

Are You An Engineer If You Don't Pass the P.E.?

Burton Siegal's case in Illinois worries engineering organizations

By Charles J. Murray, senior technical editor, electronics

During the course of his 55-year career, Burton Siegal has assembled a resume that would be the envy of most design engineers. He's been awarded 123 patents, has been nominated for the National Medal of Technology, received a Distinguished Alumnus Award from the University of Illinois' College of Engineering, designed a part of the Surveyor cameras that traveled to the moon and served as a consultant for IBM, Ford, Chrysler and countless other major corporations.

Unfortunately for Siegal, the state of Illinois isn't sure he deserves to be called an engineer. Because Siegal isn't a licensed Professional Engineer (P.E.), the state's Dept. of Financial & Professional Regulation is investigating him for unlicensed practice of engineering. Siegal's attorney says Illinois has asked him to "show cause" to prevent it from levying a "cease and desist" order that would stop Siegal from using the term "engineer" or "engineering" on his business card or in his company's name. Siegal sees the matter as a cruel irony, especially since he is an engineering graduate of the University of Illinois. M

"For them to take him on is shocking," says Cristofer E. Lord, who is serving as Siegal's attorney. "He's been a practicing engineer, consultant and inventor for a very long time."

Siegal is also devastated by the turn of events, not only because it affects his company, Budd Engineering Corp. in Skokie, IL, but because he says he has never held himself out as a P.E.

"In a half-century, I not only didn't claim to be a P.E., I never even allowed anyone to make the assumption," Siegal says.

As distressing as the case is for Siegal, however, it poses bigger questions for manufacturing and professional organizations. Industry organizations worry cases like Siegal's could set a precedent. If Siegal is not recognized as an engineer, states could force thousands of manufacturing firms to remove the term "engineering" from their company names and might even tell hundreds of thousands of engineering graduates to remove "engineer" from their business cards.

"There's definitely a concern here," says Mark Denzler, vice president of government affairs for the Illinois Manufacturers Assn. (<http://rbi.ims.ca/5726-535>). "This situation is a test case for the departments of professional regulation. It's very possible that there are other Burt Siegals out there who could come under the same scrutiny or face similar ramifications."

Running 'Afoul of the Law'

Illinois' investigation began after Siegal had a payment dispute with a client in 2003. When the dispute escalated into legal action, the state caught wind of it and a member of its registering agency visited him, he says.

"A representative of the Department of Registration rang our doorbell," Siegal recalls. "She told me I couldn't use the word 'engineering' in my company name." (Contacted by *Design News*, the state of Illinois declined to comment on the case, saying the matter was still under investigation.)

To be sure, experts say there is good reason for such action. States control the practice of engineering for the public good, providing safety for users of engineered products and maintaining a standard that's in the best interest of the profession.

Moreover, experts say, states don't arbitrarily examine com-

pany records in search of those who aren't licensed. The sheer number of unlicensed engineers makes such action impossible. By most estimates, less than one-third of all graduate engineers ever obtain a P.E. license. According to 2006 statistics published by the National Society of Professional Engineers (NSPE) (<http://rbi.ims.ca/5726-536>), the number of P.E. licenses in the U.S. is approximately 740,000, with many engineers holding two or more licenses (in multiple states). In contrast, American universities graduate approximately 70,000 engineers per year and many experts estimate U.S. schools have granted more than 2 million engineering degrees in the past 30 years.

"As a practical matter, state licensing boards do not go after engineers in industry who use the term 'engineer' on their business cards," says Arthur Schwartz, deputy executive director and general counsel for the NSPE. "If you're working for Microsoft and your business card says 'John Smith, engineer,' then there shouldn't be a problem with that."

Schwartz adds, however, that state boards do not want engineers without a license to "hang out a shingle" as consultants.

"If you hold yourself out as offering engineering services and you're not a P.E., then you will run afoul of the law," he says.

Rising Concerns

Manufacturing organizations, however, worry state agencies are crossing a slippery slope when they go after the likes of Siegal. Siegal, they say, represents a huge contingent of engineers in manufacturing who never bothered to take the P.E. because it didn't seem to have relevancy to their jobs.

"If it's their intention to ensure that all consulting engineers have a P.E., then they need to broaden the exam to be

more all-encompassing," says Robert Chalker, a director of the Society of Automotive Engineers (SAE) (<http://rbi.ims.ca/5726-537>). "Right now, the P.E. is very heavily weighted toward the mechanical and civil engineering worlds."

In Illinois, many engineers in the manufacturing community felt they were exempt from the Professional Engineering Practice Act, based on their reading of a provision that grants an exemption to "services performed by employees of a business organization engaged in utility, industrial or manufacturing operations." For decades, Siegal has believed that exemption applied to him.

Manufacturers say they're concerned that the lack of an exemption in Siegal's case could carry over to them. If it did, many small manufacturers would suffer, they say.

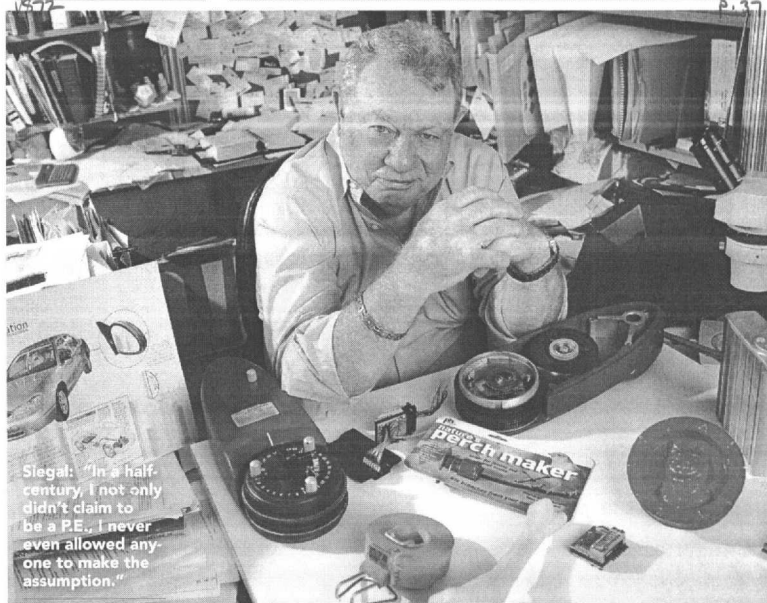
"A lot of companies have the word 'engineering' in their company names," Denzler says. "If they have to change their names, it could have a negative influence on their businesses. It could also call into question a company's integrity or its ability to get the job done."

In Siegal's case, manufacturers are concerned such damaging decisions could be made on the basis of a test they believe has limited relevance, instead of on a "body of work" in the manufacturing community.

"Here's a guy who has sent equipment on Apollo missions," says Brian McGuire, executive vice president of the Tooling and Manufacturing Assn. (<http://rbi.ims.ca/5726-538>). "Do you really want to get in a discussion about whether he's qualified to call himself an engineer?"

TRENDS
BREAKTHROUGHS
DEVELOPMENTS

NEWS



Siegal: "In a half-century, I not only didn't claim to be a P.E., I never even allowed anyone to make the assumption."

PHOTO: RALF-FINN HESTOFT

PROFESSIONAL ENGINEER