MA CMMS ™

14 Ways a CMMS / EAM can help your organization become more OSHA, Environmental, Health, and Safety compliant

Who or what is OSHA?

OSHA stands for Occupational Safety and Health Administration and is the agency charged with assuring safe working conditions for employees across America. The agency was originally established in 1964 by then president Nixon with the goal of proactively protecting American employees from work related injuries, incidents and illnesses. Organizations that are forced to drive down the costs of doing business often take risks or cut corners that can impact employee wellbeing.

Under the Occupational Safety and Health Act of 1970, American workers are entitled to "safe and healthful" conditions. The agency has introduced new regulation, written standards, whistleblower protection programs and published safety limits for many industries but unfortunately, today, the majority of its time and budget is spent reacting to environmental health and safety incidents.

CMMS Software: The Unsung Safety Hero

Employee Health and Safety should be of critical importance in every working environment. An essential part of keeping employees safe is demonstrating an ongoing commitment to preventing employee injury through proactive health and safety activities. This whitepaper discusses how to build a safer work environment and reduce employee injury by using the built in functionality readily available in your CMMS software.

In addition to helping to proactively prevent safety related incidents, in today's world of liability, a CMMS can help an organization demonstrate that maintenance activities were performed according to regulatory requirements and that all the possible steps were taken to keep staff safe. Having CMMS software could help mitigate the impact of fines imposed by OSHA if you can demonstrate you have taken the proactive steps to prevent injuries.

The following outlines several ways CMMS software can play an important role in ensuring your organization is OSHA compliant while reducing the chance of injuries happening due to negligence.

Reduce Breakdown Maintenance

By design and intended function, a CMMS helps you reduce the amount of breakdown maintenance your organization performs on its equipment. Breakdown maintenance can be a relative unknown and is usually poorly documented. The technician is using his/her expertise to solve the issue rather than working from guides, procedures or checklists. It could be the first time a technician is faced with a repair of a type and could be unaware of the dangers. Breakdown maintenance happens when you least expect it so the added pressure to return the system to production can make technicians take additional risks.

The CMMS helps an organization shift focus from reactive maintenance to planned proactive maintenance. A CMMS helps you schedule and track your maintenance and safety related inspections including those tasks required by law. The CMMS triggers those important checks on the predefined schedule, taking the human element out of the equation. By planning system maintenance and inspections, organizations can circumvent major breakdowns or in many cases, identify the small issues before they turn into something more serious if left unattended. Typically, planned maintenance is known in advance and well documented, which gives technicians time to prepare the right tools and parts for the job.

Classification of Safety Issues

By classifying repairs in the CMMS as they happen, you can run reports to help identify those recurring underlying problems so you can take proactive measures can be taken to mitigate such issues in the future. You can also chart safety related work orders over time so you can spot trends in trouble systems, areas or individuals. Proactive steps such as updating safety procedures or conducting employee safety training can be taken to reverse perturbing trends in the wrong direction. In addition, by classifying issue as safety related in the CMMS, organizations can quickly publish the maintenance department safety reports so employees are more mindful of their own personal safety and suitably motivated to keep the work environment safe for everyone else.
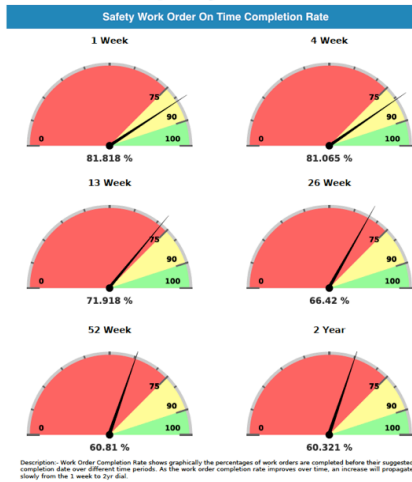
Issue Tracker

By our very nature, humans tend to forget things. Relying on memory to remember all the maintenance related items that need to be addressed virtually guarantees something will be forgotten. Using the CMMS as an automated tracking system will ensure that important safety related issues get prioritized and addressed quickly. Guest users can log safety issues to the maintenance queue through the CMMS guest portal, giving maintenance supervisors as much information as possible to help prioritize the work, as well as to alert technicians of any health and safety concerns. By tracking every work request, work order or PM in one central database, it is less likely that something will get missed.

