

## **AC 2010-1938: NEW KNOVEL INTERFACE**

### **Sasha Gurke, Knovel Corporation**

Sasha Gurke is Sr. Vice President of Knovel Corp. He was one of the co-founders of Knovel in 1999, having joined a predecessor company in 1996 as VP Product Development. In this position, Sasha has led the development of Knovel award-winning e-book library, focusing on product development, functional design, information architecture, search logic and production.

Prior to Knovel, Sasha spent 15 years with Chemical Abstract Service/American Chemical Society in Product Development and Editorial.

Sasha is a trained Chemist and Process Engineer with years of industrial and lab experience. His major contribution to Knovel's success was application of this experience in the development of information products for applied scientists and engineers.

## New Knovel Interface

### Abstract

In the past year Knovel interface has undergone several facelifts and some more serious changes. This paper discusses user centric approach to design and implementation of new graphic user interface. New features, including Knovel Lab, Data Search, autocomplete, spell checker, browse interface, My Knovel and Knovel Math are discussed. Current work and plans for the future enhancements, including expansion of content coverage, are discussed as well.

### What's New at Knovel?

First a brief overview of Knovel for those who are not familiar with this award-winning, Web-based library of e-references (e-books and databases) for applied scientists and engineers.

Knovel adds value to e-books by making them interactive. Interactive book tools include tables, graphs and equations. There are several interactive tools, including:

- *Graph Digitizer* for digitizing graphs displayed as calibrated raster images stored in Knovel database
- *Graph Plotter* for plotting graphs using X,Y coordinates stored in Knovel database
- *Equation Plotter* for calculating and plotting functions  $F=Y(X)$  stored in Knovel database
- *Phase Diagram Viewer* for determining phase composition of binary systems by digitizing diagrams displayed as calibrated raster images stored in Knovel database
- *Excel Spreadsheet* for calculating equations programmed in Excel
- *Interactive Tables* for sorting, filtering, etc. of tabular data stored in Knovel database
- *Knovel Math* for calculating equations using PTC's Mathcad software

Interactivity improves an engineer's productivity by enhancing searchability and allowing analysis and manipulation of otherwise static data.

Starting in 2000, we have digitized over 2300 STM titles from over 30 publishers including industry leaders such as Elsevier, Wiley, McGraw-Hill and Springer, and 25 engineering societies, including ASME, IEEE and SAE. The topics range across 23 subject areas, including chemistry, mechanical engineering, electronics, oil and gas, sustainable development and construction materials. Many titles, e.g., in the chemical industry safety area, are unique to Knovel and cannot be found anywhere else.

In 2009, we introduced 3 new subject areas:

Industrial Engineering & Operation Management

Nanotechnology  
Transportation Engineering

with hundreds of new titles in each.

Some Knovel titles are multi-volume publications. The total number of pages in all Knovel titles, excluding databases, exceeds 1,000,000. The collection is growing at a rate of 35-40 new titles per month. In 2009 alone, we have added 455 new titles.

Users can browse and simultaneously search all titles via a single interface. Basic and Fielded (Data) searches are fast and optimized for technical users.

At the end of 2008, Knovel embarked on a new and exciting project: Mathcad-enabling Knovel content. The product, called Knovel Math, was released last summer and includes over 4,000 Mathcad worksheets with over 20,000 pages of engineering solutions for structural and civil engineers.

Below we describe in detail this new product as well as the following new Knovel Interface features and products released in 2009:

Knovel Lab  
My Knovel  
Data Search  
Search Enhancements  
Browse Enhancements  
Engineering Cases

### **Knovel Math**

Engineers across all industries perform engineering calculations and document their design and analysis work. While performing these tasks, they often reference standard calculations, solutions and other pertinent information from titles such as *Roark's Formulas for Stress and Strain* and *(Hicks) Handbook of Civil Engineering Calculations*. Knovel introduced Mathcad-enabled versions of these two leading engineering reference titles to allow engineers to design and document engineering calculations with increased efficiency.

