

## **Engineering Technician Information Guide**

### **E-books**

**Available via the Knovel service in the [IMechE Virtual Library](#)**

2009 ASHRAE Handbook - fundamentals (SI edition)  
An introduction to engine testing and development (Society of Automotive Engineers, 2009)  
Biomaterials science - an introduction to materials in medicine (Elsevier, 2004)  
Control techniques and drives and control handbook (Institution of Engineering and Technology, 2001)  
Engineers' guide to pressure equipment - the pocket reference (Wiley, 2001)  
Engineers' guide to rotating equipment - the pocket reference (Wiley, 2001)  
Essential MATLAB for engineers and scientists, 4<sup>th</sup> ed (Elsevier, 2010)  
Fluid mechanics and thermodynamics of turbomachinery, 5<sup>th</sup> ed (Elsevier, 1998)  
Fluid power dynamics (Elsevier, 2000)  
Finite element method - its basis and fundamentals (Elsevier, 2005)  
Fundamentals of heat exchanger design (Wiley, 2003)  
Fundamentals of polymer engineering (Springer, 1997)  
Fundamentals of production logistics - theory, tools and applications (Springer, 2009)  
Industrial fire safety guidebook (William Andrew/Noyes, 1998)  
Introduction to fluid mechanics (Elsevier, 2000)  
Introduction to systems engineering (Wiley, 2000)  
Manufacturing engineer's reference book (Elsevier, 1993)  
Materials selection in mechanical design, 5<sup>th</sup> ed (Elsevier, 2005)  
Mechanical engineers' handbook, 2<sup>nd</sup> ed (Wiley, 1998)  
Mechanical engineer's reference book, 12<sup>th</sup> ed (Elsevier, 1998)  
Mechanics of materials, 3<sup>rd</sup> ed (Elsevier, 1997)  
Plant engineer's reference book, 2<sup>nd</sup> ed (Elsevier, 2002)  
Risk assessment and risk management (Royal Society of Chemistry, 1998)  
Rules of thumb for mechanical engineers - a manual of quick, accurate solutions to everyday mechanical engineering problems (Elsevier, 1997)  
Strength of materials and structures, 4<sup>th</sup> ed (Elsevier, 1999)  
Systems engineering principles and practice (Wiley, 2003)  
Safety, reliability and risk management - an integrated approach (Elsevier, 1998)  
Vibration fundamentals (Elsevier, 1999)

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Buecher B, Basics of boiler and HRSG design, PennWell Corp, 2002  
Denton T, Advanced automotive fault diagnosis, Butterworth-Heinemann, 2006  
Donnavair R, Practical hydraulic systems: operation and troubleshooting, Newnes, 2005  
Galvery W L, Welding essentials: questions and answers, 2001  
Hamner W, Blueprint reading basics: manufacturing print reading, Industrial Press 2001  
Hecht H, Systems reliability and failure prevention, Artech House, 2004  
Higham DJ, Matlab Guide, SIA, 2000

Hoyle D, Automotive quality systems handbook, Butterworth-Heinemann, 2005  
Hoyle D, ISO 9001: 2000 quality management system design, Arctech House, 2003  
Isakov E, Engineering formulas for metalcutting, Industrial Press, 2004  
Karris S T, Mathematics for business, science and technology: with MATLAB and spreadsheet  
Kiencke U, Automotive control systems: for engine, driveline, Springer, 2005  
Mechanical engineering referencepoint suite, Skillsoft  
Narayan V, Effective maintenance management: risk and reliability, Industrial Press. 2004  
Newbold D, A practical approach to motor vehicle engineering, Butterworth- Heinemann, 2005  
Norton R L, Cam design and manufacturing handbook, Industrial Press, 2002  
Shrock CR, AutoCAD pocket reference, Industrial Press, 2006  
Smid P, CNC programming techniques: an insiders guide, Industrial Press, 2002  
Sproull B, Process problem solving: a guide for maintenance, Productivity Press, 2001  
Uicker J J, Theory of machines and mechanisms, Oxford University Press, 2003  
Zakien V, Control systems design: a new framework, Springer, 2005

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## E-journals

4,000 leading full text journals are available via the EBSCO Science and Technology Database and EBSCO Business Source Corporate in the [IMechE Virtual Library](#).  
[A list of EBSCO Science and Technology Collection titles](#) and [a list of EBSCO Business Source Corporate titles](#) are available on the EBSCO website.

## Useful books

Available to borrow by postal loan or in person - search the [IMechE library catalogue](#) to locate these titles or look for more.

