

## **PREVENTATIVE MAINTENANCE SAFETY PROGRAM**

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### **PURPOSE / SCOPE**

Winger Contracting Company, herein referred to as Winger, Preventative Maintenance program is for the purpose of ensuring an inventory of the company's machinery/ equipment is established and kept current. When new machinery or equipment is acquired, it must be added to the inventory. Winger's management expectancy/policy is that an up to date equipment inventory maintained that covers all company owned equipment is maintained at all times.

### **PREVENTATIVE MAINTENANCE SCHEDULE**

A preventative maintenance schedule is established based on manufacturer requirements and industry standards so it is unique to each piece and type of equipment. Preventative maintenance performed on machinery or equipment must be documented and retained for the life of the machinery or equipment. Defects observed in machinery or equipment shall be reported to a supervisor, and must be repaired or replaced before being used again.

### **OSHA STANDARDS**

The primary source for OSHA regulations is Title 29 of the Code of Federal Regulations, sections 1910 through 1910.1450. Preventive-maintenance standards are found throughout the regulations, some of which generally apply to workplaces and others that are industry specific. For example, section 1910.22(a)(2) requires "every workroom" to be maintained in a "clean and, so far as possible, dry condition."

OSHA emphasizes certain activities as basic to implementing a preventive maintenance program. For example, a maintenance system entails written instructions for regular inspections of safety equipment, such as monitors used to prevent unhealthy levels of noxious gases used in the workplace. Inspections should be documented as to the date, time and type of equipment inspected, as well as identify who performed the inspection.

A preventive maintenance system for non-safety equipment requires inspection of important components to ensure they are working properly. For example, the tires or hydraulic cylinders on a forklift should be inspected for adherence to performance standards because a failure of either of these components during an attempted lift may cause the forklift to fail and lead to an injury.

### **MANDATORY PROCEDURES**

OSHA regulations mandate the implementation of preventive maintenance procedures for certain industries or equipment. Manufacturers' recommended maintenance must be followed for all equipment, and any malfunctioning or inefficient equipment must be repaired or replaced promptly.

## VOLUNTARY SAFETY GUIDELINES

In 1989, OSHA issued voluntary guidelines for all employers designed to encourage greater workplace safety. The guidelines are designed to prevent workplace hazards in situations where the employer's compliance with specific OSHA regulations is not an issue. A fact sheet available from OSHA summarizes the guidelines for employers. Among these, OSHA states that management's commitment and employee involvement are required for effective implementation of workplace safety and healthful working conditions.

### Operating Procedures

No dust control system can perform reliably unless it is operated properly. To achieve reliability, the following measures are suggested:

- Educate operators on startup and shutdown procedures of dust control systems and the use of blast gates
- Instruct operators that all dust control systems should be in operation before any processing equipment is started
- Eliminate the use of compressed air jets to clean accumulated dust from equipment or clothing and substitute a vacuum cleaning system
- Use a vacuum cleaning system to clean spills and dust accumulations, void using brooms and shovels
- Use water pressure, where applicable, to clean equipment during plant shutdown or as necessary
- Check the speed of belt conveyors and slow them down, if possible, to reduce dust circulation and spillage
- Install an alarm to sound when a dust collector stops operating
- Develop procedures of handling process upsets which may overload conveyors and dust collectors

### Preventive Maintenance Program

A preventive maintenance (PM) program is the key to reliable and efficient operation of any dust control equipment or system. When instituting a PM program, the following points should be considered:

- Conduct PM programs on all dust control system hardware and components, as well as dust producing sources, during plant shutdown or as
- Inspect all belt conveyor training idlers, adjust as necessary so the conveyor belt does not travel laterally

- recommended by the equipment manufacturer
- Carry all necessary spare parts in sufficient quantities
- Give high priority to patching holes, caulking and sealing cracks, and maintaining dust seals
- Inspect and adjust all belt conveyors and their skirting rubber and dust seals
- Replace torn or defective conveyor belts
- Inspect belt conveyor idlers and nonmoving idlers
- Remove and replace missing or broken idlers
- Shut and clamp all access and inspection doors before any operation begins
- Inspect all dust seals and repair or replace
- Rotate periodic cleanup among crews
- Inspect belt scrapers on belt conveyors and adjust, replace worn-out components
- Measure velocity and static pressures weekly
- Check for plugged ductwork and clean immediately.
- If plugging occurs repeatedly, redesign the ductwork
- Develop safeguards to prevent overflowing bins and overloading conveyors

**Examples of Common Problems associated with dust collection systems**

The following link to pictures which show problems often associated with dust collection systems.

- [Improper Modifications](#)
- [Dust generating points not controlled](#)
- [Possible design improvements](#)
- [Improper maintenance](#)
- [Improper work practices](#)
- [Lack of housekeeping](#)

## TRAINING

Winger employees shall be trained in safe work procedures while working with cement. Files will be kept at the Winger corporate office in their safety training files.

## **SOURCE CREDITS**

U.S. Department of Labor, Occupational Safety and Health Administration,  
[https://www.osha.gov/dsg/etools/silica/protect\\_against/examples/operating\\_pm.html](https://www.osha.gov/dsg/etools/silica/protect_against/examples/operating_pm.html)  
Small Business Chronicles, OSHA Preventative Maintenance Regulations, <https://smallbusiness.chron.com/osha-preventive-maintenance-regulations-39945.html>

## **DOCUMENT CONTROL**

Initial Program September 3, 2020