



# Knovel Manual del usuario



#### Elsevier Soluciones de Ingeniería

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# Knovel Registration: ¿Cómo abrir una cuenta?

- 1. Entra en la página https://app.knovel.com
- 2. Al entrar en Knovel , haz clic en "REGISTER NOW" .

<b>K</b> t	novel®		
21	27 6 3		
Please login or authenticate v	ia an Organization		
Username (Email)	Normally access Knovel through another site		
e.g. someone@domain.com	Search for your institution		
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Remember Me			
÷	Unsure if you have access to Knovel?		
Login Cancel and browse as guest.	CLICK HERE		
Fornet your password?			
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#### Knovel Registration: Cómo abrir una cuenta

3. Ingresa el e-mail con dominio de su Institución, la contraseña y el nombre del usuario.

4. Al hacer clic en **Terms and Condition**, aceptas las condiciones y políticas, luego haz clic en **"Sign up"** para terminar el registro y tener una cuenta propia.

Children and the second		
	Please cre take adva	ate your Knovel profile to access content a intage of the new "Personalization" features
Re-enter Email Address:"		
Password:" Confirm Pa	issword:"	
First Name:" Last Name	•	
I accept the Knovel Terms and Conditions*	I.	
Sign up		

✓ Nota: Cuando otro usuario trata de entrar con la misma cuenta, se ve obligado a reiniciar la sesión.

#### Knovel Login: Iniciar sesión

- 1. Abre la página <u>https://app.knovel.com</u>, y aparece la interfaz de abajo
- 2. Al iniciar sesión, si haces clic en "Remember Me", vas a entrar automáticamente la siguiente vez, no hará falta ingresar de nuevo los datos.

Please log into your profile.		
Username	Don't have an a	ccount? Create a Profile now
Type Usemame to Access Knovel	Normally access	REGISTER NOW Knovel through another site? Institution
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#### Knovel My Knovel: mi Knovel

1. Es muy importante tener una cuenta propia, porque eso facilitará la administración de los resutados de búsqueda.

2. Al iniciar la sesión, encontrarás la página "My Knovel".

Home	Browse	Tools		Supp	rl Center 👔 Ny Kna 🛛	Welcome Key Lee 💌
			<b>(</b> Knovel			
		Q sensor ne	elworks For MATERIAL/SUBSTANCE of PROPERTY se Data Search ►	arch use	50	
	New Intera Try Knovel's mechanical industries g worked exa calculation problems fs <u>Try it Now</u>	ctive Equations Available Now! enoves tool where engineers in process to to find equations, paired with mples and ready to use activare to help solve activare	Knovel will be unavailable Saturday, December 13, 2014, trom 9 a.m. EST until approximately 1 p.m. EST. Please check back after this maintenance window.	Data Search new d precision for Materia By introducing an ex- properties. Data Se with more focus on I characteristics of the in question, resulting interactive content Learn more here!	elivers greater I Property searches. gended list of arches can be built the exact Property materialisubstance g in the most relevant	

#### Knovel My Knovel: mi Knovel

3. Al hacer click en My Knovel · aparecerá la interfaz de abajo.

4. My Knovel puede guardar los ítems de la búsqueda, desde los títulos, contenidos, ecuaciones hasta las propias búsquedas, además, es capaz de administrarlos catalogándolos



#### Knovel Basic Search: ejemplo de Búsqueda Básica

- 1. Por favor abre <u>https://app.knovel.com</u> , aparece la siguiente interfaz.
- 2. Introduce en la barra de búsqueda "1045 Steel", y a continuación haz click en "Go"



#### Knovel Basic Search: recuperación de Vocabulario

- 1. Búsqueda semántica para facilitar la búsqueda de los resultados
- 2. En general, la búsqueda de palabras es mediante operadores Booleanos

**OR** Operador "O" : para localizar registros que contengan cualquiera o todos los términos especificados

Ejemplo: rapid transit OR light rail OR subways seatbelts OR seat belts

**AND** Operador "Y" : para localizar registros que contengan todos los términos de búsqueda especificados

Ejemplo: Prosthetics AND biocontrol

**NOT** Operador "No" : para localizar registros que contengan el primer término de

búsqueda pero no el segundo

Ejemplo : mines OR mining NOT "data mining "

3. Un **asterisco(\*)** : para buscar todas las palabras que comienzan con la misma cadena de letras, la misma cadena con un asterisco prevalece.