Mathcad is a desk-top Computer Aided Design (CAD) platform with calculation, graphing, text formatting and reporting capabilities and is produced by Parametric Technology Corp. In Knovel Math, it is seamlessly integrated with standard engineering content online by transcribing engineering calculations and design examples in the above titles. Using our precision search tools in an easy to use interface, Knovel search results identify examples that are fully interactive, integrate directly into Mathcad for easy data manipulation, and are available in U.S. Customary and Metric units.

There are several points of access to Mathcad worksheets in the Search and Browse modes. Users can access the worksheets and the corresponding PDF reports via links in the original source (see below), or access worksheets from the links in the reports.



determination of beam deflections. By superposition, the formulas can be made to apply to almost any type of loading and support. The use of the tabulated and fundamental formulas given in this article is illustrated in the following examples.

**EXAMPLES**  US Customary  US Customary  Metric  Metric

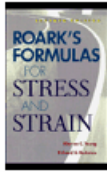
1. For a beam supported and loaded as shown in Fig. 8.2, it is required to determine the maximum tensile stress, maximum shear stress, and maximum compressive stress, assuming, first, that the beam is made of wood with section as shown in Fig. 8.2(a) second, that the beam is made of wood with section as shown in Fig. 8.2(b); and third that the beam is a 4-in, 7.7-lb steel I-beam.

**Solution.** By using the equations of equilibrium (Sec. 4.1), the left and right reactions are found to be 900 and 1500 lb, respectively. The shear and moment equations are therefore

$$\begin{aligned} (x = 0 \text{ to } x = 160): \quad & V = 900 - 12x \\ & M = 900x - 12x\left(\frac{1}{2}x\right) \\ (x = 160 \text{ to } x = 200): \quad & V = 900 - 12x + 1500 \\ & M = 900x - 12x\left(\frac{1}{2}x\right) + 1500(x - 160) \end{aligned}$$

Mathcad worksheets and PDF reports along with all the chapters of the books can be also accessed from the Table of Contents as users browse through the site. A single click on the Filter button  **Filter:**  **Knovel Math Documents** conveniently exposes all Mathcad links by expanding the Table of Contents (see below).

## Roark's Formulas for Stress and Strain (7th Edition) [Mathcad-enabled]



By: Young, Warren C.; Budynas, Richard G. © 2002 McGraw-Hill

**Description:** All examples in Part III: Formulas and Examples, over 75 in total, have been made interactive using Mathcad. Each example is available in US Customary and Metric units. Examples cover straight and curved beams, plates and shells. *[Mathcad 14.0 or higher is required.]*

[Title Details](#) | [Citation](#)

Filter: Close Knovel Math Documents

Table of Contents	Data (Records)	Text
•Front Matter		Text
•List of Tables		Text
•Preface to the Seventh Edition		Text
•Preface to the First Edition		Text
•Table of Contents		Text
<b>▣ Part I. Introduction</b>		
<b>▣ Part II. Facts; Principles; Methods</b>		
<b>▣ Part III. Formulas and Examples</b>		
▣ 7. Tension, Compression, Shear, and Combines Stress		Text
▣ 7.1 Bar under Axial Tension (or Compression); Common Case		Text
•Example 7.1.1 (US Customary Units)	Mathcad	Text
•Example 7.1.1 (Metric Units)	Mathcad	Text
▣ 7.2 Bar under Tension (or Compression); Special Cases		Text

Overall the design of Mathcad-enabled titles follows the standard design of all interactive content on Knovel. Clicking on a Mathcad link in the Table of Contents opens the application with the fully parameterized example (see below). To view it, users must have Mathcad 14.0 or higher installed on their desktops.

Each Mathcad worksheet (see Example 16.2.1 from *Roark's Formulas of Stress and Strain* below) and corresponding PDF report exists in both US Customary and Metric units for a total of 4 files, i.e., native units (as found in the source document), one translated units to its counterpart and a PDF rendering of both Mathcad files. To access, the users must subscribe to the Mathcad-enabled title as it is not part of the standard Knovel subscription. Mathcad worksheets can be downloaded and modified without any restrictions. Users can copy and paste desired calculations from Knovel produced worksheets into their own Mathcad worksheets.

