PROCESS SAFETY MANAGEMENT

Safety is rightfully considered the top priority of organizations. Every business touts it as a value and they should. People have the right to return home just like they went into work and we should all work toward that end.

How an organization manages safety can tell you almost everything you need to know about how it manages its entire business. Simply said, if they can't manage what they profess to be their core value how can you trust them to manage anything else? Moreover, good process safety results are often found to be highly correlated with strong performance in other areas. This is because they are both driven by good leadership and management practices that naturally span all areas of interest.

Safety management has two dimensions – personal and process safety. To confuse personal safety with process safety poses a risk. One can be misled into thinking that indicators such as OSHA recordables are somehow a predictor of process safety performance. There may be some overlap since they are both high-level indicators of the organization's culture and how it is managed. However, there are distinct differences that require different skill sets and, especially in the process industries, that distinction is critical.

Process safety is the domain of engineers and highly-trained operators.. The professional and safe operation of sites often correctly falls to that of trained mechanical, chemical, materials, metallurgical and electrical engineers simply because they deeply understand the process and its control.

Process safety most generally starts with preventing losses of containment. That is preventing oil, gas, or even electricity from leaving vessels, pipes, and wires. To do so requires practitioners to deeply understand what they are doing. It requires the proper design, engineering, operation and maintenance of the system.

The management systems for doing this are well known. Many facilities are, for example, required to be OSHA Process Safety Management (PSM) compliant which provides a framework. There are also resources such as Guidelines for Risk Based Process Safety from the AIChE (American Institute of Chemical Engineers). Many well-run companies have their own operation management systems in which these principles and practices are embedded. The challenge then often becomes not the absence of a framework but the execution of the management practices that make it live.

As usual, it starts at the top. Easily said, but also not easily done. Organizations follow the leader. If the leader doesn't understand, prioritize, and act on process safety issues, and hold herself/himself accountable, then why should the organization do so?

Once the leadership commitment is in place and the organization is executing within a management framework, there can be of the matter of it all getting stale. Being human, we naturally, and even necessarily, normalize everything from physical environments to work processes to individual and team behaviors. This type of normalization serves us well; however, the best organizations do not allow themselves to normalize its current safety practices as the status quo. The best ones practice continuous risk reduction. In fact, it is the act of continuous risk reduction that becomes the norm. In good organizations that constant drive to become better becomes part of the culture. It becomes "the way we do things around here".

At other organizations where safety is just on a "checklist", normalization of issues is one's worst enemy. It locks in less-than-best or even bad practices and once that happens it is only a matter of time before a full-blown accident with all its consequences materializes.

Here's what can be done to reduce the risk of normalizing safety and other practices related to it:
- Adopt the behavior that whenever someone suggests a way to improve or better mitigate a risk, say "thank you", and really mean it. When you or your organization stop listening you put everyone at risk. Humility coupled with listening and then inquiry is the right way to go. That's the way to learn and once you learn something you can correct it. It is a key leadership behavior. It is the way to identify and reduce risk while engaging as many resources as you can. It's an act of leadership.

- Invite people from outside your organization to give you and your organization input. Aim for getting fresh eyes, new perspectives, new and best practices, and new ideas to test what you are doing and consider ways to improve. Properly done, this can help energize an organization. Shut these inputs down and you risk becoming insular, redundant in your thinking, and small-minded. Ask your suppliers for their input as well. They have likely worked with many companies in your industries and it could be that they have seen more variety than those in your organization. Use them as a resource to gather input and improve. Internal audits are good but external feedback challenges the norms.

- Organizations often need to be shaken up a bit. That should be done before a real accident occurs. We have all lost someone whether it be to an accident that was preventable or just because of our inherent mortality. When that occurs, you see the world differently. Your mind goes to what really matters. Your sense of vulnerability is heightened. But we can't sustain this mindset continuously and it probably isn't healthy to do so. Nonetheless, as a leader you want others to be aware of the importance of what you and your team are doing. That your work and how it is done is critical to others and that if it is done poorly it can have consequences. Have your organization follow incidents that have occurred in your and in other industries. Talk about them and what they mean to your organization.

- Learn from your own organization's failures and from others. Incident investigations are a critical part of process safety management. If you turn it into a "blame game" you've taken the sharp instrument of incident investigations and cut yourself with it. Instead the investigation needs to be an opportunity to broadly, and in detail, learn where you can improve. It needs to be a thoughtful look at the culture, organizational work processes, organizational capability, how you are prioritizing your work and much more.

Consider also going to the Chemical Safety Board website routinely to see what incidents/investigations have occurred and understand what you can learn from them. Push your inquiry further and consider what can you and your team can learn from previous incidents, such as:

- o Chernobyl
- o Boeing 737 Issue
- o Macondo/Deepwater Horizon
- o Bhopal

What these incidents have in common is that they all deal with complex systems involving people. At a fundamental level there is no difference between these systems and those in the process industries.

- Challenge yourself to be creative. One way to do this is to continuously ask yourself "what's the best question(s) you can ask?"
  - o Are there new ways to learn? Are there new ways to engage teams and individuals in learning?
  - o Are you prioritizing correctly? What gives you the confidence that you are?
  - o Are there new approaches to bringing in outside views? Can you invite speakers? Can you listen to suppliers more or differently?
  - o Do you require everyone in your organization to step up and explain the reasons behind executing critical safety procedures for which they are held accountable?
  - o Are there paradigms in place that might be challenged or even broken?
  - o Can you do more training? Are you training in all the right areas? How do you measure effectiveness? Do you have the right people doing the training?
  - o Does your organization have the capability (and capacity) to see risk? How do you measure this metric?
  - o What actions can you take that could really have a big impact?

These and other lines of inquiry are only limited by your creativity and willingness to try.

The process industries are very important economic engines for many local communities and even the country. Those of us that operate and supply materials and services to them must be technically outstanding. But we must also be leaders in every way possible. We also have an obligation to explain what we are doing to others that do not share that technical depth.

We are also accountable to our employees, company, and community. Safety accountability is great work; however, it is also can be a great burden. Leaders carry it well, and they do so with humility and often unspoken pride.

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