



QSI Corporation
2212 South West Temple #50
Salt Lake City, Utah 84115-2648 • USA
Phone 801-466-8770
Fax 801-466-8792
Email info@qsicorp.com
Web www.qsicorp.com

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National Math Advisory Panel
U.S. Department of Education
NationalMathPanel@ed.gov

Dear Sir/Madam:

I am writing to you as the President of a US engineering and manufacturing company. We manufacture specialized industrial equipment, and employ people in fields ranging from engineering to administration to sales and marketing to manual assembly labor.

Given the wide variety of education levels of the people we employ, I have a good view of where different educational systems (i.e., grade school, high school, college) are properly equipping their students for the types of work they will be doing. In one area in particular, they are failing students abysmally, excepting only the scientists and engineers we hire. That area is in teaching the metric system

The modern metric system (SI) is the worldwide standard of measurement, with the USA being the *only* country that does not use it in day-to-day activities. Sadly, the USA *does* use it in many areas, but they are largely hidden: cars are entirely metric, electronics devices are mostly metric (computers, cell phones, etc.). We see some of this in consumer products (e.g., soda pop, detergents, pet food, hair care), but many people in this country still erroneously think they live in a non-metric world.

Because of this belief and the failure of our educational system, when a manufacturing company such as QSI Corporation hires someone other than an engineer, we are pretty much forced to teach what our schools are failing to teach: the modern metric system.

Why do assemblers and secretaries and salespeople need to know the metric system? Allow me to list a few reasons:

- Every component we purchase overseas, which our assemblers make into products, is all-metric, and about 99% of time comes with metric-only drawings – no inches or pounds anywhere.
- When a drawing for a product to be shipped overseas specifies, for example, a 150 mm cable, assemblers must be able to understand what that means and make the appropriate part.
- All our correspondence with overseas customers must be in metric. You cannot send an email to someone in Japan or Denmark and use feet or pounds – they are largely unfamiliar with such units.

NMAP

23 August 2006

PAGE 2

- All of our sales literature and web page information must be metric, for two reasons. First, the world of electronics is metric (there is no colloquial equivalent to units of measure such as volts, watts, amps ohms), and, second, web pages are selling tools for the whole world, so we have to make sure the whole world can understand our specifications.
- Many of the more progressive American companies use metric exclusively or extensively, and therefore we have to use metric to be a supplier to them. For example, if you are working with any of the automobile manufacturers (Ford, Chrysler, etc.), you will be working with metric units. Though they publish literature in the USA that gives a car size in inches and pounds, that car was entirely designed and manufactured using metric measurements and components.

I hope these examples give you an idea of why this is a serious problem. We purchase from suppliers all over the world, and we sell to customers all over the world. Unfortunately, US school systems send us people who are pretty much ignorant of the measurement language of the world.

I encourage you, in the strongest possible terms, to help prepare the United States for the future, and an important part of the future is the ongoing adoption of metric measurement by the USA. So please do the whole country a favor by strongly supporting educating our students, starting at the lowest levels, in how to use the metric system.

Finally, please *discourage* the teaching of our old colloquial measurement system (feet, inches, pounds, etc.) This only slows the adoption of the metric system in this country, and slows the education of students. Let them spend their time learning the measurement system the world uses. What little they need to know about our colloquial system they will learn in day-to-day life; their school life should include only metric education.

Sincerely,

QSI CORPORATION



James K. Elwell
President

JKE/sf