

BOILER MECHANIC//SR. BOILER MECHANIC

Ref. Code: P-BM-9

PERFORMING MAINTENANCE TO BOILER ROOM DURING ANNUAL PLANT SHUTDOWN		
Activity	Hazard Identification	Required Precautions
1. Annual boiler shutdown.	1. Head injuries.	1. Wear hard hat.
2. Walking on steps, catwalks, and platforms.	2. Slipping; falling.	2. Keep walkways clear of hazards. Walk carefully to maintain footing.
3. Using stepladder or mechanics ladder.	3. Ladder collapsing; slipping/falling from ladder.	3. Inspect ladder before use. Use ladder of proper height. Make sure ladder is properly assembled and locked and standing on level ground. Do not exceed weight limit for ladder. Do not stand on top of ladder or on top rung. Have coworker hold ladder.
4. Using extension ladder.	4. Ladder falling; slipping/falling from ladder.	4. Use bucket truck if possible. Inspect ladder before use. Verify that ladder is properly assembled and that it is securely positioned on level ground. Tie safety rope to hold ladder to roof. Use 1'-4' rule. Use OSHA decal to verify that ladder is in the proper position.
5. Using interior scaffolding.	5. Scaffolding collapsing; falling from scaffolding.	5. Verify that scaffolding is properly assembled and wheels locked. Use safety rails properly. Verify a safe means of climbing on/off scaffolding.
6. Replacing heavy valves and motors.	6a. Lines moving or dropping when valve is removed.	6a. Inspect area before beginning work. Brace or support lines next to valve as needed before removing valve.
	6b. Lifting heavy weight can cause back strain or overexertion.	6b. Know your weight-lifting capacity and get help if needed. Lift using leg muscles. Keep back straight. Use mechanical lifting

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		equipment. Always use come-along, chain hoists, or pulleys to lift heavy valves or motors.
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	6c. Dropping object when lifting it with chains or pulleys.	6c. Hook come-along to a secure anchoring device before lifting.
	6d. Cuts from frayed wire ropes.	6d. Inspect equipment before use and replace any frayed wires.
	6e. Pinching fingers.	6e. Handle materials carefully.
	6f. Slipping on grease drippings.	6f. Clean up any spilled oil using Virginia 10 or equivalent product.
7. Using power tools, including drills, saws, grinder, pipe threading machine, and pipe cutter.	7a. Electric shock; electrocution.	7a. Inspect cord before use. Keep power cord away from work area. Plug tools into GFCI-protected outlets. Do not use electric tools if work area is wet.
	7b. Tripping over or cutting power cord.	7b. Keep power cord away from work area.
	7c. Injury from flying bits of material.	7c. Wear safety glasses, and optionally a dust mask, gloves, long-sleeve shirt and/or coveralls.
	7d. Saw or drill bit catching; severe lacerations or abrasions; dismemberment.	7d. Keep tools in good condition. Inspect tools before use. Verify that guards work properly. Do not put hands near blades. When using tools, make sure you have a good center of gravity and are properly balanced. Hold tools securely with two hands to maintain control.
	7e. Getting caught in pipe threading machine.	7e. Do not wear loose clothing, jewelry, or keys. Stay alert while working with pipe threader.
	7f. Getting cut by metal chips.	7f. Properly dispose of rags used to clean pipe in order to prevent injury to yourself or others from oil and metal chips.
8. Using fitters tools, pipe wrenches, combination wrenches, and other hand	8a. Cuts, pinches, smashes, punctures, severing of fingers.	8a. Keep tools in good condition. Inspect tools before use. Ear safety glasses.

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tools.		Work away from yourself. Use normal caution required for all hand tools.
	8b. Wrench slipping and worker hitting self or others with wrench or dropping wrench on self or others.	8b. Wear hard hat. Handle tools carefully with dry gloves or hands. Make sure you have a firm footing so you do not fall.

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9. Soldering on water pipes.	9a. Burning self.	9a. Wear safety goggles, gloves, coveralls, and leather chaps. Always burn away from yourself.
	9b. Starting a fire.	9b. Do not solder near flammable materials. Always keep fire extinguisher nearby and have a person stand by as firewatch.
	9c. Burns from hot solder, dripping metal.	9c. Do not reach to solder; stay level with area being soldered. Wear gloves, safety glasses, and coveralls.
	9d. Inhalation of fumes.	9d. Work in well-ventilated area. Use exhaust fans and tubes for ventilation.
	9e. Using wrong solder can cause popping and splattering.	9e. Use correct solder for job.
	9f. Explosions.	9f. Turn off valves to relieve pressure in work area before beginning work.
	9g. Buildup of acetylene from leaks.	9g. Check hose and connections for leaks and damage before using.
10. Storing or transporting compressed gas cylinders and oxygen/acetylene torch.	10a. Explosion of compressed gas.	10a. Do not allow cylinder valves or regulator assemblies to come into contact with grease, oil, or lubricants.
	10b. Rupture of cylinder if valve breaks off.	10b. Always install protective valve cover. Always secure cylinder to a stand or a wall.
11. Using oxygen/acetylene torch to cut bolts, etc.	11a. Regulator diaphragm rupturing when torch is turned on.	11a. Turn regulator adjusting screw counterclockwise to disengage plunger before turning on cylinder.
	11b. Acetylene explosion.	11b. Stand acetylene tank vertically before using.
	11c. Torch explosion.	11c. Install spark arrestors on torch and regulators.
	11d. Burning self.	11d. Wear gloves, overalls, and leather chaps. Always burn away from yourself.

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	11e. Starting a fire.	11e. Always keep fire extinguisher nearby and have a person stand by as a firewatch. Must have a burning permit.
	11f. Burns form metal dripping on self.	11f. Do not reach to burn; always work level with torch.
	11g. Inhalation of fumes.	11g. Work in a well-ventilated area. Use exhaust fans and tubes for ventilation.
	11h. Flash burn to eyes.	11h. Wear burning goggles to protect eyes.
	11i. Buildup of acetylene from leaks.	11i. Check hose and connections for leaks and damage before using.
12. Working in boiler room.	12a. Getting burned by steam, hot water, or hot oil.	12a. Wear proper protective clothing. Be aware of your surroundings and of possible leaks.
	12b. Inhalation, skin exposure, or irritation to eyes from contact with waste oil and oil additives.	12b. Wear proper protective clothing. Be aware of unusual odors (e.g., natural gas) that could signify leaks.
	12c. Electric shock; electrocution.	12c. Always use GFCI protectors.
	12d. Damage to eyes from bright flame intensities.	12d. Wear eye protection.
	12e. Slipping on water or oil on floor.	12e. Clean up any standing water or oil. Identify leaks and repair if possible.
	12f. Excessively hot temperatures; heat exhaustion.	12f. Take frequent breaks in cooler areas. Drink plenty of liquids.
	12g. Loss of hearing due to loud noise.	12g. Wear earplugs or earmuffs.
	12h. Tripping.	12h. Survey work area for hazards. Walk carefully.
	12i. Inhalation of dust.	12i. Wear dust mask.
13. Removing gaskets.	13. Exposure to asbestos when removing old gaskets.	13. Wet down gasket before scraping it off.

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14. Using cleaning solvents (Virginia 10 and surface cleaners).	14a. Inhalation of solvents.	14a. Use solvents in well-ventilated area. Use sparingly and reseal bottle. Dispose of rags properly.
	14b. Skin irritation.	14b. Wear rubber gloves. Do not allow solvents to come into contact with skin. If solvent does get on skin, wash affected area thoroughly.
	14c. Getting solvent in eyes.	14c. Wear safety glasses.