Ejemplo. En la búsqueda 'Compute\*' los resultados: "computer, computerized, computation, computational" y así sucesivamente

#### **Knovel Basic Search: Ejemplo**

3. Al ingresar **1045 Steel**, se dan como resultados 451 **Text Sections** (textos), 55 **Interactive Tables** (tablas), 16 **Conference Proceedings** (actas de congreso), 13 **Interactive Graphs** (gráficos).

Home Browse Tools	Support Center  My Knovel 🛛 Welcome Rich Garvin 🔻
🗷 Knovel° <i>Search</i>	Q 1045 Steel X GO Data Search .
Home Search for '1045 Steel'	Search within these results
CONTENT TYPES	Save Search         All Content         My Subscription         Showing page 1 of 54         Image: Showing page 1 of 54         Imag
All Content Types	INTERACTIVE TABLES + Save to My Knovel
Text Sections (451)	Table 2. Nominal speeds and feeds for turning a variety of steels (4 hits)
Conference Proceedings (16)	# type material hardness, hb condition depth of cut
Interactive Graphs (13)	5 Calenchikken: Calenchikken: Calenchikken: Calenchikken:
	from ASM Handbook, Volume 16 - Machining (1989) Search within this title »
	INTERACTIVE TABLES         + Save to My Knovel           Table 6. Comparison of actual and nominal speeds and feeds for the ture         4 hits)
	# steel average bardness comparable steel operation tool material
	5
	from ASM Handbook, Volume 16 - Machining (1989) Search within this title »

4. Al hacer clic en **Text Sections**, aparece la interfaz de abajo.

5. Haz clic en Text Sections, y podrás encontrar los ítems, leer textos relacionados y descargarlos.



6. Al hacer clic en Interactive Tables (tablas interactivas), aparece la interfaz de abajo.

7. Al hacer clic en la tabla encontrada, se puede descargar las tablas Excel procesadas por Knovel.



8. Interactive Tables procesará de nuevo y aportará las estadísticas.

9. Los contenidos relacionados aparecerán en color azul, por orden ascendente o descendente, y podrán ser filtrados. Además, es fácil descargarlos en formatos como Excel.

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	Home 9, Search for 1      ASM Handbook B Table 5, Comparison of actual and nominal speeds and      1045 steel									a.s					
20	Con	tents	Save	Not	es 🗗 Expo	urt •				2	( Page		1 of 1 P PI	Rows 1 - 4 of 4	from 16 ( 🕱 )
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	. 1		1037		185		1045	Roughing		Carbide	Brazed		220	725	102
1	5		1045		194		1045	Roughing		Carbide	Brazed		131	430	102
	6		1045		194		1045	Roughing		Carbide	Brazed		161	530	102
	14		1035		150		1045	Roughing		Carbide	Brazed		151	495	116
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10. Al hacer clic en **Conference Proceedings**, aparece la interfaz de abajo.

11. Al hacer clic en las actas de congreso, puedes encontrar los ítems relacionados, leer los archivos y descargarlos.



12. Al hacer clic en Interactive Graphs (gráficos), aparece la interfaz de abajo. 13. Al hacer clic en el ítem encontrado, se encuentran los datos del gráfico, que se puede descargar en formato de JPG o Excel.



#### ELSEVIER

## Knovel Search Within: Busca entre resultados (ejemplo)

- 1. Cuando es necesario realizar búsqueda avanzada, usa la barra Search Within.
- 2. Ingresa palabras clave si quieres saber la amplitud de deformación de 1045 Steel.