Searchability of Mathcad-enabled content has been enhanced by indexing the keyword 'mathcad' for each page of Mathcad content. As a result, users can retrieve this content very precisely by a Boolean query containing this keyword, e.g., 'beam bending AND mathcad'. To further assist users in browsing and searching Mathcad-enabled content,

each case and example has been labeled with meaningful titles which include measurement system used.

---

**Knovel Mathcad Solution.** Copyright © 2009 Knovel Corp.

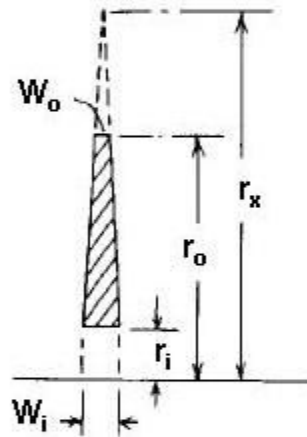
**Roark's Formulas for Stress & Strain, Seventh Edition.** Copyright © 2002 McGraw-Hill  
 Chapter 16: Dynamic and Temperature Stresses  
 16.2 Body in a Known State of Motion

**EXAMPLE 16.2.1**

▶ Disclaimer

▶ User Notices

The conical steel disk shown in section in **Fig. 16.4** rotates at 2500 rpm. To its rim it has attached buckets whose aggregate mass amounts to  $w = 0.75$  lb/linear in of rim; this mass may be considered to be centered 30 in from the axis. It is desired to determine the stresses at a point 7 in from the axis.



**Fig. 16.4:** Cross sectional view of the disk

**Geometry**

- + Mean radius:  $R_m = 28 \cdot \text{in}$
- Inner rim:  $r_i = 4 \cdot \text{in}$
- Outer rim:  $r_o = 20 \cdot \text{in}$
- Circumference:  $r_r = 7 \cdot \text{in}$

Currently, Knovel Math content is derived from these 3 important titles:

- *Roark's Formulas for Stress and Strain* (7<sup>th</sup> Edition), 2002, McGraw-Hill
- *Handbook of Civil Engineering Calculations*, 1999, McGraw-Hill
- *Foundation Engineering Handbook - Design and Construction with the 2006 International Building Code*, 2007, McGraw-Hill

Future Knovel Math packages will focus on Mechanical, Electrical, Chemical and Engineering Math. We are currently working on Mathcad enabling venerable *Handbook of Mathematical Functions with Formulas, Graphs, and Mathematical Tables*.

### **Knovel Lab**

The release of Knovel Lab in 2009 allowed Knovel to include users in the design process. Users who sign up for Knovel Lab can see prototypes and new functionality under development and comment on these, providing valuable feedback to Knovel's Product Management and IT teams. Below is Knovel Lab interface with some of the new features related to My Knovel (see below):

The screenshot shows the Knovel Lab interface. At the top, there is a search bar with the text "search knovel..." and a "Search" button. Below the search bar is a navigation bar with tabs for "My Knovel", "Browse", "Data Search", "Tools", "Support", and "Live". The main content area is titled "My WebClips (12)" and features a list of webclips. The list has columns for "WebClip", "Date", and "Actions". The first clip is "Drews Brees, Jack Nicklaus play pro-am at Honda Classic - Tours & News - Golf.com" dated "Mar. 03, 2010". The second clip is "Delta" dated "Mar. 03, 2010". The third clip is "Mondial Assistance" dated "Mar. 03, 2010". On the left side, there are folders for "Date-March3 (2)", "Plastics and Rubbers (1)", "Test (2)", and "Unfiled Items (27)". Below the folders is a section for "Aggregated Content" with buttons for "My Searches (7)", "My Bookshelf (11)", "My Content (2)", and "My WebClips (12)".

The feedback is optional and provided in the form of a survey.

Knovel Lab and related Design Partner Program showcase new customer-driven approach to product development at Knovel, that also include focus groups, advisory boards and independent studies of user experiences aimed at better workflow integration and usability of the product.

## My Knovel

My Knovel is the most important feature released in 2009. It allows personalization of Knovel interface. Users can now save multiple search queries, links to the titles and links to the individual content files in the Aggregated Content folders called My Saved Searches, My Bookshelf and My Saved Content, respectively. The content files that can be saved include text in PDF and HTML formats and interactive tables.

