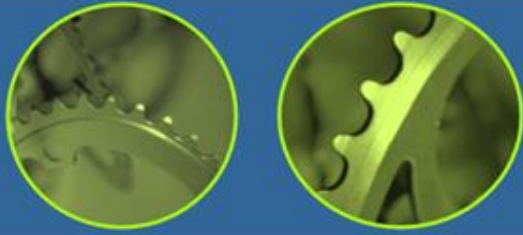


David Neely, CSP EHS Manager



Process Safety Management (PSM)
The System, The Challenge....



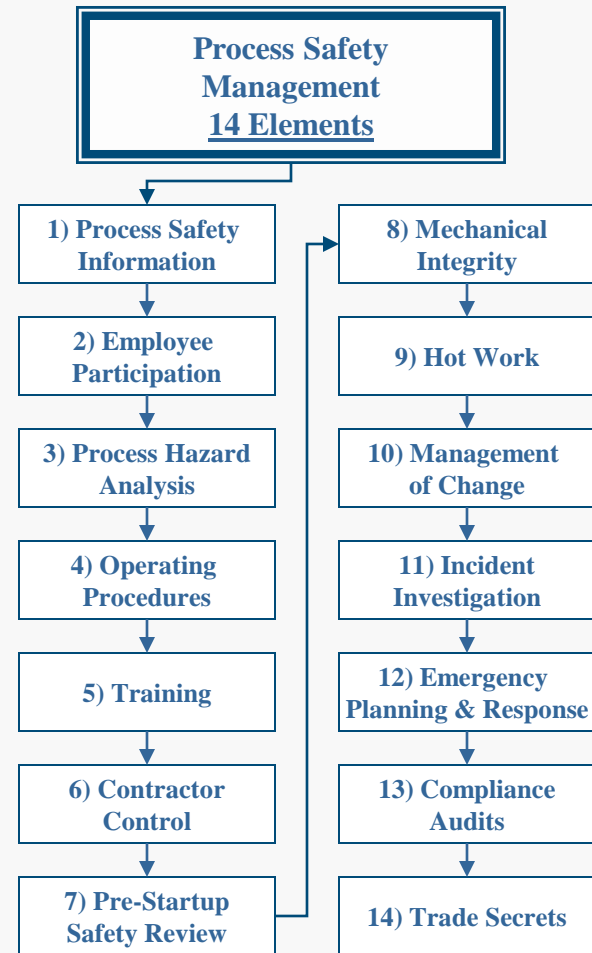
The Regulation

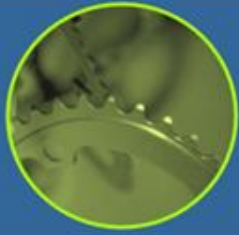
OSHA's Process Safety Management Standard

29 CFR 1910.119

I would make that 15 Elements!

PSM Management System



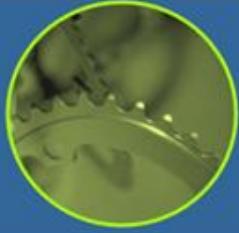


The PSM Standard

Performance Standard

NOT

Specification Standard



Daveism #1...

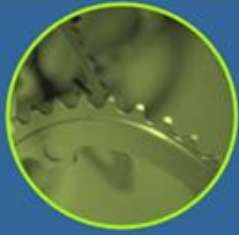
Please do not approach PSM with a mindset that it is a safety function.....

This mindset is a recipe for mediocrity and boatloads of frustration for everyone.....

To be as efficient and “user-friendly” as possible, PSM must be process driven simply because you need buy-in from everyone at the facility.....

To properly complete a PHA or Incident Investigation you will need: line employees (they know what really happens), line supervision, engineers and managers!

Daveism #1 is..... **“PSM is a facility function, not just a safety function.”**



Brief Discussion on a few PSM elements....

3) Process Hazard Analysis

1) Process Safety Information

8) Mechanical Integrity

Again... the 15th Element!

PSM Management System

Process Safety Management 14 Elements

2) Employee Participation

4) Operating Procedures

5) Training

6) Contractor Control

7) Pre-Startup Safety Review

9) Hot Work

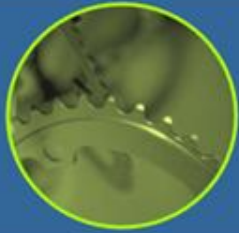
10) Management of Change

11) Incident Investigation

12) Emergency Planning & Response

13) Compliance Audits

14) Trade Secrets

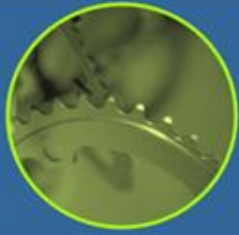


Process Hazard Analysis....