Home <ul> <li>Search for '1045 Steel'</li></ul>		Q 1045 Stee	əl	× 60	Data Search		
Save Search       All Content My Subscription       Showing page 1 of 54         All Content Types       * Save to My Knovel         Text Sections (451)       * Save to My Knovel         Interactive Tables (55)       * type       material       hardness, hb       condition       depth of cut         Interactive Graphs (13)       # type       material       hardness, hb       condition       depth of cut       *         Image: Search within this title *       * Save to My Knovel       *       *       *       *         Image: Search within this title *       *<	Home 9 Search for '1045 Steel'	>				ain amplitude	٩
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Conference Proceedings (16)   Interactive Graphs (13)     # type   material   hardness, hb   condition   depth of cut     5     from ASM Handbook, Volume 16 - Machining (1989)   Search within this title >     MITERACTIVE TABLES     * Save to My Knowel   Table 6. Comparison of actual and nominal speeds and feeds for the tur   # steel   average hardness   comparable steel   operation   tool material	Text Sections (451) Interactive Tables (55)	Table 2. Nom	nal speeds and fee	eds for turning a	variety of stee	els (4 hits)	inves.
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#### Knovel Search Within: Busca entre resultados (ejemplo)

3. Como se muestra en la foto de abajo, se han filtrado muchos datos después de la búsqueda por Search Within.

4. Al ingresar **Strain amplitude** (amplitud de deformación), se dan como resultados 20 **Text Sections** (textos) y 2 **Interactive Graphs** (gráficos).

Home Browse Tools		Support Center 📧 My Knovel 🛛 Welcome Rich Garvin 🔻
<sup>®</sup> Knovel <sup>®</sup> Search	Q 1045 Steel X G0	Data Search +
Home     A Search for '1045 Steel'	9. Search for 'strain amplitude' within '1045 Steel'	strain amplitude
CONTENT TYPES	Save Search All Content My Subscription	Showing page 1 of 3
All Content Types Text Sections (28)	Strain -life behavior of medium-carbon steel as a	+ Save to My Knovel
	# class material temper	uns no. x-axis label
	from Atlas of Fatigue Curves (1986) Search within this title »	
	Figure 23. Strain -life behavior as a function of ha	+ Save to My Knovel ardness (HB (2 hits)
	# x-axis label y-axis label graph title	text graph digitizer
	from ASM Handbook, Volume 19 - Fatigue and Fracture ( Search within this title »	1996)

# Knovel Search Result: Resultados de búsqueda (ejemplo)

**ELSEVIER** 

1. Teniendo los resultados de la búsqueda de **1045 Steel Strain amplitude**, haz clic en **"Strain-life behavior of medium..."** 

Home Browse Tools	Q 1045 Steel	Support Center 🛞 My Knovel Welcome Rich Garvin 👻
Home     A Search for '1045 Steel'	Browse       Tods       Welcome Rich Gaulti         Cnowel Search       O 1045 Steel       O 0       Data Search •         Ne       • Search for '1045 Steel'       • Search for 'strain amplitude' within '1045 Steel'       • etrain semplitude       • etrain semplitude	
CONTENT TYPES All Content Types	Save Search All Content My Subscription	Showing page 1 of 3
Text Sections (28) Interactive Graphs (2)	Strain_life behavior of medium carbo           # class         material         temper	uns no.
	from Atlas of Fatigue Curves (1986) Search within this title »	
	<b>INTERACTIVE GRAPHS</b> Figure 23. <b>Strain</b> -life behavior as a function	+ Save to My Knovel of hardness (HB (2 hits)
	# x-axis label y-axis label graph title	text graph digitizer
	645 from ASM Handbook, Volume 19 - Fatigue and Frac Search within this title »	ture (1996)

## Knovel Search Result: Resultados de búsqueda (ejemplo)

2. Puedes ver en la imagen de abajo los datos acerca del **Graph Digitizer**, que muestra las estadísticas por medio del gráfico.