## My Saved Searches

Searches	Date
<input type="checkbox"/> You searched for (gold)	Jan. 13, 2010

## My Bookshelf

Titles
<input type="checkbox"/>  Sax's Dangerous Properties of Industrial Materials (11th Edition) Volumes 1-3 By: Lewis, Richard J. Sr. The Eleventh Edition provides an essential, up-to-date resource for professionals in industrial hygiene, safety, emergency response, law, and policymaking.



## My Saved Content:

Content	Date
Encyclopedia of Chemical Physics and Physical Chemistry, Volumes 1 - 3 A2.3 Statistical Mechanics of Strongly Interacting Systems: Liquids and Solids	Jan. 13, 2010
Perry's Chemical Engineers' Handbook (8th Edition) Interactive Graphs	Jan. 13, 2010
Adhesion Aspects of Thin Films, Volume 1 2. Fundamental Aspects of Residual Stress Evolution in Thin Metal Films During Energetic Particle Deposition	Jan. 13, 2010

Any item in Aggregated Content folders can be selected to be removed, e-mailed or moved to a new folder. A click on any item opens this item or executes a query (in the case of My Saved Searches).

New, custom named folders can be added by using the Add a New Folder feature. Users can move content from generic Aggregate Content folders to new folders.

Folder Content	Date	Type
Adhesion Aspects of Thin Films, Volume 1 2. Fundamental Aspects of Residual Stress Evolution in Thin Metal Films During Energetic Particle Deposition	Jan. 13, 2010	SAVED CONTENT

## Data Search

Data or Fielded Search has been improved to make it more dynamic and easy to use by introducing several new features, including field lookup. When users click the Data Search link on the main toolbar they are taken to this page:

Data Search

Data Search retrieves numeric and other tabular data contained in Knovel's interactive graphs, equations and tables. Click in the Field box to display the available search fields. When you begin typing, the list is filtered.

[? Help](#)

Field:  Operator:  Value:

[+ Add another row](#)

or [clear form](#)

A click in the Field box displays a drop down with classified list of available search fields. Typing in this box activates the lookup feature and highlights matched character string in field names on the drop down list. Then just select the desirable field, operator and input the value and the unit (for most numeric fields).

To add other search criteria, click on the Plus button designated Add another row as demonstrated below, select Boolean operator (AND, OR, NOT) and repeat the previous steps. Then click the Search button.

Data Search

Data Search retrieves numeric and other tabular data contained in Knovel's interactive graphs, equations and tables. Click in the Field box to display the available search fields. When you begin typing, the list is filtered.

[? Help](#)

Field:  Operator:  Value:  and  Units:

**0.0030 - 3.23E8 ksi**

And  Or  Not

Field:  Operator:  Value:

[+ Add another row](#)

or [clear form](#)

**material composition**

- material composition
- material composition (mass basis)
- material composition (textual)

**materials and substances**

- material or substance name
- material class
- material DIN No.

**stability**

- material consumption rate

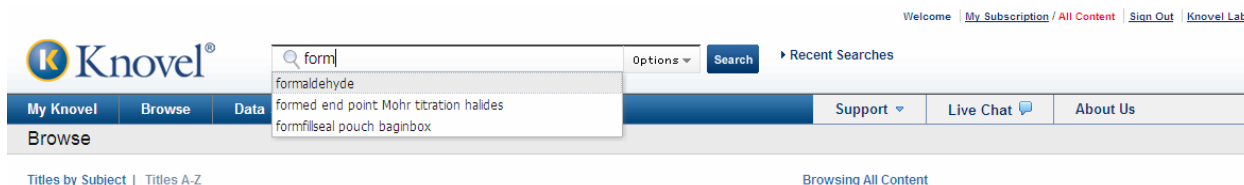
© 200  
Corpo  
Terms  
Bookr

K-Exchange  
[Knovel Blog »](#)