A process hazard analysis (PHA), sometimes called a process hazard evaluation, is one of the most important elements of the process safety management program.

PHA is an organized and systematic effort to identify and analyze the significance of potential hazards associated with the processing or handling of highly hazardous chemicals.

A PHA is directed toward analyzing potential causes and consequences of fires, explosions, releases of toxic or flammable chemicals and major spills of hazardous chemicals. The PHA focuses on equipment, instrumentation, utilities, human actions (routine and non-routine), and external factors that might impact the process.



Process Safety Information....

Complete and accurate written information concerning process chemicals, process technology, and process equipment is essential to an effective process safety management program and to a process hazards analysis.

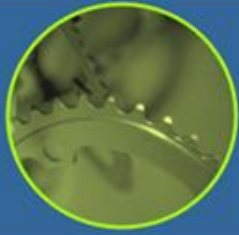
Technology Information

√ if needed	INFORMATION	Information Collected	ISSUING DEPARTMENT
	Block Flow Diagram & Process Flow Diagram		ENGINEERING / PRODUCTION
	Process chemistry		QUALITY / MAINTENANCE
	Maximum intended inventory		SUPPLY CHAIN
	Operating Procedures		PRODUCTION
	Safe upper & lower limits		ENGINEERING / MAINTENANCE
	Evaluation of consequences of deviating from established limits		ENGINEERING / MAINTENANCE

Examples of PSI

Equipment Information

√ if needed	INFORMATION	Information Collected	ISSUING DEPARTMENT
	Materials of Construction		ENGINEERING
	P&ID's		ENGINEERING
	Electrical Classifications		ENGINEERING
	Relief System Design / MAWP		ENGINEERING
	Ventilation System Design		ENGINEERING
	Design codes & standards used		ENGINEERING
	Safety systems (alarms, interlocks, detection, or suppression)		ENGINEERING
	Material & energy balances		ENGINEERING



Mechanical Integrity....

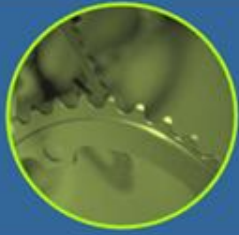


Mechanical Integrity is
the 800 lb GORILLA....



You Can't Ignore the
800 Pound Gorilla

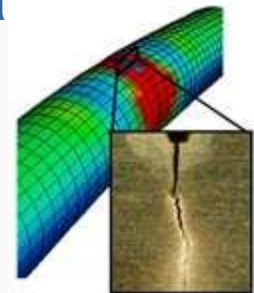
The good news is that a
good MI Program will
bring a high level of value
to your facility!

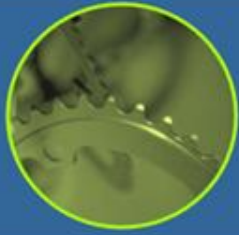


Mechanical Integrity....

