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# Maintaining Standards

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As members of ASHRAE we are privileged to have access to the most comprehensive and useful set of standards for design and construction of buildings. For most people these are viewed as the backdrop to the design process—a constant that helps define the parameters within which the designer works. However, the standards themselves are dynamic entities, changing and developing as time goes by.

In recent years, this change has been rapid, often shorter than the lifespan of the system it describes and, in some recent cases, even shorter than the design phase of the project described by the standard.

ASHRAE has two globally recognized standards that define the design process for refrigeration systems. ASHRAE Standard 15 describes the requirements for the system itself, and ASHRAE Standard 34 provides classification for the refrigerants used within the system. The two standards complement each other: the classifications in Standard 34 are used throughout Standard 15 to set fundamental safety requirements for the different types of refrigerant in use.

Each document is prepared by a working committee of experts who give generously of their time, talent and accumulated wisdom to produce a finished standard. I have been privileged over the last 10 years to work with some of the brightest and best minds in our industry on standards. I encourage you to participate in the writing process of ASHRAE standards. You will gain more than you can imagine from joining a standards committee. Employers should also note that their staff, particularly younger engineers, will bring huge benefit to the company through work in this process.

In a presentation to the Gustav Lorentzen conference in China last year, I likened the process of preparing standards to the sculpting of a fine statue. Michelangelo said that “every block of stone has a statue inside it, and it is the task of the sculptor to discover it.” When the raw material for a standard (the “block of stone”) is first placed in front of the committee, nobody is entirely sure how the finished item will look. Auguste Rodin described the next stage in the process very well: “I choose a block of marble and chop off whatever I don’t

need.” I emphasize that it is important that the document contain everything necessary but nothing else.

It is often necessary to make sure the committee has stayed on the right track. Robert Breur, the American wood carver and sculptor, said, “The ultimate goal of the sculptor is to capture the essence of the figure.” This is like the process of fine-tuning a standard: rereading the purpose and scope and oftentimes rewriting the text to ensure that the correct message is delivered clearly and unambiguously.

It astonishes me that a text I have read many times, and with which I feel totally comfortable,

can be completely reinterpreted by another reader who draws a very different conclusion. I was going to say “completely misinterpreted,” but who is to judge the correct interpretation?

If I need to be present to explain my reasoning to every user of the standard, I clearly did a poor job writing it. Nor is it simply weight of numbers that dictates the meaning. It is possible, even in a democracy, for the majority to be wrong. The ultimate word in this analogy goes to the ultimate Renaissance man, Leonardo da Vinci, who said, “Art is never finished, only abandoned.”

Thus it is with standards writing. Once it is published, the real test of its utility comes into play: is it actually of any use? Then the process of appraisal, revision, redrafting and republishing can begin, and so the cycle goes on.

So here’s my message: if you don’t like the content of the standard, engage in the process and contribute toward making the next generation better. However, always remember the watchword “be careful what you wish for—you might get it.” ■

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