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<b>(</b> Knc	ovel®	(	2 1045 Steel	_	×	GO Data Sea	arch 🕨	8
Home	A Search for 's	Atlas of Fati	🛛 Fig. 2 Typic	al S-N curves for c	onstant amplitude a	and sinuso	strain amplitude	×Q
Save E	xport Find Colu	mns V Show all	rows				Rows 1 - 1 o	f 1 from 791 < >
class	material	temper	uns no.	x-axis label	y-axis label	graph title	text	graph digitizer
medium- carbon wrought and cast steels	1045		G10450	Reversals to failure 2N <sub>f</sub>	Strain amplitude - Δε/2	Strain-life behavior of medium- carbon steel as a function of hardness.	view text	¥
			Atlas of	Fatigue Curves © 1986 /	ASM International			

## Knovel Search Result: Resultados de búsqueda (ejemplo)

- 3. En la tabla hay un link de "View Text" (leer texto)
- 4. Haz clic en el link "View Text" .

Home Br	rowse Tools					Support Center	My Knovel \	Welcome Rich Garvin 🔻
<b>()</b> Kno	ovel®		2 1045 Steel		×	GO Data Sea	arch 🕨	0
A Home	Search for 's	Atlas of Fati	Fig. 2 Typic	al S-N curves for co	onstant amplitude a	and sinuso	strain amplitude	×Q
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class	material	temper	uns no.	x-axis label	y-axis label	graph title	te	graph digitizer
medium- carbon wrought and cast steels	1045		G10450	Reversals to failure 2N <sub>f</sub>	Strain amplitude - Δε/2	Strain-life behavior of medium- carbon steel as a function of hardness.	view text	×
			Atlas of	Fatigue Curves © 1986 A	SM International			

### Knovel Search Within: Resultados de búsqueda (ejemplo)

- 5. Al hacer clic en "View Text", se abre el archivo de gráficos.
- 6. Al hacer clic en el link "Live Graph", se puede abrir el gráfico procesado por Knovel.

7. Antes de abrir el archivo, presionando el botón de "Graph Digitizer" se abre también el gráfico Knovel.



## Knovel Interactive Content (Graph Digitizer): utilizar el gráfico (ejemplo)

1.El de abajo es un gráfico interactivo (Interactive Graph) procesado y aportado por Knovel

2. Knovel no es simplemente un gráfico escaneado, sino un gráfico con alcance y coordenadas configuradas, que puede ser utilizado directamente.



#### Knovel Interactive Content (Graph Digitizer): utilizar el gráfico (ejemplo)

3. Es complicado conseguir las estadísticas sobre la curva 225 HB, porque tanto el eje x como el y se han configurado como logarítmicos.

4. Ingresa el nombre de la curva, cuyas estadísticas intentas conseguir, en nuestro caso, 225HB. Si quieres obtener información sobre más curvas, presiona el botón "Add New Curve" para más estadísticas.



#### Knovel Interactive Content (Graph Digitizer): utilizar el gráfico (ejemplo)

- 5. Se obtienen las estadísticas del gráfico al hacer clic en el cursor. Como se ha mostrado en el gráfico de abajo, se puede confirmar las estadísticas de coordenadas.
- 6. Con Knovel se consiguen fácilmente las coordenadas log, que regularmente son díficiles de obtener (por ejemplo., medidas irrisorias).



# Knovel Interactive Content (Graph Digitizer): Descargar las estadísticas conseguidas (ejemplo)

- 1. Al hacer clic en el botón "Action", se puede descargar "Export" las estadísticas y gráficas.
- 2. La descarga de estadísticas es en formato de Excel, aunque también se puede exportar en formatos de HTML y CSV.
- 3. Las gráficas se descargan en formatos de JPG, GIF y PNG.



#### Knovel Exported to Excel: Descargar las estadísticas conseguidas (ejemplo)

- 4. La gráfica de abajo muestra las estadísticas presentadas en Excel.
- 5. Para las estadísticas conseguidas, se anota abajo el propietario intelectual.

1	А	В	С	D
	Strain-life behavior of medi	um-carbon steel as a function	n of hardn	ess.
2				
;				
5	225 HB			
5	Reversals to failure 2Nf	Strain amplitude - Δε/2		
7	109.3	0.05518		
;	471.0	0.02179		
)	2590	0.008608		
0	21220	0.003589		
1	181700	0.002003		
2	7830000	0.001300		
3				
4				
5	595 HB			
6	Reversals to failure 2Nf	Strain amplitude - Δε/2		
7	12.76	0.02676		
8	148.9	0.01326		
9	1068	0.008796		
0	18170	0.005588		
1	194100	0.004359		
2	8368000	0.003829		
3				
ŧ				
5	Atlas of Fatigue Curves			
6	Copyright © 1986 ASM Inter	national		
,				

1. Abre la página https://app.knovel.com , y haz clic en la barra Data Search ·

para buscar información sobre propiedades de materiales.

