

INJURY & ILLNESS PREVENTION PROGRAM

For

ADVANCED MARINE SERVICES CORP

Assignment of Responsibility

In accordance with Cal/OSHA regulations, our company has assigned responsibility and accountability for the administration of our “I2P2” to:

John Shaw

July 10, 2014

Depending on your location, this I2P2 may also be referred to as a Safety and Health Program.

The Federal OSHA designation is “I2P2”; however, you will notice that all the terms are used.

A copy of the I2P2 is available upon request for our employee’s review. Questions should be directed to supervision or management.



21. HOTWORK

Advanced Marine Services Corp has adopted this program to ensure employees are properly trained, aware of hazards associated with hot work, and correctly informed of procedures, policies, and practices to prevent or, if possible, eliminate these hazards. John Shaw is the supervisor responsible for ensuring these engineering controls, work practices, and safety procedures are enforced.

RESPONSIBILITIES

Hot work safety is a responsibility shared between Advanced Marine Services Corp and its employees.

EMPLOYER RESPONSIBILITIES

Advanced Marine Services Corp responsibilities include:

- Ensure employees involved in hot work operations receive proper training in the use of any equipment required, proper PPE, and safety procedures.
- Ensure, where possible, all hot work operations will be performed outside of buildings or structures clear of any foreseeable fire hazards.
- Provide employees with proper initial, refresher, and residual hot work safety training.
- Provide appropriate personal protective equipment (PPE).
- Establish, maintain, and periodically review the hot work safety program.
- Ensure all equipment used in the Advanced Marine Services Corp workplace for hot work procedures meets all applicable guidelines and regulations.

SAFETY COMMITTEE RESPONSIBILITIES:

The Advanced Marine Services Corp Safety Committee (where one exists) responsibilities include:

- Work with John Shaw to establish and conduct regular safety meetings to involve employees in an ongoing training and dialogue regarding safe hot work procedures.
- Work with John Shaw in conducting workplace hazard assessments.
- Assist in the maintenance and review of the hot work safety program.

EMPLOYEE RESPONSIBILITIES:

Advanced Marine Services Corp employee responsibilities include:

- Employees are required to comply with the guidelines set forth, and to comply with the instruction of John Shaw. In the event an unsafe condition arises, employees will alert the lead person on the jobsite immediately. Employees will also alert co-workers of any unsafe conditions that arise.
- The employee(s) assigned to fire watch will: be trained in the proper use of fire extinguishers and fire prevention measures, ensure firefighting equipment is readily available, and be responsible for the sounding of fire alarms in the event of a fire which is not readily extinguishable.

- Work with John Shaw and the Safety Committee (where one exists) to inspect work areas prior to any hot work being performed, designate precautions to be followed prior to work commencing, and assign a fire watch where advisable or required.

POLICY

Below are the company's policies regarding hot work procedures.

HOT WORK PROCEDURES

- Where practical, employees will relocate all combustibles at least 35 ft. from the work site.
- Where relocation is impractical, employees will ensure combustibles are protected with flameproof covers, shielded with metal, guards, curtains, or wet down to help prevent ignition of material.
- Employees will protect or shut down ducts, conveyor systems, and augers that might carry sparks to distant combustibles.
- Where employees are cutting or welding near walls, they will ensure partitions, ceilings, or a roof of combustible construction, fire-resistant shields, or guards are placed to prevent ignition.
- Employees will take precautions if welding is performed on a metal wall, partition, ceiling, or roof, to prevent ignition of combustibles on the other side, due to conduction or radiation of heat.
- Where combustibles cannot be relocated on the opposite side of the work, a fire watch person will be on the opposite side of the work.
- Employees will not attempt welding on a metal partition, wall, ceiling or roof having a covering or on walls having combustible sandwich panel construction.
- Employees will not perform cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs if the work is close enough to cause ignition by combustion.
- In areas where employees will perform welding/hot work, there is dust accumulation of greater than 1/16 in. within 35 ft. of the area, the employees will clean all dust accumulation following the housekeeping program of the facility before working.
- Advanced Marine Services Corp will provide fire extinguishers that are maintained and easily accessible for immediate use by all employees.
- A fire watch will monitor the area during and for two hours past the completion of the welding project.
- Advanced Marine Services Corp will obtain and issue a welding/cutting permit for all welding or cutting outside of designated welding areas.

