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"Of the 14 elements of PSM, choose ONE and describe it's purpose and how it plays a role in reducing the likelihood of catastrophic failures and fatalities".

The element that I chose to describe is "Mechanical Integrity". The purpose of mechanical integrity is to periodically inspect different systems, make sure the systems are up to date, and that the function of the systems is working up to OSHA standards. A few of these systems include pressure vessels, storage tanks, piping systems, ventilation systems and more (Basic Safe). The jobs of the inspectors also include rotating equipment like fans and compressors (LCE). The inspectors must be certified and trained and must be able to explain their decisions and why they made those decisions. The mechanical integrity guidelines are described by OSHA. These guidelines are set in place specifically to ensure the safety and standards of the company.

If the guidelines of mechanical integrity are not correctly met, then that could cause an abundance of issues. It is critical for the inspectors to look at all the systems to insure they are functioning properly. If they are not, they need to form a plan of action to fix the broken or faulty systems to prevent dangerous accidents. If the inspectors are examining these systems properly, and are trained correctly they can typically failures, which can lead to serious injury or death. Mechanical integrity includes a plan of action, and the company should ensure the inspector is appropriately trained, and suitable for the job. "In the United States, OSHA Regulation 1910.119 requires that the mechanical integrity of equipment is properly managed in order to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable, or explosive

chemicals", and by following these guidelines will prevent any of these fatalities, or failures (Inspectioneering).

Therefore, mechanical integrity of the systems is extremely important, and the inspectors must be trained properly, and exceptionally diligent to prevent any catastrophic events. Without proper training for the inspectors, there cannot be efficient mechanical integrity, and that is why it is vital for companies to ensure that the people hired have adequate training and are doing a sufficient inspection job. Working with any type of flammable, toxic or explosive chemicals is dangerous, and terrifying and any course taken to avert an event must be done with caution and precision.

References

Brown, Don. "The 14 Elements You Should Include in Your PSM Program." *Basic Safe*, 11 Nov. 2015, info.basicsafe.us/safety-management/blog/the-14-elements-you-should-include-in-your-psm-program.

"What Is Mechanical Integrity and What Are the Requirements of an MI Program?" *Consulting, Engineering, Applied Technology and Education Solutions*, www.lce.com/What-is-Mechanical-Integrity-and-what-are-the-requirements-of-an-MI-program-1670.html.

Williams, Pat. "Mechanical Integrity." *Inspectioneering*, Inspectioneering, 2021, inspectioneering.com/tag/mechanical integrity.