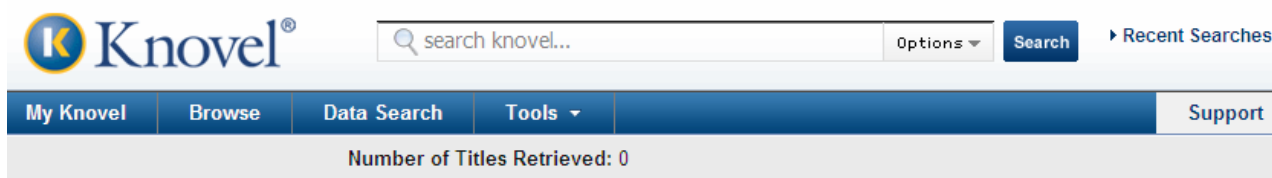
## Search Enhancements

The following search enhancements have been introduced in the past several months and available for Basic Search only.

**Autocomplete** – suggested keywords and keyword terms are displayed as users start to type in the Basic Search box. The keywords are selected from most frequently used search terms used on Knovel. Users must click on the displayed term for it to appear in the box and then click the search button.



**Spell Checker** – if you made a mistake typing a keyword in the basic search box and run the search that resulted in no hits, a suggested correct spelling of your keyword could be displayed. If you are in agreement, select this keyword and the query will be re-run automatically with selected keyword.



**You searched for (aluminum)**

[Add Search to My Knovel](#)

Did you mean: [aluminum](#)

**No Results Found**

There are no results matching your search criteria. Please consider using fewer query terms, and/or using more general query terms.

**Recent Searches** – your recent searches are saved on the pages displayed when you click on the Recent Searches link located next to the Basic Search box. Click on any of the search queries listed on this page to execute it. You can also add any of these searched to My Knovel from this page. Clicking on the Clear History button removes all the queries from this list.

## Recent Searches

Search	Link to Search	Searched On	Add to My Knovel
You searched for (lignin (chemistry or structure))	<a href="#">Basic Search</a>	Jan 12, 2010	<input type="button" value="Add"/>
You searched for (lignin structure)	<a href="#">Basic Search</a>	Jan 12, 2010	<input type="button" value="Add"/>
You searched for (abramowitz)	<a href="#">Basic Search</a>	Jan 13, 2010	<input type="button" value="Add"/>
You searched for (gold)	<a href="#">Basic Search</a>	Jan 13, 2010	<input type="button" value="Add"/>
You searched for (perry)	<a href="#">Basic Search</a>	Jan 13, 2010	<input type="button" value="Add"/>
You searched for (chemical physics)	<a href="#">Basic Search</a>	Jan 13, 2010	<input type="button" value="Add"/>

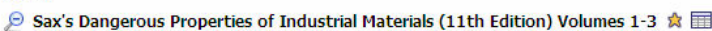








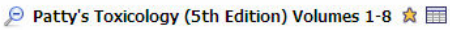


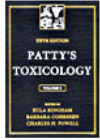





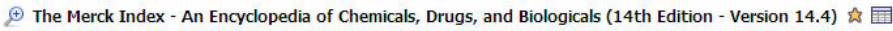


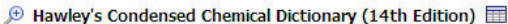

Some features formally available on Knovel have been restored by popular demand. These include Search Within – basic search within a title, and Basic Search by the Author name.

## Browse Enhancements

Browsing experience for the users of Knovel interface has been enhanced in several ways in 2009. In the browse mode, browsing has been simplified by removing some rarely used features. The features that stayed include views by Topic, All Titles, New Titles, and Titles with interactive tools. All these available either classified by Subject (Titles by Subject view is default), or as an alphabetical listing (Titles A-Z view).

In the search mode, top ranking two titles have an expanded display with up to 10 retrieved sections accessible from the title search results page. This eliminates the need to click on the title name to display search results on the table of contents page before displaying the content.

The screenshot shows the Knovel search results page for the query 'gold'. The page header includes the Knovel logo, a search bar with 'search knovel...' and a 'Search' button, and navigation tabs for 'My Knovel', 'Browse', 'Data Search', 'Tools', 'Support', and 'Live Chat'. Below the header, it indicates 'Number of Titles Retrieved: 1173' and 'Page: 1 of 40'. The search results are titled 'You searched for (gold)' and include a button to 'Add Search to My Knovel'. The results are listed under 'Titles:' and are sorted by 'Relevancy'. The top two results are expanded to show a table of sections with their respective relevancy and content types.