WORK IN CONFINED SPACES

Any hot work performed in confined spaces will conform to the following requirements:

- Adequate ventilation is a prerequisite to work in confined spaces.
- When employees perform welding or cutting in confined spaces, the gas cylinders and welding machines will remain outside. Before operations are started, employees will block wheel-based heavy portable equipment to prevent accidental movement.
- Where a welder must enter a confined space through a manhole or other small opening, the work team will have means for quickly removing him in case of emergency. When a worker is using safety belts and lifelines for this purpose, they will be attached to the welder's body such that his body can't be jammed in a small exit opening. An attendant with a preplanned rescue procedure will remain outside to observe the welder at all times and be capable of putting rescue operations into effect.
- When arc welding is suspended for any substantial period of time, such as during lunch or overnight, employees will remove all electrodes from the holders and the holders stored so accidental contact can't occur and the machine will be disconnected from the power source.
- To eliminate the possibility of gas escaping through leaks of improperly-closed valves when welding or cutting, employees will close the torch valves and shut off the fuel-gas and oxygen supply to the torch outside the confined area, whenever the torch is not to be in use for a substantial period of time, such as during lunch hour or overnight. Where practical, employees will remove the torch and hose from the confined space.
- Employees will ensure that, in enclosed spaces, all surfaces covered with toxic preservatives are stripped of all toxic coatings for a distance of at least 4 in. from the area of heat application, or the employees are protected by air-line respirators. In the open air, employees will use a respirator.

WELDING & HOT WORK FIRE PREVENTION MEASURES

Designated welding areas will meet the following requirements:

- Floors swept and clean of combustibles within 35 ft. of the work area.
- Flammable and combustible liquids and materials will be kept 35 ft. from the work area.
- Adequate ventilation providing 20 air changes per hour, such as a suction hood system, will be provided to the work area.
- At least one 10-lb. dry chemical fire extinguisher should be within 35 ft. of the work area.
- Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible-free area.

REQUIREMENTS FOR WELDING OUTSIDE DESIGNATED AREAS

- Portable welding curtains or shields will be in place to protect other workers in the welding area.
- There will be a "Hot Work Permit" completed and complied with prior to welding operation.
- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present has been established and maintained.
- Employees will cover plastic materials with welding tarps during welding procedures.
- All hot work operations will have a Fire Watch.

MANUAL ELECTRODE HOLDERS

- Employees will use only manual electrode holders which are specifically designed for arc welding and cutting, and are of a capacity capable of safely handling the maximum rated current required by the electrodes.
- Employees will ensure any current-carrying parts passing through the portion of the holder which the arc welder or cutter grips in his hand, and the outer surfaces of the jaws of the holder, are fully insulated against the maximum voltage encountered to ground.

WELDING CABLES AND CONNECTORS

- All arc welding and cutting cables will be of the completely insulated, flexible type, capable of handling the maximum current requirements of the work in progress, taking into account the duty cycle under which the arc welder or cutter is working.
- Advanced Marine Services Corp permits that employees only use cable free from repair or splices for a minimum distance of 10 ft. from the cable end to which the electrode holder is connected, except that cables with standard insulated connectors or with splices whose insulating quality is equal to that of the cable.
- Employees will use, when it becomes necessary to connect or splice lengths of cable to another, substantial insulated connectors of a capacity at least equivalent to that of the cable. If connections are affected by means of cable lugs, employees will securely fasten them together to give good electrical contact and then completely insulate exposed metal parts of the lugs.
 - Employees will not use cables in need of repair. When a cable becomes worn to the extent of exposing bare conductors, the portion thus exposed will be protected by means of rubber and friction tape or other equivalent insulation.

