By Jocelyne Hébert, in collaboration with Daniel Jolin

For safer industrial machinery: a new competency profile!

Presse Hydraulique

The Ordre des ingénieurs du Québec just published a new competency profile, this time for engineers who work in an environment where industrial machines are used. As a result, engineers will be better equipped to make these machines safer and prevent work accidents.

TOO MANY ACCIDENTS!

The advertising campaign that the Commission des normes, de l'équité, de la santé et de la sécurité du travail (CNESST, formerly the CSST) has carried out in the last few years clearly shows the potential consequences of an accident involving industrial machinery. In 2015 alone, seven deaths were caused by industrial machines and four others were caused by moving parts. These numbers do not include the accidents that caused serious injuries in many cases as well as amputations.

"In 2005, we adopted an action plan to make these machines safer," says Josée Ouellet, Eng., an expert prevention and inspection consultant at the CNESST. The number of accidents has steadily fallen since then, but there is still a ways to go."

Josée Ouellet adds that "engineers play a key role in this area. Industrial machine designers can include safety features during the design stage. Engineers who work with these

machines need to make sure that they really know and apply machine safety standards and principles."

ONE METHOD FOR ALL

The CNESST's concern is echoed by Tony Venditti, Eng., a technical research officer at the Association sectorielle – Fabrication d'équipement de transport et de machines (ASFETM). "Safeguarding industrial equipment," he says, "is an engineer's duty. Yet, during the 25 years I have worked in this field, I have noticed that engineers ask very relevant questions, which means that they need information and guidance in this area of expertise. The competency profile will undoubtedly help them find the answers!"

YOU WILL FIND THE "REQUIRED COMPETENCIES OF ENGINEERS FOR INDUSTRIAL MACHINE SAFETY" IN THE PROFESSIONAL PRACTICE GUIDE (GPP.OIQ.QC.CA), DEVELOPMENT SECTION.

Mr. Venditti, who participated in validating the new tool, noticed that it offers a methodology, a very enlightening structural approach to the competencies that engineers must have or develop to ensure the safety of industrial machines. "For example," he explains, "engineers must be able to specify and confirm standard requirements and applicable laws and regulations. They must also have the competencies required to explain the parameters for using a machine and list the potential accident scenarios."

The new profile is meant for all engineers concerned by this field, i.e. who design, build, modify, install, operate or service industrial machines and the protective measures applied to them, including hazardous energy control methods.

Like most of the OIQ's other competency profiles, the document is divided into two basic parts: an inventory of required competencies and a detailed description of competencies that are considered critical. "The entire document is interesting for engineers," reckons Tony Venditti. "In my case, since I am a specialist engineer at a joint sector-based association, I will use it often, particularly in the training I provide to engineers who use and modify industrial machinery. They will find it very useful to become familiar with the profile."

It takes several years to acquire machine safety competencies and, just by reading the profile, engineers will be able to choose the machine safety training activities that they should take. Searching the Internet will help them find the right training for them.

ENGINEERS ARE THE BEST SUITED!

"We need engineers in the fight to prevent work accidents," added Josée Ouellet. "They are often the best suited to intervene. In fact, they are the best trained and the most qualified to understand the specific standards that apply to machinery and to decide which safeguards need to be implemented. That is also why we always ask an engineer to analyze the circumstances of any accident that occurs with industrial machinery, whenever necessary."

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