Home	Browse	Tools	ليدوينه والمتعاول	Support Center	🚺 Ny Knovel	Welcome Key Lee 🔻	l
		Sensor ne	Eworks For MATERIAL/SUBSTAIN. PROPERTY ST Duta Search	© GO			
	New Intera Try Knovel' mechanica industries worked exa calculation problems t	ctive Equations Available Now! s newest tool where I engineers in process to to find equations, paired with imples and ready to use software to help solve aster	Knovel will be unavailable Saturday, December 13, 2014, from 9 a.m. EST unti approximately 1 p.m. EST. Please check Dack after this maintenance window.	Pata Search new delivers gre- precision for Material Property. By introducing an expanded lite properties. Data Searches ca with more focus on the exact P characteristics of the materiali in question, resulting in the ma- interactive content.	ater searches. st of n be built roperty substance set relevant		

2. Al presionar el botón de Data Search, se da la opción de búsqueda de datos por Materiales

3. En la barra de Material or Substance Name, ingresa el nombre del material o sustancia y obtendrás información de la (s) propiedad (es).

4. En la parte derecha de Find a property, ingresa directamente la propiedad que buscas.

Knovel <sup>®</sup> Search	Q Search Knovel	Data Search •
Share URL	Data Search Query Builder	٢
Material or Substance Name: 7440-38-3		(Find a property
Drag a Items droj	and Drop Properties Here oped here will be added to your query.	<ul> <li>acid-base properties</li> <li>acoustic properties</li> <li>bearing properties</li> <li>combustion properties</li> <li>creep properties</li> <li>electrical properties</li> <li>electrochemical properties</li> <li>energy and power</li> <li>environmental characteristics</li> <li>fatigue properties</li> <li>fiber properties</li> <li>fiber properties</li> <li>fiber properties</li> <li>fiber properties</li> <li>food chemistry</li> <li>gas properties</li> </ul>
As you build your p	roperly search, your result count will appear here.	geography     hazard-related properties

5.En la barra de Material or Substance Name, ingresa el nombre del material, como acrylonitrile.

6. En la gráfica de abajo se muestran 1669 resultados de búsqueda sobre acrylonitrile.

<sup>®</sup> Knovel <sup>®</sup> Search	Search Knovel	GO Data Search >	
Share URL Save to My Knovel	Data Search Query Builder		?
Material or Substance Name: acrylonitrile	x	Find a property	
Drag and Dr Items dropped her	Top Properties Here e will be added to your query.	<ul> <li>acid-base properties</li> <li>acceptor number</li> <li>donor number</li> <li>donor number</li> <li>donor number</li> <li>dielectric al properties</li> <li>dielectric constant</li> <li>dielectric loss factor</li> <li>dielectric strength</li> <li>dielectric strength</li> <li>dipole moment</li> <li>dissipation factor</li> <li>electric conductivity</li> <li>surface resistance</li> <li>volume resistivity</li> </ul>	4 10
	Your Query: 1669	environmental characteristics	

7. Si quieres saber la densidad de acrylonitrile, en la barra de Find a property ingresa density.

8. Gracias al motor semántico de obtención automático, se encuentran fácilmente los nombres de propiedades. Al arrastrar la propiedad hacia izquierda, se realiza de nuevo búsqueda de información de esa propiedad. Como se puede ver en la gráfica de abajo, se dan 22 resultados de búsqueda.

