

## Online Engineering Resources – Part II: Engineering Technology Sites

Here is the second part of a three part series discussing online engineering resources. Do you ever want to look up something technical, quickly? Wouldn't it be great if you could find it online instead of dragging out the old college text books or one of those huge engineering handbooks? Well, you can – sort of – maybe. This month I'll talk about a few online resources that present engineering technical information.

But first this caution. As you know, engineering is an exacting skill, requiring a great deal of knowledge and experience. I have found numerous online resources that are less than accurate. Be especially cautious of online calculators. Too often they don't provide information regarding their underlying assumptions and the limitations of their applicability. Having advised caution, here are just a few sites you may find helpful.

[www.onlineconversion.com](http://www.onlineconversion.com) – Whenever you are doing calculations for design analysis, data reduction, etc. it is important to maintain consistent units. And thus it is inevitable that some unit conversion is required. For those somewhat obscure unit conversions that you haven't memorized yet, try this site. They have over 5,000 units with 50,000 conversions allowing you to convert just about anything to anything else. Its quick, easy to use and best of all, it's free.

[www.efunda.com](http://www.efunda.com) – This is without a doubt, the best engineering fundamentals site I have found. It has a very broad range of technical information including materials, processes, design guides, formulas, and calculators. It contains thousands of searchable pages. One minor drawback – it is not free. To gain full access to the site, you need to become a paying member. However, at \$6/mo or \$60/year it is very reasonable for the quantity and quality of the material available.

[www.matweb.com](http://www.matweb.com) – Material property information is another frequent need during design and analysis. This website provides a searchable database of material data sheets, including property information on thermoplastic and thermoset polymers such as ABS, nylon, polycarbonate, polyester, polyethylene and polypropylene; metals such as aluminum, cobalt, copper, lead, magnesium, nickel, steel, superalloys, titanium and zinc alloys; ceramics; plus semiconductors, fibers, and other engineering materials. Basic access to this site is free. You can register for free and gain more search and material comparison features. A full, premium membership is \$74.95/yr. Unless you spend a lot of time selecting and analyzing different materials or you need to directly import the material data into your FEA application, it probably isn't worth the money.

[www.engineersedge.com](http://www.engineersedge.com) – Engineers Edge is rather small and basic compared to the other sites listed above. But it is growing and is a good place to look up some basic technical information or it can be a place to start a more exhaustive online search. The guy who runs this site has an extensive background in Geometric Dimensioning and Tolerancing (GD&T), so you can find a significant amount of related information on his site.

There you have it. A few sites that come in very handy when you happen to stray

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from your own area of expertise and can use a helping hand – quickly and easily. Next month I'll talk about online technical communities.

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<http://www.innovativethermal.com/index.html>

[bob@innovativethermal.com](mailto:bob@innovativethermal.com)