GROUND RETURNS AND MACHINE GROUNDING

- A ground return cable will have a safe current-carrying capacity equal to or exceeding the specified maximum output capacity of the arc welding or cutting unit which it services. When a single ground-return cable services more than one unit, its safe current-carrying capacity will equal or exceed the total specified maximum output capacities of all the units which it services.
- Employees will not use pipelines containing gases or flammable liquids, or conduits containing electrical circuits, as a ground return. For welding on natural gas pipelines, the technical portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, Minimum Federal Safety Standards for Gas Pipelines, will apply.
- Advanced Marine Services Corp will determine that, when a structure or pipeline is in use as a ground return circuit, the required electrical contact exists at all joints. The generation of an arc, spark, or heat at any point will cause rejection of the structures as a ground circuit.
- Employees will ensure that, when a structure or pipeline is continuously in use as a ground-return circuit, all joints are bonded, and periodic inspections will be conducted to ensure no condition of electrolysis or fire hazard exists by virtue of such use.
- Employees will ensure the frames of all arc welding and cutting machines are either through a third wire in the cable containing the circuit conductor or through a separate wire which is grounded at the source of the current. Employees will check grounding circuits, other than by means of the structure, to ensure the circuit between the ground and the grounded power conductor has resistance low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.
- Employees will inspect all ground connections to ensure they are mechanically strong and electrically adequate for the required current.

HAZARD CONTROLS

Shielding

- Whenever practical, all arc welding and cutting operations will be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc.
- When practical, objects to be welded, cut, or heated will be moved to a designated safe location or, if the objects to be welded, cut, or heated cannot be readily moved, all movable fire hazards in the vicinity will be taken to a safe place, or otherwise protected.
- If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means will be taken to confine the heat, sparks, and slag, and to protect the immovable fire hazards from them.
- No welding, cutting, or heating will be done where the application of flammable paints or the presence of other flammable compounds, or heavy dust concentrations creates a hazard.
- Suitable fire extinguishing equipment will be immediately available in the work area and will be maintained in a state of readiness for immediate use.
- When the welding, cutting, or heating operation is such that normal fire prevention precautions are not sufficient, additional personnel will be assigned to guard against

fire while the actual welding, cutting, or heating operation is being performed, and for a sufficient period of time after completion of the work to ensure that no possibility of fire exists. Such personnel will be instructed as to the specific anticipated fire hazards and how the firefighting equipment provided is to be used.

- When welding, cutting, or heating is performed on walls, floors, and ceilings, since direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area, the same precautions will be taken on the opposite side as are taken on the side on which the welding is being performed.
- For the elimination of possible fire in enclosed spaces as a result of gas escaping through leaking or improperly-closed torch valves, the gas supply to the torch will be positively shut off at some point outside the enclosed space whenever the torch is not to be used or whenever the torch is left unattended for a substantial period of time, such as during the lunch period. Overnight and at the change of shifts, the torch and hose will be removed from the confined space. Open end fuel gas and oxygen hoses will be immediately removed from enclosed spaces when they are disconnected from the torch or other gas-consuming device.
- Except when the contents are being removed or transferred, drums, pails, and other containers which contain or have contained flammable liquids will be kept closed. Empty containers will be removed to a safe area apart from hot work operations or open flames.
- Drum containers, or hollow structures which have contained toxic or flammable substances will, before welding, cutting, or heating is undertaken on them, either be filled with water or thoroughly cleaned of such substances and ventilated and tested.
- Before heat is applied to a drum, container, or hollow structure, a vent or opening will be provided for the release of any built-up pressure during the application of heat.

Mechanical Ventilation

Mechanical ventilation will meet the following Cal/OSHA requirements:

- Mechanical ventilation will consist of either general mechanical ventilation systems or local exhaust systems.
- General mechanical ventilation will be of sufficient capacity and so arranged as to produce the number of air changes necessary to maintain welding fumes and smoke within safe limits.
- Local exhaust ventilation will consist of freely-movable hoods intended to be placed by the welder or burner as close as practical to the work.
- This system will be of sufficient capacity and so arranged as to remove fumes and smoke at the source and keep the concentration of them in the breathing zone within safe limits.
- Contaminated air exhausted from a working space will be discharged into the open air or otherwise clear of the source of intake air.
- All air replacing that withdrawn will be clean and breathable.
- Oxygen will not be used for ventilation purposes, comfort cooling, blowing dust from clothing, or for cleaning the work area.

BERYLLIUM-CONTAINING BASE OR FILLER METALS

- Because of its high toxicity, work involving beryllium will be done with both local exhaust ventilation and air line respirators.
- Employees performing such operations in the open air will be protected by filter-type respirators.
- Employees performing such operations on beryllium-containing base or filler metals will be protected by airline respirators.
- Other employees exposed to the same atmosphere as the welders or burners will be protected in the same manner as the welder or burner.