Knovel <sup>®</sup> Search	), Search Knovel	GO Data	Search •	
Share URL Save to My Knovel	Data Search Query Builde	er	_	(?
Material or Substance Name: acrylonitrile	×		den	×
density		X	<ul> <li>physical constants</li> <li>critical density</li> <li>critical density (m</li> <li>density</li> <li>density</li> <li>molar density</li> <li>relative density</li> </ul>	ol/vol basis)
	Your Query:	22 results »		

#### ELSEVIER

#### Knovel Data Search: Búsqueda de datos de propiedades (ejemplo)

- 1. Se dan como resultados 17 Interactive Tables y 13 Interactive Graphs.
- 2. Haz clic en Interactive Graphs.

Knovel Seurch	material_or_substance_name."acrytonitrite
Home 9. Search for 'material	or_substance_name:acrylonitrile AND density_mf:[ * TO * ]* Search within these results
CONTENT TYPES	Save Search All Content My Subscription Back to Data Search Showing page 1 of 3
All Content Types Interactive Tables (17) Interactive Graphs (5)	INTERACTIVE TABLES     + Save to My Knovel     Physical Properties and Refractive Index (1 hit)
	# material or substance name synonym CAS Registry No. mol. formula mol. weight freezing 19 CLICK LINK TO VIEW THE TABLE
	from Yaws' Handbook of Thermodynamic and Physical Properties of Chemical Compounds (2003) Search within this title »
	Coefficient of Thermal Expansion of Liquid (Live Eqns.) (1 hit)
	# equation plotter material or substance name synonym CAS Registry No. mol. formula mol.
	19 CLICK LINK TO VIEW THE TABLE

# Knovel Data Search: Búsqueda de datos de propiedades (ejemplo)

3. Busca la propiedad **Density of Liquids**, (Live Eqns), y haz clic en el link.

Home 9 Search for 'materi	al_or_substance_name:acrylonitrile AND density_mft[*TO *]*	Search within these results
CONTENT TYPES	Save Search All Content My Subscription Back to Data Search	Showing page] of 1
All Content Types nteractive Tables (17)	Coefficient of Thermal Expansion of Liquid (Live Eq	+ Save to My Knovel
nteractine Orapins (5)	# equation plotter material or substance name synonym 19 CLICK LINK TO VIEW THE TAE	CAS Registry No. mol. formula mol.
	from Yaws' Handbook of Thermodynamic and Physical Prope Search within this title »	arties of Chemical Compounds (2003)
	INTERACTIVE GRAPHS	+ Save to My Knovel
	# equation plotter material or substance name synonym	CAS Registry No. mol. formula mol.

### Knovel Data Search: Búsqueda de datos de propiedades (ejemplo)

4. Aparece de manera clara la tabla de estadísticas de las propiedades de acrylonitrile. Por medio de la generación de estadísticas en la parte derecha de arriba, se sabe que hay 4970 copias originales de estadísticas de propiedades.

5. Haz clic en el botón de Equation Plotter.



# Knovel Equation Plotter: Gráficos con ecuaciones (ejemplo)

6.El de abajo es un Equation Plotter. A diferencia del gráfico escaneado, es un gráfico que utiliza ecuaciones. Se dan coordenadas ingresándolas o haciendo clic en Add Point

7. Al hacer clic en Unit (unidad) se puede cambiar la Unidad de medida



# Knovel Equation Plotter: Gráficos con ecuaciones (ejemplo)

1. Al hacer clic en "Action", se descargan ("Export") las estadísticas o gráficos

2. La descarga de estadísticas se realiza en formato de Excel, pero también se puede en formato de HTML y CSV.

3. Los gráficos se descargan en formatos de JPG, GIF y PNG.



## Knovel Exported to Excel: Descargar estadísticas obtenidas (ejemplo)

- 4. Como se ha mostrado en el gráfico de abajo, las estadísticas se presentan en Excel.
- 5. Para las estadísticas conseguidas, siempre se obtendrá abajo el propietario intelectual.



# Knovel Interactive Content (Excel Sheet): Calcular Excel Sheet (Ejemplo)

1. En la barra de Search , ingresa "liquid discharge hole" •



# Knovel Interactive Content (Excel Sheet): ): Calcular Excel Sheet (Ejemplo)

2. Al ingresar liquid discharge hole, se dan como resultados 755 Text Sections, 33 Conference Proceedings, 3 Excel Sheet.

