

[LETTERS]



LAST REMAINING MILL IN CANADA

It is not a surprise that Mr. Hogg (“Stainless steel for rebar?,” *Engineering Dimensions*, May/June 2016, p. 75) and Mr. Smith (“The many uses of stainless steel,” *Engineering Dimensions*, July/August 2016, p. 57) were not aware that there is, in fact, a steel mill in Canada capable of producing stainless steel for rebar, special bar and large forged products industries, so I felt compelled to set the record straight on the subject. In fact, a stainless steel melt facility does exist in Canada and ASW Steel Inc. in Welland, Ontario is that mill.

ASW boasts a long and rich lineage in the specialty steel industry dating back to the early 1900s as Atlas Steels Ltd. Stainless, and other specialty steel products used in critical applications, such as nuclear refurbishment projects, aerospace landing

gear products, land-based turbine, heavy equipment bearing and race production, and a myriad of military equipment and armament applications, have been the staple of the very existence of this mill since its inception. Atlas Steels developed stainless steel rebar capability in the 1990s when the Ministry of Transportation of Ontario made SS rebar a requirement for the bridge decks of all 400-series highways. ASW continues to possess the facilities and know-how to produce the product and has recently partnered with a domestic rolling mill to supply such projects again today. Re-entering this market is anticipated to occur in the next quarter.

Hopefully this short communication will provide some insight as to the last remaining melt facility in Canada capable of producing stainless steel products through electric arc furnace melting and argon-oxygen decarburization.

Tim Clutterbuck, P.Eng., Welland, ON

MAINTAINING PROFESSIONAL COMPETENCE

I have known President George Comrie for many years and respect his commitment to the engineering profession. I was particularly interested in his comments regarding continuing professional development (CPD), which I fully endorse as being even more relevant today than when he expressed his original ideas in 2004. When I graduated as a civil engineer 60 years ago, computers were virtually unheard of and slide rules and logarithms were the norm in undertaking calculations. Simple structural designs could take days, and while many of us “old-timers” have struggled to keep up with modern technology, I was humbled when I read a recent article in the UK publication *New Civil Engineer*.

If I may quote a phrase from the Comrie article in the July/August 2016 issue of *Engineering Dimensions* (“Better regulation still the goal, says Comrie,” p. 36): “At the same time, I firmly believe the status quo is not a sustainable option. PEO cannot continue to require nothing of its members to maintain their licences other than payment of their annual dues.”

The UK article was entitled “Cream of the Crop” and listed what it considered the 2016

Companies of the Year, following a “painstaking [selection] process” to choose the 100. When reading this article, I was humbled, as I have already stated, by how little I knew of the current state of innovation in the civil engineering industry. Quoting from the article: “In total the NCE 100 brought 666 different technology innovations to market in 2015. A good civil engineering practice is one that seeks to maximize the use of technology. Of the NCE 100, 81 per cent have a digital strategy and a board director responsible for its successful implementation. Equally, 81 per cent claimed to be ready to operate in a building information modelling (BIM) Level 2 environment. Proving that technical best-practice sharing runs through many of the hundred, on average 41 per cent of senior management sits on industry panels and boards with 13 per cent of all staff—on average—getting involved in industry committees and professional knowledge sharing groups.”

I could go on and quote many other statistics but the message to me is quite clear. Engineers in the 21st century have no option other than to maintain their professional competence and this means acting in a proactive manner right across the board from the most senior partner to those newly entered into the profession. I have now been retired for many years and I regret the fact that technology has now far outpaced my knowledge even though during my career I was honoured by receiving fellowships in both the UK and Canadian professional organizations. George Comrie’s comments are both timely and relevant.

Brian Lechem, P.Eng., Toronto, ON



ONTARIO
SOCIETY
OF PROFESSIONAL
ENGINEERS

OSPE OFFERS ENTREPRENEURSHIP RESOURCES

Regarding the article “Inspiring innovation and entrepreneurship within PEO’s Ottawa Chapter” in *Engineering Dimensions*, September/October 2016 (p. 37), I’m pleased to advise on how the Ontario Society of Professional Engineers (OSPE) is serving our membership in this area.

Firstly, I’d encourage all readers to check out the resources OSPE has made available to our membership regarding entrepreneurship. You’ll find a growing set of links to resources available to all of our members, province-wide, addressing the topics identified in the article.

As a partner in the Ottawa activities expressed in the article, I’m pleased to say OSPE has established a business and operating model to bring to our membership networked resources, a framework for any interested chapters in engaging in local entrepre-

neurial networking events and linkages to academia, industry and government, not to mention colleagues and mentors.

Regarding organizational roles, the regulatory role of PEO and the advocacy role of OSPE, each organization optimized to their roles and mandates, clearly this entrepreneurial support role belongs to OSPE. It was good and appropriate for PEO to clearly and correctly identify its position, and this will, in fact, ensure we bring the right resources to support the entrepreneurial initiatives. The “two sides of the same coin” collateral further clarifies the roles of PEO and OSPE.

OSPE is pleased to engage with chapters, university or industry groups to ramp up the engagement of our members in fuelling the economic growth and success of Ontario. The society will move an entrepreneurship agenda forward within our means and based on our strategic goals, with an interest in first and foremost serving those who support OSPE through active membership.