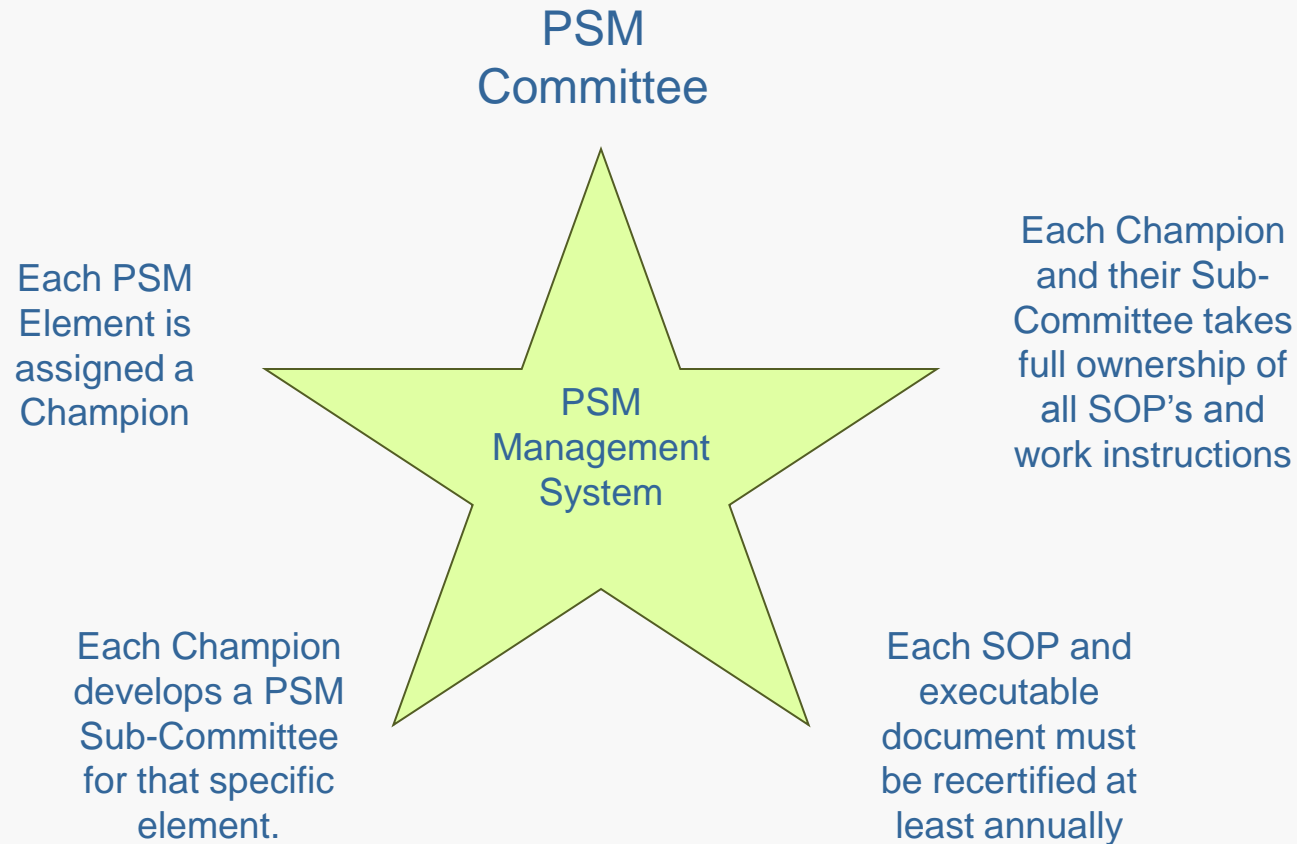
Elements of a mechanical integrity program include (Appendix C):

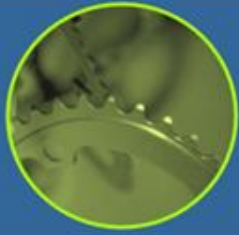
1. the identification and categorization of equipment and instrumentation,
2. inspections and tests,
3. testing and inspection frequencies,
4. development of maintenance procedures,
5. training of maintenance personnel,
6. the establishment of criteria for acceptable test results,
7. documentation of test and inspection results,
8. and documentation of manufacturer recommendations and a
 meantime to failure for equipment and instrumentation.





PSM Management System....





Summary Points....

PSM is very doable...

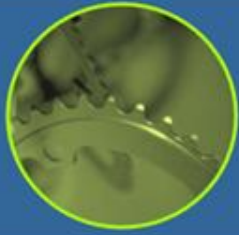
PSM can be fun..... If...

You do it right...

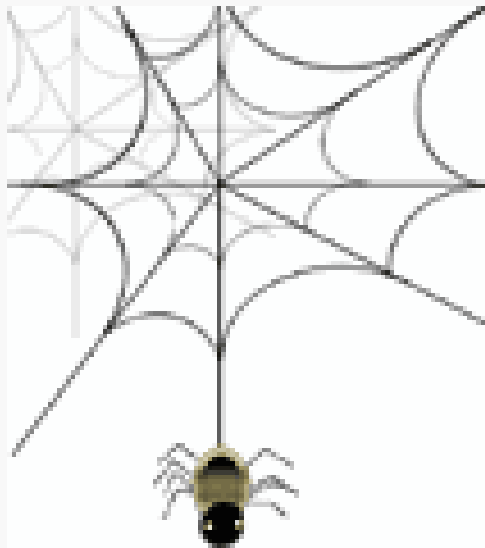
And continue to do it right...

PSM is never done...

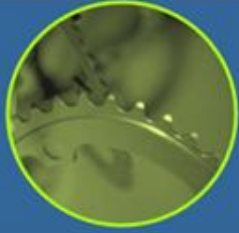
Accept the above admonition and your PSM life will be much easier!



The Final Word....



All these elements interconnect and overlap with themselves, other OSHA and regulatory compliance programs, and your company's processes and procedures, much like a spider's web. You tug on one section and you can't help but affect another!



THANK YOU!

QUESTIONS?