

Q&A with David D. Dexter, FNSPE, FASPE, CPD, CPI, LEED DB+C, PE

ASPE has embarked on a path to gain professional recognition and acknowledgement of plumbing engineering through the creation of a plumbing option under the Mechanical Engineering exam for Professional Engineer (PE) registration. To this end, the Society has established a Working Group (WG), Chaired by Scott Steindler, CPD, to develop and present a unified strategy to all State Boards of Registration for Engineers. We sat down with WG member, David Dexter, F.NSPE, F.ASPE, CPD, CPI, LEED DB+C, PE, to better understand the complexities of the issue and reasons for moving forward.

PE: Please give us some background on this issue. Why is it so contentious?

Dexter: There are some within ASPE's membership that believe this to be a doomed effort that could lead to the end of the Society. They cite past experiences as a reason to not seek the goal of Professional Registration for engineers through a plumbing based exam. When this was attempted in the late 60s and early 70s, ASPE was subjected to the wrath and scorn of other professional and technical organizations for pushing a "Plumbing Engineer" designation.

However, I must respectfully disagree. Looking at the past efforts, as well-intentioned as they might have been, they promoted what was essentially a two-year community college or technical school curriculum as an equivalent to a four-year Accreditation Board for Engineering and Technology (ABET)-accredited engineering degree. Much of the engineering basics...calculus, differential equations, chemistry, fluid dynamics, heat transfer, thermodynamics...was provided in a "watered down" form or not at all as part of the programs of study. This previous approach did not likely meet the legal requirements at that time. It certainly would not meet the requirements under current laws and procedures to become a Professional Engineer today.

PEs signing or sealing documents are ethically and legally bound to work within their area of competency. It is not within the purview of ASPE or any person, society, or organization to establish the legal requirements, under the applicable laws, that entrust duly-certified Professional Engineers to sign and seal documents.

PE: That being said, how is the current effort different?

What ASPE can do today, through the National Council of Examiners for Engineering and Surveying (NCEES), is establish a recognized exam path in plumbing. This would be analogous to what ASHRAE has done in creating an option under the Mechanical Engineering exam to target HVAC engineering. ASPE hopes to duplicate ASHRAE's success by creating a plumbing option under the Mechanical Engineering general heading. To assist in this effort, we intend to seek the agreement of a minimum of 10 state Boards of Registration that an option in plumbing is in the best interest of protecting the public's health, safety, and welfare.

PE: What would be the purpose in creating a plumbing option?

The qualifications and knowledge of professionals who are sealing and/or signing plumbing documents must be verifiable. It is time to end the practice of certain Professional Engineers affixing their seal to the works of a designer or drafter simply because they have a license under the generic title of Mechanical Engineering. Well-meaning as those PEs may be, all too often they lack the ability to show competency in the area of plumbing. By affixing their seal and signature to documents developed by designers or drafters, they are, for all intents and purposes, engaging in the act of "plan stamping." This does not in any way take away from those designers, drafters, or similar individuals who hold the CPD (Certified in Plumbing Design) credential who actually produce the documents, but it does create a legal

difference in demonstrating the competency of PEs who specialize in plumbing as opposed to those who specialize in HVAC. Nor is this an attempt to unduly restrict or compromise the practice of any current Professional Engineer. The concern here is to provide a verifiable means of competency, to the benefit of the profession and the health, welfare and safety of the public at large, of the professionals that affix their seal and signature on engineering documents.

PE: Why do you think this is so important?

As a skilled tradesperson, licensed Master Plumber, Certified Plumbing Inspector/Plans Examiner, and a registered Professional Engineer and CPD, I am disappointed in the current, established process of appropriately signing and sealing documents. Too many Professional Engineers rely on very qualified and competent designers and drafters to develop contract documents to which they affix their seal and signature—all too often signing and sealing documents of which they have insufficient technical knowledge. The status quo is not acceptable if the public's health, safety, and welfare are to be protected. Professional Engineers who sign and seal documents without a verifiable level of competency are engaging in the unethical act of "plan stamping." It is time to recognize and end this practice.

The public and profession perceive and expect an engineer to be competent in the area in which they claim knowledge. This is especially true of Professional Engineers recognized under law by the state. The public deserves, and frankly expects, better from the engineering profession.

PE: So any plumbing system designer will automatically be able to sit for the exam?

No, this does not mean that designers or drafters will become eligible to sit for the Principals and Practices (PP) examination. However, it does mean that those who have obtained an ABET-accredited degree in engineering or its equivalent and have obtained the requisite experience under the responsible charge of a Professional Engineer would be able to demonstrate their competency in the area of plumbing.

PE: Does this effort conflict with ASPE's certification programs?

No. In addition to pursuing the registration of those who hold the appropriate engineering degree and experience, we will also continue to promote the CPD and the Certified in Plumbing Design Technician (CPDT) programs to allow those without the ABET-accredited engineering degree to show their commitment to themselves and the discipline and their willingness to exceed the average level of knowledge and experience in plumbing design.

The profession and public deserve nothing short of verifiable professionals and certified designers to oversee projects that impact and affect their daily lives.

PE: What is your ultimate goal?

ASPE is the preeminent international organization in the discipline of plumbing design. The Society is well-positioned to advance plumbing engineering and systems that protect the interests of the public and society at large. The time has come for the Society to elevate the status and public view of plumbing engineering. As with the skilled trades, the plumbing engineer protects the health and safety of the nation and the global population. It is time to raise ASPE to the position that actually fits the public's view and advance the status of the profession.