

## Overhead Structure & Fixture Evaluation

Plant Name / #: \_\_\_\_\_ Date: \_\_\_\_\_ Person Completing Form: \_\_\_\_\_

### Step 1 – Review Guidance Table

The following is a list of potential items for inspection to ensure your overhead structures and fixtures were installed properly and remain in good condition. This is not an all-inclusive list.

<b>Items</b>	<b>Check</b>	<b>Findings</b>
Scrap Duct	Adequate Initial Design	The standard design for scrap pipe hangers is a split band around the pipe, bolted together that is either welded or bolted to 1-1/2" angle iron. The angle iron can either be bolted or welded to the joists or purlins. Pipe supports should be no greater than 20' apart. Verify the pipe is not sagging and all doors are properly secured.
Scrap Duct	Condition of hangers, fasteners, straps, welds	Welds should be checked to ensure there are no cracks or breaks. All fasteners should be checked for tightness. Make sure there are no bends, breaks or forklift damage to the angle iron.
Scrap Cyclone	Adequate Initial Design	Cyclone support design should be verified with the existing design prints. If you do not have the original prints, you must contact manufacturer and get them.
Scrap Cyclone	Condition of main support & cross braces, roof penetrations, fasteners	Steel should be checked for rust, bends, breaks, weld condition and forklift damage. All fasteners should be checked for tightness and rust. Verify flashing is adequate on all roof penetrations and there is no sign of any water damage.
Electrical Bus Bar	Adequate Initial Design	The standard design for electrical busway hangers are UL listed for hanging on 10' 0" centers. Additional hangers may be used if structural equipment mandates their use. Types of busway support are: trapeze hangers, spring hanger and single drip rod hangers. Verify the busway is not sagging.
Electrical Bus Bar	Condition of hangers, fasteners, security of bus switches	Periodically the support means should be checked to insure the busway is not sagging. Ensure the connection to the support bracket (normally threaded rod) is intact and securely connected at both ends. During this inspection ensure all unused access points on the busway have the hinged door covering in place and closed.  The security of the bus switches must be reviewed to ensure the switch does not have any undue vertical or horizontal forces imposed on the switch. Ensure any conduit leaving the switch is supported so the conduit is bearing a minimal load on the switch.
Cable Tray & Wire Management	Adequate Initial Design	The standard design for electrical cable tray and wire management hangers should not exceed 10' 0" centers. Additional hangers may be used if structural equipment mandates their use. Typical cable tray support is done using trapeze hangers. Verify the trapeze distance and the cable tray is not sagging.
Cable Tray & Wire Management	Condition of hangers, fasteners, security of cable tray	Periodically the support means should be checked to ensure the cable tray is not sagging. Ensure the connection to the support bracket (normally threaded rod) is intact and securely connected at both ends. During this inspection, ensure all covers are closed and there are no exposed penetrations on the cable tray.
Heaters, Fans, Light	Adequate Initial Design	Lighting: Typical means of support of the lighting fixture will be either support wire

Fixtures, & associated supports		(grip style), chain, or hook. Electrical cable is not to be used as the support means for the lighting fixture. Review the support means to Ensure the electrical connection to the fixture is not the support means for the fixture  Fan / Heaters: Depending on the size and location of the fan / heater, the mounting of the unit will be supported by a trapeze hanger system. Ensure all bracing is intact.
Heaters, Fans, Light Fixtures	Condition of support & braces, roof penetrations, fasteners, hangers, chains, fans, etc.	Lighting: Ensure the support wire, hanger, or hook is supporting the fixture. Review the condition of the conduit or cable to ensure it is not damaged and is securely fastened to the fixture and to the plug. In the case of task lighting where multiple fluorescent fixtures are connected to a common feed, ensure the fixtures are supported by two (2) supports. The conduit between the fixtures cannot exceed 10' 0" without additional support and the conduit must be properly connected to each fixture.  Heaters / Fan: Ensure all mounting bracing is intact. Ensure all connections to the heater (Gas / Oil / Electrical) are not sagging, the utility feeds to the unit are not the means of support for the heater / fan and each must be independently supported.
Roof insulation, Ceiling Tiles	Adequate Initial Design	Roof insulation and ceiling tiles should be checked for water damage. Verify they are not sagging in any areas.
Roof insulation, Ceiling Tiles	Support, fasteners, clips, chains	Verify supports are not bent or loose. Light fixtures in ceiling grids should be supported by chain or wire and not the grid. Ceiling tiles should fit tight in the grids.
Signs, safety mirrors, production scoreboards, etc.	Adequate installation.	Verify installation follows manufacturer's guidelines.
Signs, safety mirrors, production scoreboards, etc.	Condition of support & braces, roof penetrations, fasteners, hangers, chains, fans, etc.	Verify all installations are secure. Verify hooks and chains are in good condition and secure.
High traffic area, prone to incident damage	Identify and list potential high incident areas	Check for damage from material handling equipment.
Print die racks	Identify and list	Verify all material is secure on racks and load capacity is not exceeded. Verify rack is not sagging and moves freely. Welds should be checked to ensure there are no cracks or breaks. Make sure there are no bends, breaks or damage to the rack support track.



### Step 3 – Sustain

Enter inspection criteria into maintenance work order system. Recommended inspection frequencies have been included, but inspection frequency selection should be decided by site personnel knowledgeable with overhead structures and fixtures installation and condition.

<u>Items</u>	<u>Recommend Inspection Frequency</u>	<u>Inspection Frequency</u>
Scrap Duct	Annual	
Scrap Duct	Annual	
Scrap Cyclone	Annual	
Scrap Cyclone	Annual	
Electrical Bus Bar	Annual	
Electrical Bus Bar	Annual	
Cable Tray & Wire Management	Annual	
Cable Tray & Wire Management	Annual	
Heaters, Fans, Light Fixtures, & associated supports	Biannual	
Heaters, Fans, Light Fixtures	Biannual	
Roof insulation, Ceiling Tiles	Biannual	
Roof insulation, Ceiling Tiles	Biannual	
Signs, safety mirrors, production scoreboards, etc.	Biannual	
Signs, safety mirrors, production scoreboards, etc.	Biannual	
High traffic area, prone to incident damage	Quarterly	
Print die racks	Biannual	
<i>Other</i>		
<i>Other</i>		
<i>Other</i>		
<i>Other</i>		
<i>Other</i>		