Titles:	Relevancy	
 Sax's Dangerous Properties of Industrial Materials (11th Edition) Volumes 1-3  	100 %	
 Add Book to My Knovel Search Within		
Sections	Relevancy	Content Type
Dangerous Properties of Industrial Materials	100 %	 Table (30)
Gold Sodium Thiomalate (GJC000)	90 %	 Text
Diethyl Gold Bromide (DJJ850)	87 %	 Text
Gold (GIS000)	87 %	 Text
Gold Chloride (GIW176)	87 %	 Text
<a href="#">Show more results</a>		
 Patty's Toxicology (5th Edition) Volumes 1-8  	100 %	
 Add Book to My Knovel Search Within		
Sections	Relevancy	Content Type
Gold	100 %	 Text
Silver	65 %	 Text
Inorganic Lead Compounds	8 %	 Text
Uranium	8 %	 Text
Silicon Dioxide	6 %	 Text
<a href="#">Show more results</a>		
 The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals (14th Edition - Version 14.4)  	99 %	
 Hawley's Condensed Chemical Dictionary (14th Edition) 	99 %	

## Engineering Cases

The Home for Knovel has been redesigned recently to highlight new products, new publisher relationships, and new product enhancements (Knovel headlines) and stories written by engineers in the field (Engineering Cases). Engineering Cases highlight engineering solutions in a number of subject areas covered by Knovel and intended to demonstrate the use of information in engineering.

**Knovel**® search knovel... Options Search Recent Searches

My Knovel Browse Data Search Tools Support Live Chat

**MY BOOKSHELF** MY SAVED CONTENT MY SAVED SEARCHES

**Critical Status Updates**

Based on our customer feedback, G.E.T. Search has been renamed and is now called Data Search, but its powerful functionality remains unchanged. Use Data Search to access numeric data from Graphs, Equ...  
[read full article >>](#)

Knovel is optimized for use with Internet Explorer 7x and above, and Firefox 3x and above. Using older web browsers, or disabling browser features such as JavaScript, cookies and SSL reduce functional...  
[read full article >>](#)

**Browse (All Content)**

<input type="checkbox"/> Adhesives, Coatings, Sealants & Inks	<input type="checkbox"/> General Engineering & Engineering Management
<input type="checkbox"/> Aerospace & Radar Technology	<input type="checkbox"/> Industrial Engineering & Operations Management
<input type="checkbox"/> Biochemistry, Biology & Biotechnology	<input type="checkbox"/> Mechanics & Mechanical Engineering
<input type="checkbox"/> Ceramics & Ceramic Engineering	<input type="checkbox"/> Metals & Metallurgy
<input type="checkbox"/> Chemistry & Chemical Engineering	<input type="checkbox"/> Nanotechnology
<input type="checkbox"/> Civil Engineering & Construction Materials	<input type="checkbox"/> Oil & Gas Engineering
<input type="checkbox"/> Earth Sciences	<input type="checkbox"/> Pharmaceuticals, Cosmetics & Toiletries
<input type="checkbox"/> Electrical & Power Engineering	<input type="checkbox"/> Plastics & Rubber
<input type="checkbox"/> Electronics & Semiconductors	<input type="checkbox"/> Safety & Industrial Hygiene

**Knovel News**

**Green Engineering: Sustainability and its Impact on Design and Innovation**  
 Join us for this important panel discussion on February 8, 2010  
 01-08-2010 [[More Information](#)]  
[Read more...](#)

**Knovel Boosts Roster of Publishers**  
 SAE International, ASHRAE and 14 Other Societies and Publishers Add Content to Knovel  
 12-16-2009 [[Full Article](#)]  
[Read more...](#)

**Major U.S. Utility Taps Knovel's Trusted Technical Information**  
 Knovel Helps Engineers to Solve Complex Problems Faster; Increases Efficiency of Technical Decisions  
 12-14-2009 [[Full Article](#)]  
[Read more...](#)

[Subscribe to the RSS feed >>](#)

**Engineering Cases**

[Optimization of CCHP Systems Based on Energy, Economic and Environmental Considerations](#)  
 by Dr. Pedro J. Mago, Department of Mechanical Engineering, Mississippi State University. Posted on January 5, 2010.