Michael Monette, P.Eng., Ottawa, ON

President and chair, Ontario Society of Professional Engineers

Letters to the editor are welcomed, but must be kept to no more than 500 words, and are subject to editing for length, clarity and style. Publication is at the editor’s discretion; unsigned letters will not be published. The ideas expressed do not necessarily reflect the opinions and policies of the association, nor does the association assume responsibility for the opinions expressed. Emailed letters should be sent with “Letter to the editor” in the subject line. All letters pertaining to a current PEO issue are also forwarded to the appropriate committee for information. Address letters to naxworthy@peo.on.ca.

OSPE TO TAKE A LEADING ROLE

I was very happy to read of the success that has been achieved with the Ottawa Chapter Entrepreneurship Program (“Inspiring innovation and entrepreneurship within PEO’s Ottawa Chapter,” *Engineering Dimensions*, September/October 2016, p. 37). What Dr. Das and the project team have accomplished with the pilot program could be a model for other chapters, PEO or even other provincial regulators.

As one of two Eastern Region councillors in 2015, however, I’d like to correct a misimpression that may arise from Dr. Das’ article. The Regional Councillors Committee did not vote to withhold support for the program because it lacked merit, but because it was unclear if it was within PEO’s mandate to unilaterally run such a program. Much discussion occurred prior to our decision, with the resulting consensus being that this program fell mostly within the jurisdiction of the Ontario Society of Professional Engineers (OSPE). That would not preclude PEO’s involvement, but would require that OSPE have a leading role. Indeed, a joint program of this nature could be an ideal opportunity to further strengthen the relationship between OSPE and PEO.

Charles Kidd, P.Eng., Peterborough, ON

Former PEO Eastern Region councillor

[LETTERS]

STRENGTHENING OUR POSITION

I believe this article by Howard Brown and Blake Keidan, especially the illustration of two identical lathes, has completely negated the point that PEO has been trying to get across to industry leaders and the government to abolish the industrial exception (“Safety in manufacturing: Can you spot the difference?” *Engineering Dimensions*, September/October 2016, p. 23).

The illustration of two identical lathes with identical guards will raise the logical questions in the mind of the industrial managers: “Why should I hire an engineer to design a safety guard when my own experienced people can do the same thing?” I am sure the same people in government that PEO is trying to convince would raise similar questions.

A far better illustration would have been to show one machine with a jury-rigged homemade guard, and one with a professional appearance.

With 34 years in a factory environment, and many of them in machine shops, I also take exception to their statement that lathes are dangerous—all machine tools can be dangerous in inexperienced hands. But machinists are highly trained, highly experienced and very safety-conscious people. In the plant I was in, all machinists are high-school graduates and have four years’ apprenticeship before they become journeymen. These people are professionals; they can design, build and install any safety guard as well as, or probably better than, an outside engineer.

Also, in many manufacturing plants, the product, tools and processes are proprietary, requiring very special equipment. How many engineers are versatile enough to have the specialized knowledge to design equipment better than the people who work with it?

Another point I would like to make is that many machinists have expressed to me that guards are, in themselves, dangerous. They can induce a false sense of security and thus complacency. Also, they can interfere with accessibility, as frequently machinists must access the machine (lathes particularly) while running to polish the workpiece with emery strips or measure with calipers.

I am not disagreeing with PEO’s position on the industrial exception but I believe that articles such as this one have weakened rather than strengthened their argument.

Clayton M. Morgan, P.Eng., Newcastle, ON

SOFTWARE ENGINEERING CHALLENGES

The President’s Message in the September/October issue presented some interesting issues related to the emerging discipline of software engineering, among other emerging disciplines (“Regulating emerging engineering disciplines,” *Engineering Dimensions*, p. 3).

Software is almost ubiquitous in most major systems and processes and forms an essential component of both the normal operation but, more importantly, the emergency operation and safety systems of the plant. For nuclear plants, this is especially so as the controls are software driven as are the shutdown systems. Hence, they affect both the safety and the operating status (hence the financials) of the plant.

In addition, software also affects the aviation industry (avionics, flight controls, etc.) and also the defense industries. We do have a sizable aerospace industry. Hence, when we think of regulating the software engineering discipline, I feel we have to tread carefully.

Some industries, notably defense and aerospace, may have their own regulations and standards,



hence could there be overlap and over-regulation? Would public and industry perception really be that we are adding value?

Some safety systems have components that are microprocessor-based, so would the firmware in these devices be subject to regulation—i.e. certification by a licensed software engineer? If the product is manufactured overseas, the source code may not be made available as it is the manufacturer’s IP, so how would the software engineer certify it? In many cases, the system and its software may be certified by a third party overseas (commercial grade dedication), so what would the software engineer’s role be in this case? I have faced this in my career.

Then there is the question of software QA. In regulated industries, this is fairly rigorously implemented, hence would there be value added by having a certified software engineer certify it?

While the principle espoused here may be laudable, the implementation may be a challenge.

Ken Dias, P.Eng., Scarborough, ON