Knovel® Search	Q liquid discharge hole X	GO Data Search •
A Home 🔍 9. Search for 'liquid discha	rge hole'	Search within these results
CONTENT TYPES	Save Search All Content My Subscription	Showing page 1 of 80
All Content Types Text Sections (755) Conference Proceedings (33) Excel (3)	Excel  Example 2.1 Liquid Discharge throug See table of contents »	[+ Save to My Knovel]
	Excel Example 2.1 Liquid Discharge throug See table of contents *	[+ Save to My Knovel] gh a Hole in a Tank
	Excel Example 2.1 Liquid Discharge throug See table of contents »	+ Save to My Knovel
	TEXT SECTIONS	+ Save to My Knovel

# Knovel Interactive Content (Excel Sheet): Calcular en página de Excel (Ejemplo)

3. Al hacer clic en Text Sections, se encuentra Example 2.1 - Liquid Discharge through a Hole in a Tank •

4. Haz clic en el botón...

Knovel <sup>®</sup> Search	Q liquid discharge hole	Data Search •
A Home 🔍 ۹. Search for 'liquid discharg	je hole'	Search within these results
CONTENT TYPES	Save Search All Content My Subscription	Showing page 1 of 76
All Content Types	TEXT SECTIONS	+ Save to My Knovel
Text Sections (755)	Example 2.1 Liquid Discharge through a Hole	e in a Tank
Excel (3)	Example 21 Liquid Discharge through a Hole in a Tank Input Data outside hole O barg Liquid density 490 more »	a Tank pressure above liquid 01 barg Pressure
	from Guidelines for Chemical Andrew Quantitative Ris See more results from this title Andrew Within this title	sk Analysis (2nd Edition) (2000) Ue »
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	15.1.10 Vessel Discharge: Liquid Discharge	Time
	are given in the Rijnmond Report and by Mecklenburgh 1985 15	110 VESSEL DISCHARGE LIQUID DISCHARGE TIME

#### **Knovel Interactive Content (Excel Sheet):**

- 5. Al hacer clic se puede ver demás información sobre datos relacionados.
- 6. Haz clic en resultado encontrado, vuelve a hacer clic en **Example 2.1 Liquid Discharge through a Hole in a Tank.**

Rhover Search		
Home 9. Search for 'liquid discha	arge hole"	Search within these results
CONTENT TYPES	Save Search All Content My Subscription	Showing page of 76
All Content Types	TEXT SECTIONS	+ Save to Uv Knowel
Text Sections (755)	Example 2.1 Liquid Discharge through a Ho	le in a Tank
Conference Proceedings (33)	Example 21 Liquid Discharge Strough a Hole is a Tank Issue De	ata Tank praseura aboue limuid 01 hara Praseura
	term204082 m2s2 Height term 196 m2s2 Velocity coefficient 125 Spreadsheet output for Example 21 Liquid discharge through a h Hole Consider again Example 21 A stream of liquid discharging t impact the ground at some distance away from the tank In some designed to contain « less from a lines for Chemical Process Quantitative R Social e results from this title   Search within this t	I Exit velocity 57 ms Mass flow 022 kgs Figure 28 hole in the tank Example 22 Liquid Trajectory from a from a hole in a tank will stream out of the tank and cases the liquid stream could shoot over any diking Risk Analysis (2nd Edition) (2000) title #
	TEXT SECTIONS	+ Save to My Knovel
	Example 2.1 Liquid Discharge through a Ho	le in a Tank
	Example 21 Liquid Discharge through a Hole in a Tank Input Da outside hole O barg Liquid density 490 more »	ata Tank pressure above <b>liquid</b> 01 barg Pressure
	from Knovel Sampler (2003)	

#### **Knovel Interactive Content:**

- 7. Se encuentran ejemplos (Example) de resultados conseguidos.
- 8. Al hacer clic en el ejemplo, vuelve a dar click **Example 2.1 Liquid Discharge** through a Hole in a Tank.