METAL-INERT-GAS (MIG) ARC WELDING

- The use of chlorinated solvents will be kept at least 200 feet, unless shielded, from the exposed arc, and surfaces prepared with chlorinated solvents will be thoroughly dry before welding is permitted on such surfaces.
- Employees in the area not protected from the arc by screening will be protected by filter lenses.
- When two or more welders are exposed to each other's arc, filter lens goggles of a suitable type will be worn under welding helmets.
- Hand shields to protect the welder against flashes and radiant energy will be used when either the helmet is lifted or the shield is removed.
- Welders and other employees who are exposed to radiation will be suitably protected so the skin is covered completely to prevent burns and other damage by ultraviolet rays.
- Welding helmets and hand shields will be free of leaks and openings, and free of highly-reflective surfaces.
- When inert-gas metal-arc welding is being performed on stainless steel, employees will be protected against dangerous concentrations of nitrogen dioxide.

GAS CYLINDERS

Transporting, Moving, and Storing Cylinders

- Valve protection caps will be in place and secured.
- When cylinders are hoisted, they will be secured on a cradle or slingboard.
- Cylinders will not be hoisted or transported by means of magnets or choker slings.
- Cylinders will be moved by tilting and rolling them on their bottom edges.
- When cylinders are transported by powered vehicles, they will be secured in a vertical position.
- Valve protection caps will not be used for lifting cylinders from one vertical position to another.
- Bars will not be used under valves or valve protection caps to pry cylinders loose when frozen. Warm, not boiling, water will be used to thaw cylinders loose.
- Unless cylinders are firmly secured on a special carrier intended for this purpose, regulators will be removed and valve protection caps put in place before cylinders are moved.
- A suitable cylinder truck, chain, or other steadying device will be used to keep cylinders from being knocked over while in use.

- When work is finished, when cylinders are empty, or when cylinders are moved at any time, the cylinder valve will be closed.
- Compressed gas cylinders will be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.
- Oxygen cylinders in storage will be separated from fuel-gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20 ft. or by a noncombustible barrier at least 5 ft. high having a fire-resistance rating of at least one-half hour.
- Inside of buildings, cylinders will be stored in a well-protected, well-ventilated, dry location, at least 20 ft. from highly-combustible materials such as oil or excelsior.
- Cylinders should be stored in assigned places away from elevators, stairs, or gangways. Assigned storage places will be located where cylinders will not be knocked over or damaged by passing or falling objects, or subject to tampering by unauthorized persons. Cylinders will not be kept in unventilated enclosures such as lockers and cupboards.

Placement of Gas Cylinders

- Cylinders will be kept far enough away from the actual welding or cutting operation so that sparks, hot slag, or flame will not reach them. When this is impractical, fire resistant shields will be provided.
- Cylinders will be placed where they cannot become part of an electrical circuit.
- Electrodes will not be struck against a cylinder to strike an arc.
- Fuel gas cylinders will be placed with valve end up whenever they are in use.
- They will not be placed in a location where they would be subject to open flame, hot metal, or other sources of artificial heat.
- Cylinders containing oxygen or acetylene or other fuel gas will not be taken into confined spaces.

Handling and Treatment of Gas Cylinders

Cylinders, whether full or empty, will not be used as rollers or supports.

- No person other than the gas supplier will attempt to mix gases in a cylinder.
- No one except the owner of the cylinder or person authorized by him will refill a cylinder.
- No one will use a cylinder's contents for purposes other than those intended by the supplier.
- All cylinders used will meet the Department of Transportation requirements published in 49 CFR Part 178, Subpart C, and Specification for Cylinders.
- No damaged or defective cylinder will be used.