Standardized Checklists

Standardizing the way we work leads to increases in reliability and performance. For example, if you perform a standard engine oil change at regular intervals, you'll reduce the chances your engine will fail. When you standardize organizational processes, quality and reliability increases, while variation and cost decreases.

Variation in maintenance processes can creep in when maintenance technicians are under pressure or let their concentration lapse.

It is well documented that the elimination of variation in processes through standardized checklists can reduce the chances of error and adverse events. Checklists are used in many industries as cognitive aids to guide users through accurate task completion. Standardization of work practices through checklists ensures everyone performs the same job in the same way every time, and no steps are missed. It also helps ensure employees are aware of dangers. By reducing variation, it improves the quality of work, improves reliability and reduces the chances something happens due to missed steps. Most CMMS systems come with the functionality to add standardized checklists to work orders and planned maintenance. Some CMMS applications take this one step further by giving organizations the ability to create visual operating procedures (VOPs) for accurate task completion
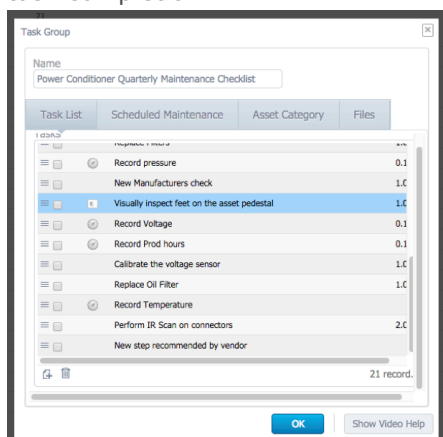
Automated Safety Checklists

Many CMMS systems can be configured to automatically add health and safety checks to work orders and PM's, thereby incorporating safety into everyday maintenance operations. This includes safety checks before commencing the repair, dangers to look out for during a repair, and safety steps to take before handing the system back to production. For example, the CMMS could be configured to remind users to wear

eye protection or other PPE when working on a particular system. You simply create a checklist and associate it with the asset category or machine type.
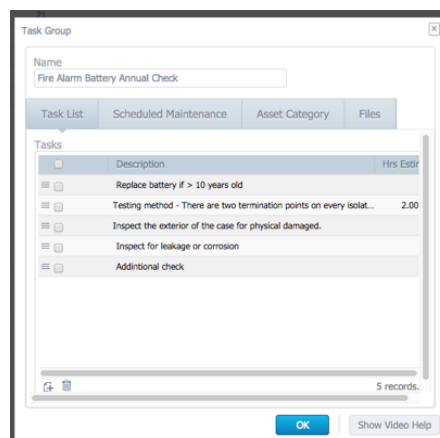

When a reactive work order is created on that system, the safety steps are highlighted at the start of the work order. Automated steps like this ensure personnel have the correct safety information as they perform the work. In addition, you could also create a back to production safety checklist such as visual inspections, tool count, interlock check or wipe down. In the same way, the checklist can be automatically added to the end of each work order through the task manager tool in the CMMS.

Integrated Safety Videos & Graphics

CMMS applications come with generous file storage giving organizations the ability to upload important documentation to the CMMS and make it available to technicians as they perform the job in the field. If safety checks vary from system to system, it makes sense to attach asset specific checks lists, graphics or videos to the asset or work order. This helps increase employee awareness of the risks and dangers associated with the task. For example, attach a drawing of the asset with the hazardous areas highlighted. Some CMMS application let you embed videos and graphics on the individual tasks. Watching a quick

refresher safety video could help the technician spot the danger points while carrying out the work.
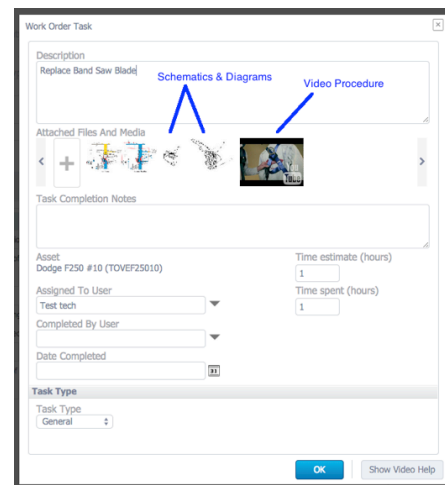
Audit Trail

