

When I was an apprentice engineer, we did one day a week at college where they measured things in anything from 'thousandths of an inch' to 'so many yards' (and of course the ridiculous metric alternatives of millimeters, centimeters and metres that had been forced on us back in the early 1970's). However, 'real engineers' were taught a far older and more reliable range of measurements.

Generally, at the quantum end of the scale, you started with a 'Smidgen', which equated to the standard British imperial precision 'clearance' measurement of 'sixteen thou' (16/1000 of an inch) or just under half of one of those ridiculous 'millimeters' that were foisted upon us by Europe.

In traditional British industries (if you are under 30 years old, ask your dad about the industries we had before Thatcher shut them down or sold them off for pennies), three Smidgens were equivalent to a 'Gnat's-Dick'.

Three Gnat's-Dicks were equivalent to a 'Cock-Hair' and four Cock-Hairs equalled one 'Tad'.

With the Tad we have entered the 'macro' scale, where things can be reliably measured by eye.

A 'Thumb-End' was made-up of two Tads and five Thumb-Ends were equivalent to one Handful. (Except in Norfolk or certain parts of Yorkshire where a Handful can be comprised of six or even seven Thumb-Ends).

At the larger end of the scale, we had a 'Batch', which was the equivalent of twelve Handfuls followed by a 'Ruck' which was comprised of twelve Batches. The only measurement greater than a Ruck was a 'Shitload'.

It was never firmly established how many Rucks it took to make a Shitload because, according to conventional wisdom, "If you have a Shitload, you have enough!"

This system of 'standard integers' was ideally suited to the universal requirements of British industry because they can be used as a measurement of length or mass but equally as a measurement of volume or the passage of time. Even the intensity of human emotions was often calculated using this system.

"Mr. Brunel will be more than a tad peeved if this bridge turns-out to be a thumb-end short of reaching the other

side of the Avon!" Said the foreman as he surveyed the site from his vantage-point atop a swarthy barmaid from Bristol; "And there'll be a shitload of us filling the next batch of boats back to Ireland if it's so much as a cock-hair out-of-kilter!"

*Excerpt from 'The Building of the Dangly Bridge' by R S Biscuits @1868.*

Nowadays of course we have all sorts of silly metric sizes for things while still clinging forlornly to the old imperial system of inches, feet, yards and miles. It's no wonder we have difficulty grasping the finer nuances of measurements.

Have you ever found yourself in the position where you need to replace a bolt on your bike or trike but you aren't sure of the exact size?

OK so, if you have the original bolt, you can try to roughly measure the diameter with a rule (or more exactly if you own a Micrometer), and perhaps you establish it to be in all likelihood 10mm in diameter (or 25/64 inch or about 8 cock-hairs); but then how do you know if it is a British imperial thread such as BA, BSF or BSW, or a metric thread or even a silly American 'Unified' thread? The simple answer is, generally you can't!

Maybe you can take a guess based on the manufacturer of the motorcycle but even that becomes less reliable with custom built bikes and trikes, so what do you do?

Well, you could try wading through all of the tech-spec stuff on the internet or you can go to your local bike-shop and ask them (again, less of an option for custom bikes).

I suppose, if you are a deranged optimist, you could ask on one of the motorcycle forums on the internet but the chances are some incredibly boring bastards will give you the very-long-winded version of 'a completely wrong answer'.

Well, I'll tell you what you have to do! You have to ask around until somebody gives you the name of the local Wizard!

Wizards nowadays don't tend to dress in pointy hats, curly-toed shoes and starry robes, they are far more likely to be wearing oily jeans and a mucky, often blim-burned and invariably aged t-shirt; but they are no-less mystical and magical for that!

Wizards can have strange names like 'Grobo' or 'Snob' or 'Budgie' though often they have fairly mundane-sounding names like 'Chris Ireland' or 'Dick Smith'.

My local Wizard is known as 'Trike Paul' and he can ascertain the size and thread of the bolt you need simply by licking the end of your thumb!

Wizards can conjure-up whatever parts you need, including parts you weren't even aware you needed, with the wave of a hand (though it can often be a very slow wave) and they can tell you how to fit them.

Wizards can also 'magic-up' cups of tea with barely a flicker of movement, if you are prepared to listen to them describing in great detail how they designed a revolutionary exhaust bracket for a triple-expansion banjo polisher or some such bizarre item... and it is invariably 'bloody good tea'!

I hope this short educational article has gone some way to helping you to solve your engineering problems. I shall now return to sitting in the corner of my nicely padded room and eating my crayons.

You never know, now that Britain has left Europe, perhaps we can all get our cock-hairs back and start believing in magic again?

Geoff Mockford