USE OF FUEL GAS

All employees will be thoroughly instructed in the safe use of fuel gas, as follows:

- Before a regulator to a cylinder valve is connected, the valve will be opened slightly and closed immediately. (This action is generally termed “cracking” and is intended to clear the valve of debris that might otherwise enter the regulator.)
- The valve of a fuel gas cylinder will not be cracked where the gas would reach welding work, sparks, flame, or other possible sources of ignition.
- The cylinder valve will always be opened slowly to prevent damage to the regulator.
- For quick closing, valves on fuel gas cylinders will not be opened more than 1½ turns.
- When a special wrench is required, it will be left in position on the stem of the valve while the cylinder is in use so the fuel gas flow can be shut off quickly in case of an emergency.
- In the case of manifold or coupled cylinders, at least one such wrench will always be available for immediate use.
- Nothing will be placed on top of a fuel gas cylinder when in use, which may damage the safety device or interfere with the quick closing of the valve.
- Fuel gas will not be used from cylinders through torches or other devices which are equipped with shutoff valves without reducing the pressure through a suitable regulator attached to the cylinder valve or manifold.
- Before a regulator is removed from a cylinder valve, the cylinder valve will always be closed and the gas released from the regulator.
- If, when the valve on a fuel gas cylinder is opened, there is found to be a leak around the valve stem, the valve will be closed and the gland nut tightened. If this action does not stop the leak, the use of the cylinder will be discontinued, and it will be properly tagged and removed from the work area. In the event fuel gas should leak from the cylinder valve, rather than from the valve stem, and the gas cannot be shut off, the cylinder will be properly tagged and removed from the work area. If a regulator attached to a cylinder valve will effectively stop a leak through the valve seat, the cylinder need not be removed from the work area.
- If a leak should develop at a fuse plug or other safety device, the cylinder will be removed from the work area.

FUEL GAS AND OXYGEN MANIFOLDS

- Fuel gas and oxygen manifolds will bear the name of the substance they contain in letters at least 1-in. high which will be either painted on the manifold or on a sign permanently attached to it.
- Fuel gas and oxygen manifolds will be placed in safe, well ventilated, and accessible locations.
- Fuel gas and oxygen manifolds will not be located within enclosed spaces.
- Manifold hose connections, including both ends of the supply hose that lead to the manifold, will be such that the hose cannot be interchanged between fuel gas and oxygen manifolds and supply header connections.
- Adapters will not be used to permit the interchange of hose. Hose connections will be kept free of grease and oil.
- When not in use, manifold and header hose connections will be capped.

- Nothing will be placed on top of a manifold, when in use, which will damage the manifold or interfere with the quick closing of the valves.

HOSES

- Fuel gas hose and oxygen hose will be easily distinguishable from each other.
- The contrast may be made by different colors or by surface characteristics readily distinguishable by the sense of touch.
- Oxygen and fuel gas hoses will not be interchangeable.
- A single hose having more than one gas passage will not be used.
- When parallel sections of oxygen and fuel gas hose are taped together, not more than 4 in. out of 12 in. will be covered by tape.
- All hose in use, carrying acetylene, oxygen, natural, or manufactured fuel gas, or any gas or substance which may ignite or enter into combustion, or be in any way harmful to employees, will be inspected at the beginning of each working shift. Defective hose will be removed from service.
- Hose which has been subject to flashback, or which shows evidence of severe wear or damage, will be tested to twice the normal pressure to which it is subject, but in no case less than 300 psi.
- Hose couplings will be of the type that cannot be unlocked or disconnected by means of a straight pull without rotary motion.
- Hoses, cables, and other equipment will be kept clear of passageways, ladders, and walkways.

TORCHES

- Clogged torch tip openings will be cleaned with suitable cleaning wires, drills, or other devices designed for such purpose.
- Torches in use will be inspected at the beginning of each working shift for leaking shutoff valves, hose couplings, and tip connections.
- Torches will be lighted by friction lighters or other approved devices, and not by matches or from hot work. Defective torches will not be used.
- Oxygen and fuel gas pressure regulators, including their related gauges, will be in proper working order while in use.

OIL AND GREASE HAZARDS

- Oxygen cylinders and fittings will be kept away from oil or grease.
- Cylinders, cylinder caps and valves, couplings, regulators, hose, and apparatus will be kept free from oil or greasy substances and will not be handled with oily hands or gloves.
- Oxygen will not be directed at oily surfaces, greasy clothes, or within a fuel oil or other storage tank or vessel.

FIRE PROTECTION

- Objects to be welded, cut, or heated will be moved to a designated safe location. If the object cannot be easily moved, all moveable fire hazards will be moved or protected.
- If the object to be welded, cut, or heated cannot be moved and if all the fire hazards cannot be removed, positive means will be taken to confine the heat, sparks, and slag, and to protect the immovable fire hazards from them.