Ashby M F, Engineering Materials 1:  
Ashby M F, Materials and design  
Ashby M F, Materials : engineering, science, processing and design  
Bentley C, Prince 2 revealed, including how to use PRINCE2 for small projects  
Bird J O, Basic Engineering Mathematics  
Bird J O, Higher Engineering Mathematics  
Bird J O, Bird's pocket reference guide for electrical and electronic Engineers  
Bishop O, Robot Builder's Cookbook: Build and Design Your Own Robots  
Bolton W, Engineering Science  
Bolton W, Instrumentation and Control Systems  
Bolton W, Mechanical science  
Bolton W, Newnes instrumentation and measurement pocket book  
Bonnick A, A Practical Approach to Motor Vehicle Engineering  
Darbyshire A, Mechanical Engineering: BTEC National Option Units  
Denton T, Advanced automotive fault diagnosis  
Denton T, Automobile electrical & electronic systems  
Dingle L, Aircraft Engineering Principles  
Doddannavar R, Practical Hydraulic Systems  
Drucker P F, The Essential Drucker  
Greeno R, Building Services Handbook  
Hahn B, Essential MATLAB for Engineers and Scientists

Hoyle D, ISO 9000 Quality Systems Handbook  
Langton MA, Electrical engineers reference book  
Megson T H G, Aircraft Structures for Engineering Students  
Moore T, Tolley's Handbook of Disaster and Emergency Management  
Nunney M J, Light and Heavy Vehicle Technology  
Salmon D, Mechanical Engineering: Level 2 NVQ  
Stranks J, Health and Safety Pocket Book  
Stranks J, The handbook of health and safety practice  
Tooley M, Aircraft digital electronic and computer systems principles, operation and maintenance  
Tooley M, BTEC First Engineering: Core Units for BTEC firsts  
Tooley M, BTEC National Engineering  
Tooley M, Higher national engineering  
Ward R, Domestic Central Heating Wiring Systems and Controls  
Watkins A J, Electrical Installation Calculations Volume 1  
Wiseman, June, Labour market survey of the GB engineering sections, 2006

## Databases

- **Efunda**  
Engineering fundamentals including: material datasheets, engineering formulas, unit conversions, mathematics, physical constants and processes. Design calculators powered by webMathematica. Available in the [IMechE Virtual Library](#).
- **ILI Metals Infodisk (Library only database)**  
Metals properties database. Search by standard number, designation, grade or description. Library staff can run searches on your behalf of Members email the results. Results can be emailed to IMechE Members. Please [contact us](#) to request this.
- **ILI Standards Infobase (Library only database)**  
Abstracts and contents listings of worldwide standards. You can search by keyword, title or standard number. Results can be emailed to IMechE Members. Please [contact us](#) to request this.
- **IMechE Library Catalogue**  
This contains details of all the books available in the library and title and abstract information for papers and articles published in IMechE conference, seminar, proceedings and journal publications. Available at <http://62.173.95.116/webview/>.
- **Mint & Dash company databases (Library only database)**  
Company mailing lists can be produced in Excel format restricted by company size, turnover, product/service, number of employees and location. We can also provide financial and other data on individual companies. Results can be emailed to IMechE Members. Please [contact us](#) to request this.
- **Society of Automotive Engineers (SAE) (Library only database)**  
Abstracts of SAE technical publications papers, articles, proceedings, standards and books. A full collection of SAE technical papers are held in the Library. Searches can be run on your behalf or articles or books supplied by post. Please [contact us](#) to request this.

## Useful links

### Apprenticeships

**Engineering Technician (EngTech)** is a professional registration awarded by the IMechE for technicians. Information on apprenticeships and the benefits of registering with EngTech can be found at <https://www.imeche.org/students-and-apprentices/apprentices/welcome>

**National Apprenticeship Service** - website includes listings of apprenticeships  
[www.apprenticeships.org.uk/](http://www.apprenticeships.org.uk/)

**EEF** website <http://www.apprentices.co.uk/> - includes listings of apprenticeships

**Apprenticeship guide** - includes directory of employers and apprenticeship listings  
[www.apprenticeshipguide.co.uk/](http://www.apprenticeshipguide.co.uk/)

**Semta**, the Sector Skills Council for Science, Engineering and Manufacturing Technologies has FAQs on engineering apprenticeships on its website  
[www.semta.org.uk/careers\\_qualifications/apprenticeships/apprenticeships\\_in\\_engineering.aspx](http://www.semta.org.uk/careers_qualifications/apprenticeships/apprenticeships_in_engineering.aspx)

**Scottish Engineering** - If you are based in Scotland see apprenticeships and training advice at Scottish Engineering: [www.scottishengineering.org.uk/](http://www.scottishengineering.org.uk/)

**The Engineering Training Council Northern Ireland** - In Northern Ireland, the Engineering Training Council Northern Ireland have partnerships with employers and often help with recruitment of apprentices: Interpoint, 20-24 York Street, Belfast, BT15 1AQ Tel: 028 9032 9878 [www.etcni.org.uk](http://www.etcni.org.uk)

### Careers advice

Please see the careers advice section of our [Careers Guide](#).

### Courses

Please see the training course information section of our [Careers Guide](#).

### Company information

Please see the company information section of our [Careers Guide](#).