Your first line of defense against incidents and lawsuits is an accurate paper trail showing every preventive measures possible are being taken. Most CMMS applications include audit trail functionality, which means the system holds a digital record of every operation performed during a given period of time. Maintaining a complete audit trail is important to conform to industry compliance and regulation. It also makes pulling the data for the audit process a breeze. If the organization gets audited, they can produced reports with the click of a mouse showing what actions were taken, when they were taken, and by whom.

Certification Tracker

If an employee gets injured performing a job they are not properly trained for, they have a greater chance of getting injured. Keeping track of employee certifications & training can be an administrative nightmare unless you have the right systems in place. Fortunately, many CMMS applications come with built in certification trackers that help

Fortunately, many CMMS applications come with built in certification trackers that help maintenance managers ensure everyone on the jobsite has up to date training.

Document Control

Government regulations require that companies working in certain industries control their documents. These industries include food safety (e.g., Food Safety Modernization Act), ISO, medical device manufacturing, manufacture of blood, human cells, and tissue products (all FDA), Healthcare (JCAHO), and Information technology. Documents stored in a document management system — such as procedures, work instructions, and policy statements—provide evidence of documents under control. Failing to comply could cause fines, the loss of business, or damage to a business's reputation
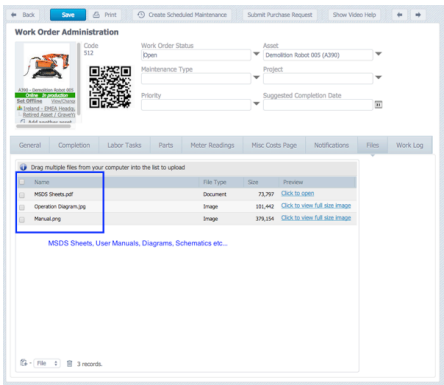
Most CMMS applications have built in file storage capabilities that lets you store procedures, manuals, permits, licenses, photos, images, diagrams, schematics etc. in the CMMS on the asset, PM, or work order records. This facilitates real time retrieval of important asset related documentation from the CMMS when the users need it most. It also simplifies versioning control as everyone is accessing the right information from the right asset. For example, imagine a technician is tasked with draining a system of liquid. They could simply open up the asset record to check they have a valid city permit to perform the task, check the attached MSDS sheet for handling and PPE guidelines, and check the vendor manual for instructions on how to complete the task.

MSDS Safety Sheets

Typically, a company must have the MSDS for every stored chemical or lubricant product readily available for access by employees. MSDS sheets outline important safety information such as the properties of each chemical; the physical, health, and environmental health hazards; protective measures; and safety precautions for handling, storing, and transporting the chemical.

OSHA permits electronic storage of MSDS provided they can be easily accessed and a physical copy is stored also . Your CMMS application has the ability to attach important MSDS sheets to asset records,

tasks, projects, PMs and work orders.

Attaching MSDS sheets to dangerous chemicals in your CMMS gives your technicians instant access to crucial safety information when they need it through their mobile CMMS. For example, they can check the correct PPE, protective clothing or respirators for handling the chemical, or the first aid measures in the event something should go wrong.

Application Protocol Interface

The growth of the Internet of Things (IOT) has opened up a whole new world of innovation and connectivity. Many cloud CMMS applications come with an API that lets you connect your systems directly to your CMMS. The CMMS can be configured so safety related alarms, such as gas warnings, temperature peaks, or high voltage spikes, trigger notifications in real time from the CMMS so technicians are informed immediately when a safety incident occurs. With the correct repair information at hand, they can also prepare the correct PPE needed to investigate the issue.

