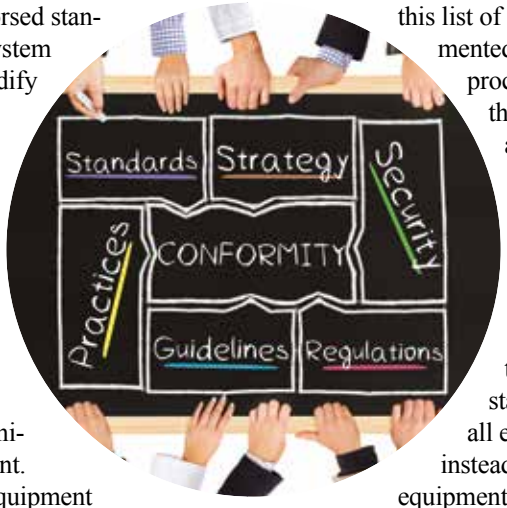
Disciplined Adherence to Standards

The Process Safety Visions (PSV) column takes an in-depth look at the Center for Chemical Process Safety's (CCPS) Vision 20/20 industry tenets and societal themes. The first two installments introduced committed culture and vibrant management systems, and discussed the application of these tenets to establish great process safety. Here we present the tenet of disciplined adherence to standards.

Disciplined adherence to standards starts by having a clear understanding of the standards that apply to various equipment and processes. With disciplined adherence, project managers either follow the endorsed standards or use an existing management system to gain approval from executives to modify the standards for a specific application.



Companies with great process safety performance establish minimum standards for existing equipment before incidents occur and have systems in place to ensure that the existing equipment meets those standards. This does not imply that existing equipment must be the same as new equipment, but decisions are documented in standards that define minimum expectations for existing equipment. Standards do not exist for all types of equipment and engineering practices; in those cases, risk-based decision-making is employed.

What Does It Mean?

• Disciplined adherence to standards means using recognized design, operations, and maintenance standards, following them every time, and continually improving them.

• Companies identify, document, and diligently follow a set of standards applicable to new and existing equipment. These set the minimum expectations for design, operations, and maintenance.

• As industry standards evolve, companies codify significant new learnings in their identified standards for existing equipment.

What Is the Value?

• The use of standards promotes efficiency, reduces the potential for a major accident, and minimizes opportunities for error in design, operations, and maintenance.

• Disciplined adherence to standards supports both safe *and* reliable operations.

What Can I Do?

• Ensure that a system exists to effectively use industry and company standards.

• Make sure the system applies to existing equipment.

• As a leader, assure standards are followed.

What Does It Look Like?

Identify standards applicable to new equipment. For new equipment, meet with personnel to identify the appropriate standards for design and operation. Ensure that this list of standards is agreed to and documented for use in the project. This starts the process of adhering to standards and gets the engineers and managers thinking about the appropriate standards for future projects.

Set or verify minimum expectations for existing equipment. Older equipment is not normally designed to current standards, but such equipment should not be forgotten when it comes to application of standards. Trying to set standards for all existing equipment can be daunting; instead, identify a single type of critical equipment and then identify the minimum expectations for design, operation, and maintenance. Consider starting with a simple type of equipment that will provide a "quick win."

Ensure employees are knowledgeable about the standards in their discipline. Ensure that engineers and other personnel responsible for equipment design and integrity have access to the applicable standards and are knowledgeable about their content and how they apply to their equipment and operations. This does not always involve formal training, but can be self-taught or learned from a mentor. As standards change over time, personnel should be aware of changes and how they relate to current operations.

Follow the standards the company has agreed upon. After standards are set, be sure that project and operations management follows the requirements of these standards, or seeks approval from appropriate leadership to use an alternative. Ensuring that standards are followed requires thorough documentation, including the standards to which the equipment is designed, the specifications of the as-built equipment, and the details of any changes made throughout the equipment's lifecycle. CEP