- Welding, cutting, or heating will not be performed in the presence of flammable paints, flammable compounds, or heavy dust concentrations.
- Fire extinguishers will be immediately available in the work area, free of obstruction, and maintained for instant use.
- When normal fire prevention precautions are not sufficient for the welding, cutting, or heating operation, the Hot Work Supervisor will assign a Fire Watch. Sufficient amount of time will be allowed after completion of work to ensure the possibility of fire does not exist. The designated fire watch will be trained in firefighting equipment.
- Gas supplies will be shut off during lunch breaks, overnight, or during shift breaks. Hoses and torches will be removed from confined spaces.

TRAINING

Advanced Marine Services Corp employees are required to become familiar with and understand these guidelines regarding Welding and Cutting operations. Designated welders and cutters must receive annual training and must demonstrate their understanding of these guidelines to the Hot Work Supervisor.

Training will include:

- Review of requirements listed in Cal/OSHA Articles 80 & 90 §4794 & §4850
- Use of Hot Works Permit System
- Supervisor responsibilities
- Fire Watch responsibilities
- Contractors' responsibilities
- Documentation requirements
- Respirator usage requirements
- Fire extinguisher training

Upon completion of Welding and Cutting training, Advanced Marine Services Corp will certify in writing that each designated welder has received and understands training requirements. Certification must include the employee's name, name of the trainer, date of training, and subject of certification.

All Company employees are required to comply with the rules set forth in this written program. This program is intended to comply with Cal/OSHA regulations and to provide the maximum protection for our employees. Any employee who disobeys and/or disregards the safety requirements set forth in the Hot Work Safety Program will be subject to disciplinary action.

RECORDKEEPING

Advanced Marine Services Corp will document both training and any hot work-related incidents that result in an accident, injury, or near-miss.

Records of initial, residual, or refresher training will be maintained and include:

- Names and signatures of individuals trained
- Name and qualifications of the trainer
- Contents of the training
- Date of the training

Records will remain on file and available for Cal/OSHA review for a minimum of three years after they date they were created.

FORMS AND ATTACHMENTS

Below are the following attachments:

- Hot Work Safety Training Documentation
- Hot Work Safety Checklist

Hot Work Safety Checklist

YES/NO

- Is appropriate fire-extinguishing equipment ready for use?
- Are drums, barrels, tanks, or other containers cleansed of flammable, explosive, or toxic residue that could react to heat?
- Are containers tested prior to and frequently during welding, torching, abrasive cutting, or other hot work to ensure the containers are free of flammable or toxic vapors?
- Are shaded goggles or other suitable eye protection used when gas welding or oxygen cutting?
- Are transparent face shields or goggles used when resistance welding or resistance brazing?
- Do all welding helpers and equipment attendants use face or eye protection?
- Are helmets and hand shields worn to protect the face, neck, and ears when arc welding?
- Do lenses have permanent distinctive markings to show the source and shade?
- Do all employees wear PPE when exposed to the hazards created by welding, cutting, or brazing?
- Is clothing that is easily ignited or highly flammable, such as that made from synthetic materials, prohibited while welding, cutting, or brazing?
- Are all electrodes removed from the holders and the machine turned off when arc welding is stopped for lunch or overnight?
- Are the torch valves closed when gas welding or cutting is stopped for lunch or overnight?
- Are only approved apparatus such as torches, regulators, or pressure-reducing valves used?
- Are all compressed-gas cylinders legibly marked to identify the gas content?
- Are all compressed-gas cylinders stored away from radiators and other sources of heat?
- Do all compressed-gas cylinders have valve protection caps in place, hand-tight when not in use?
- Are all compressed-gas cylinders securely lashed in place to prevent them from falling?
- Are oxygen and fuel-gas cylinders stored separately by at least 20 ft. or by a noncombustible barrier at least five ft. high with a fire-resistance rating of at least one-half hour?
- Are there signs in fuel-gas storage areas that read "DANGER – NO SMOKING, MATCHES, OR OPEN LIGHTS" or equivalent wording?
- Are regulators with cracked, broken, or defective parts removed from service?
- Are approved back-flow valves or flash-back valves installed between the blowpipe or torch and the hoses?
- Are arc welder lead cables or electrode lead cables with damaged insulation or exposed conductors removed from service?

Supervisor Signature: _____