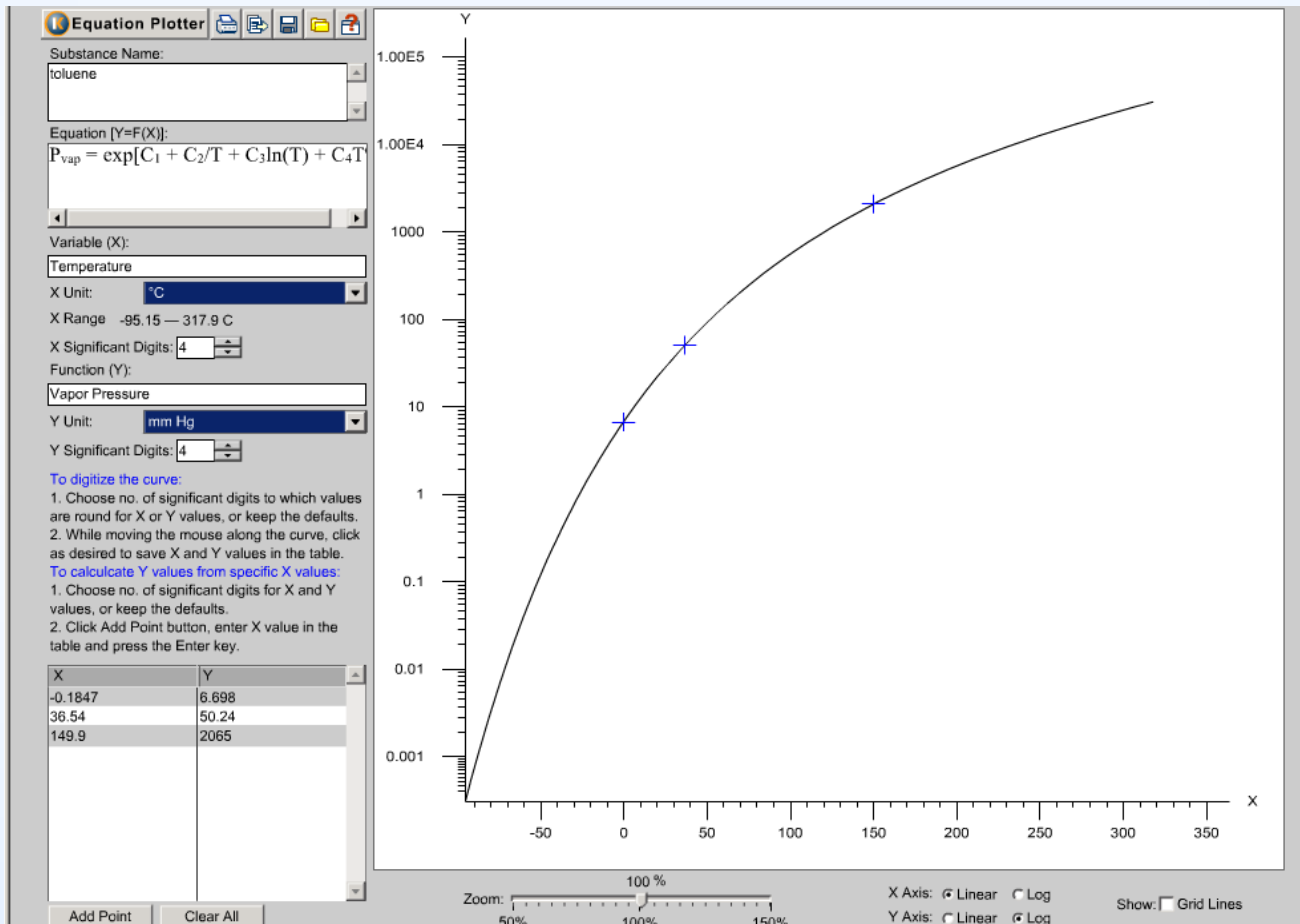


Changing Axis Display: Y Axis

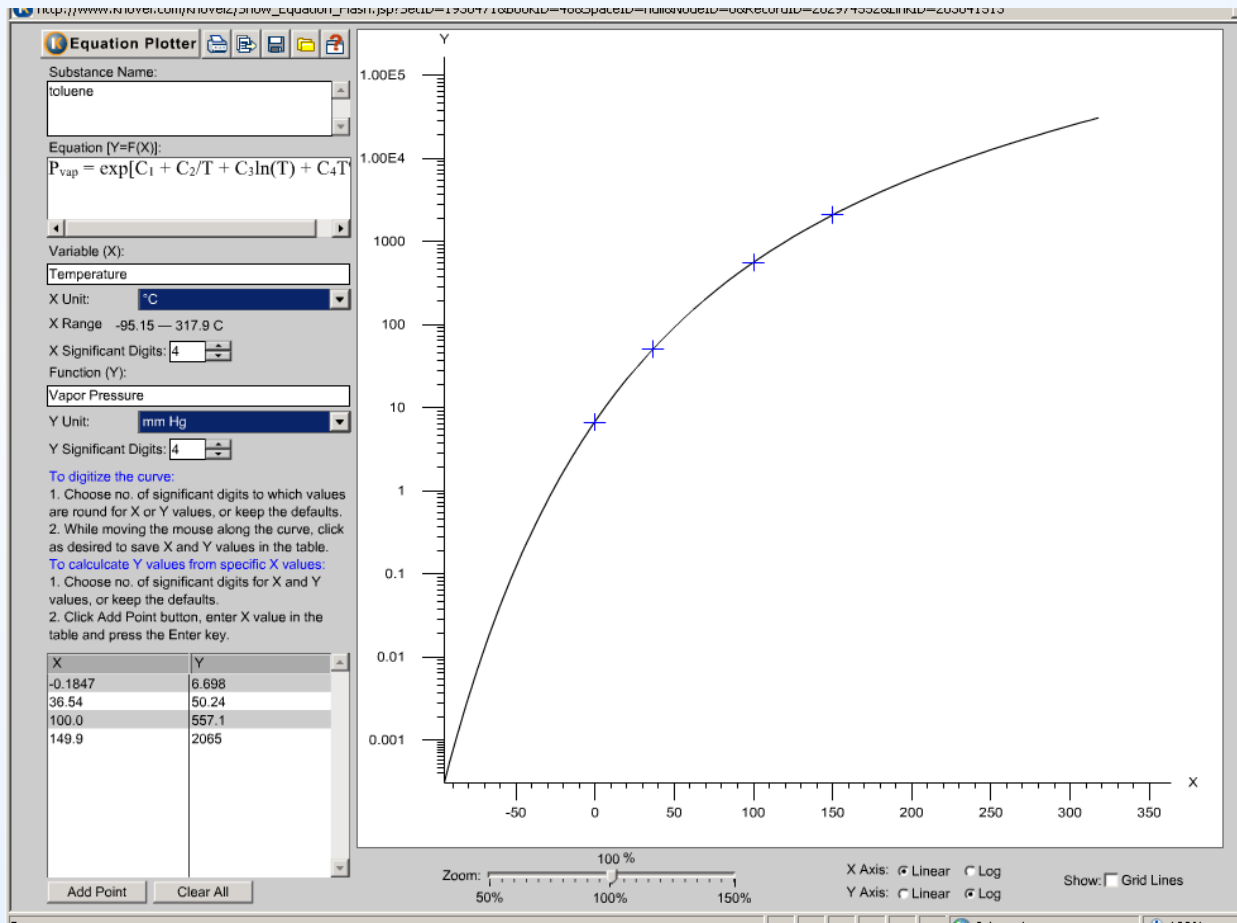


Equation Plotter With Curve Points

Digitized



New Point Added to Table and Curve



Coming in 2007

- Ⓚ 500 new titles
- Ⓚ New publisher agreements for major titles, stay tuned for more details
- Ⓚ Counter Compliant reports
- Ⓚ Search enhancements to allow industry standard search terms.
- Ⓚ Graph Digitizer enhancements
- Ⓚ Flash upgrades
- Ⓚ Math enhancements for the Equation Plotter and Unit Converter.
- Ⓚ Relevancy Ranking improvements.
- Ⓚ New math functionality, beta testing.
- Ⓚ Enhanced search performance.

Why our customers use Knovel



"In a world of static and boring e-books, I find Knovel to be unique in its capacity to be dynamic and interactive. To me, it seems like the next generation of e-books is already here, and I'm just waiting for the others to catch up!"

Domenic Iannello
Datasets Librarian
RMIT University Library
Swanston Street Campus

"Feature wise, Knovel is highly developed to meet the special needs of engineers and scientist. It has a fully searchable environment, allowing searching for properties and equations. Other special features such as Graph Plotter are not available in other systems."

Janny Lai
Assiatant Librarian, Collection development
University of Hong Kong Libraries

Thank You

-  Questions?
-  Comments?