[Normalized Power Correlation for a Vertical Axis Wind Turbine with Varying Geometries](#)  
 by E Tsang, Zephyr Alternate Power Inc, K. Pope and G. F. Naterer, University of Ontario Institute of Technology.

## Current Work and Future Plans

Knovel innovates continuously. Currently, we work on a new feature that would enable users to cut and paste snippets from text found on Knovel and on the web into My Knovel. The Product Road Map for 2010 is focused on personalization. Below is a sneak preview of updates to Knovel interface.

In terms of technology, we'll be moving away from PDF and toward HTML presentation of the text.

Welcome, James | My Knovel | Sign Out » Support | Live Chat | About Us

**Knovel** Search the Knovel Library  **Search** Advanced Search ▶

**GAF**

Home Library Ideas People Answers Projects Tools

**Idea Shop Campaign**  
**Emissions Challenge**  
 January 11 - 18

We want ideas on reducing carbon emissions in airplane engines!  
[Go to the Idea Shop ▶](#)

**Projects**

- Baltimore Lab Renovations (5)
- Improvements to UV Performance in Roofing Materials (5)
- Speaking Ideas for ANTEC 2011

**Recent**

Recently Viewed

**Light Stabilizer**  
 "We often classify the types of light or UV stabilizers we make according to..."  
[www.ciba.com](#)

**Additives for Plastic Handbok (2nd Edition)**

**Plastic Additives - An Industrial Guide (3rd Edition) Volume 3**

**ASTM International - Standard Specification for Poly(Vinyl Chloride) Sheet Roofing**  
[www.astm.org](#)

Recently Searched

UV stabilizers	Antoine coefficients	mathematical algorithms for stress fractures
viscosity of water	Vapor pressure	carbon gas mixtures
Stress concentration	uranium	

Recently Contacted

<b>Gunther Sullivan</b> Process Engineer III	<b>Jack Welch</b> Civil Engineer	<b>Susan Story</b> Civil Engineer
<b>Erika Rotheim</b> Civil Engineer	<b>Jane Brown</b> Civil Engineer	<b>Ashton Lewis</b> Civil Engineer

**Engineering Cases**

**Optimization of CCHP Systems Based on Energy, Economic and Environmental Considerations**  
 Dr. Pedro J. Mago, 1/5/10  
 Department of Mechanical Engineering, Mississippi State University.

**Normalized Power Correlation for a Vertical Axis Wind Turbine with Varying Geometries**  
 E Tsang, Zephyr 12/28/2009  
 Alternate Power Inc, K. Pope and G. F. Naterer, University of Ontario Institute of Technology.

**Dana Sealing Products Group Embarks on an Analysis-Led Design Journey**  
 by Frank Popielas, 12/21/2009  
 Manager Advanced Engineering, Sealing Products Group, Dana Holding Corp. Posted

**Knovel News**

December 16, 2009  
**Knovel Boosts Roster of Publishers**  
 SAE International, ASHRAE and 14 Other Societies and Publishers Add Content to Knovel

[Continue Reading ▶](#) [View Full Article](#)

December 14, 2009  
**Major U.S. Utility Taps Knovel's Trusted Technical Information**  
 Knovel Helps Engineers to Solve Complex Problems Faster; Increases Efficiency of Technical Decisions

[Continue Reading ▶](#) [View Full Article](#)

December 7, 2009  
**Knovel Named a 2010 CODiE Award Finalist**  
 Knovel Debuts as Finalist for Best Online Science or Technology Service in the Content Category

[Continue Reading ▶](#) [View Full Article](#)

## Conclusions

In 2009-10, Knovel has embarked on the whole new user-centric approach to interface and product design. Several tools have been developed to assist in this approach including Knovel lab. New interface features and products were well received by the customers. Monthly usage and the number of site visits have increased. Positive user feedback results in a steady flow of new releases.