Safety Inspection Rounds

Health and Safety equipment requires regular care and maintenance in order to remain functional. Inspections rounds are conducted to ensure H&S equipment is available and fully

functional when needed. Inspection rounds are also used to identify issues that, if left unattended, could develop further into major safety incidents. They are usually made up of simple inspections or checks on multiple assets. In many cases, the inspection officer will simply walk the facility to check safety items such as blocked fire escapes; missing Shepherd's hooks, under pressurized fire extinguishers, missing guard rails etc. Early problem detection is crucial in preventing potential major health and safety issues.

Whether technicians are preforming a routine health and safety inspection, or more complex checks, the Multi-Asset Work Order functionality, also called rounds, already built into your CMMS is designed to let technicians sign off tasks against multiple assets or facilities as they go. Multi-asset work orders can be repurposed for EH&S purposes and let officers sign off the safety inspections in real-time in the field with minimal effort by closing off tasks digitally on different assets as they go.
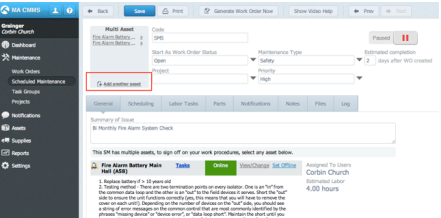
By mapping out and organizing tasks in the most efficient order or route, the inspection officer can reduce the time needed to complete and log all the activities on any given inspection round thereby increasing worker productivity. If inspection values fall outside predetermined safe limits, the system could be configured to trigger scheduled maintenance as the technician inspects. They can also log safety work requests into the CMMS the moment they notice something untoward. This provides immediate visibility on work that needs to be done. This type of automation

further helps change your organization's maintenance culture from reactive to proactive.

Permit Management

For smaller organizations without permit management software, it is possible to track permits in your CMMS application. Store your permits in the asset records and use the scheduled maintenance functionality to notify key personnel before permits are due for renewal. Create a PM called "Permit Renewal" and set the PM trigger date to a sufficient number of days before the renewal is due. Alternatively, you can use the warranty functionality on the asset record to track expiration dates. In addition, storing permit data on the asset record in the CMMS gives technicians the ability to verify they have a valid permit to perform the required work. By tracking your permits in the CMMS, your organization can ensure all your permits are up to date while reminders for renewal dates reminders are triggered automatically to the appropriate employees.

Compliance with Water Metering

Many US cities charge organizations for fresh water, storm water and wastewater usage. Metering water at the point of consumption curbs demand and reduces waste. The charge is usually a monthly charge based on the size of the water meters and then a volumetric charge based on the amount of water used or disposed of each month. For manufacturing facilities that use a large amount of the fresh water in the product itself, and do not discharge it back into the wastewater system, the organization can apply for a rebate program in which the effluent wastewater

is metered. A requirement of most rebate programs is the installation, calibration and ongoing maintenance of effluent meters. This is where your CMMS comes in valuable. Just like managing regular equipment assets in the CMMS, it can be used to track ongoing maintenance on effluent meters, schedule their annual calibrations and provide a full record to city inspectors when they audit. Getting the effluent meter calibrated on time ensures the organization compiles to the rebate program and continues to receive those credits.

Conclusion

As mentioned above, American workers are entitled to "safe and healthful" conditions. Today, more than ever, organizations must demonstrate their ongoing commitment to employee well being. CMMS software can play an important role in ensuring your organization is OSHA compliant while reducing the chance of injuries happening due to negligence. It should be a valuable tool in every manufacturing organization to ensure a safe work environment for its employees. CMMS software can help reduce the risk of injury, noncompliance fines and penalties; while ensuring OSHA regulations are complied with. In addition, data can be pulled quickly from the CMMS in report format should OSHA inspectors visit for an audit. The reports can be used to demonstrate a record of proactive inspections and safe repairs, providing dear evidence of OSHA compliance.

Disclaimer

None of the above is legal advice and should not be taken as such.

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