Home 9. Search for 'liquid o	lis 🔵 🔳 Guidelines fo	Example 2.1 Liquid Discharge through a Hole in a Tank	lguid decharge hole
Cancel Search		Highlighting liquid discharge hole	
-	2.1. Source Models	Click to View Calculation Example 83	
	<u>E</u>	xample 2.1: Liquid Discharge through a Hole in a Tank_	
•		ank pressure above liquid: 0.1 barg ressure outside hole: 0 barg quid density: 490 kg/m**3 quid level above hole: 2 m ole diameter: 10 mm	
×	<u></u> 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	xcess Head Loss Factors: france: 0.5 xit; 1 thers: 0 TOTAL: 1.5	
	C H	alculated Results: ole area: 7.9E-05 m**2	
	н ч <sup>а</sup>	eight term: -20.4082 m**2/s**2 eight term: -19.6 m**2/s**2 elocity coefficient: 1.25	I
	E	xit velocity: 5.7 m/s ass flow: 0.22 kg/s	-
	Figure 2.8. Spreadshee	tt output for Example 2.1: Liquid discharge through a hole in the tank.	
	Example 2.2: Lique stream of liquid disch the ground at some of shoot over any dikin	<b>id Trajectory from a Hole.</b> Consider again Example 2.1. A arging from a hole in a tank will stream out of the tank and impact listance away from the tank. In some cases the liquid stream could g designed to contain the liquid.	
	<ul> <li>(a) If the hole is away from the tank?</li> <li>(b) At what point</li> </ul>	3 m above the ground, how far will the stream of <b>liquid</b> shoot t on the tank will the maximum discharge distance occur? What is	Shortcuts

#### **Knovel Interactive Content (Excel Sheet):**

9. Se muestra el **Excel Sheet** de **Example 2.1** - **Liquid Discharge through a Hole in a Tank.** Al ingresar directamente datos, se puede calcular el volumen y velocidad de flujo del líquido.

- 1	A	В	С	D	E	F	G	н	1	J	K	L	1
1	Example 2	1: Liquid Di	ischarge thr	ough a Hole	e in a Tank		×						Γ
2													
3	Input Data	Č.											
4	Tank press	sure above li	iquid:	0.1	barg								
5	Pressure of	outside hole:		0	barg								
6	Liquid den	isity:		490	kg/m**3								
7	Liquid leve	above hole	65	2	m								
8	Hole diam	eter:		10	mm)								
9													
10	Excess He	ad Loss Fac	ctors:										
11	Entrance:		0.5										
12	Exit:		1										
13	Others:		0										
14		TOTAL:	1.5										
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21	Pressure t	term:		-20.4082	m**2/s**2								
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23	Velocity co	oefficient		1.25									
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25	Exit velocit	ty:	5.7	m/s									
26	Mass flow:		0.22	kg/s									-
27													
14 4	▶ # ex2-1-	1.12					1	4		18		1	E I

#### **Knovel Tools: Herramientas de Knovel**

1. Tools se encuentra en el menu de la parte de arriba de la página. Se proveen herramientas útiles para la investigación en ingeniería.

2. Entre las funciones de Knovel Tools se encuentran conversor de unidades en ingeniería calculadora de ecuación interactiva, tabla periódica, Excel Add-in, búsqueda, etc.



# Knovel Unit Converter: conversor de unidades en ingeniería

1. Knovel provee conversor de unidades en ingeniería, que es capaz de convertir unidades complejas en ingeniería

2. Knovel conversor maneja varias unidades en ingeniería, y puede crear unidades para el propio usuario.

Input	Output
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# Knovel My Knovel To Go: aplicativo de lectura de títulos (sin Internet)

Knovel provee un aplicativo que le permite al usuario revisar el texto completo de títulos seleccionados, desde una tableta/dispositivo móvil, sin requerir acceso a Internet

- Descarga y sincronismo sencillo
- Descarga de hasta 3 títulos a la vez y hasta 20 títulos al mes
- Disponible en iOS Apple App store Google Play App store

(sincronismo con reportes de uso de los títulos)

\*\*\*\*\*31



# Knovel Interactive Equation: Calculadora de ecuación interactiva

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# **Gracias!**

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