**Safe Work Requirement**

Safe use of Tools and Equipment Procedure

Table of Content

[1. Purpose 1](#_Toc479696110)

[2. Scope 1](#_Toc479696111)

[3. Hand tools 1](#_Toc479696112)

[3.1 General 1](#_Toc479696116)

[3.2 Pneumatic (air) Powered Tools 2](#_Toc479696117)

[3.3 Hammers 2](#_Toc479696118)

[3.4 Pipe Wrenches 3](#_Toc479696119)

[3.5 Screw drivers 4](#_Toc479696120)

[3.6 Knives 5](#_Toc479696121)

[3.7 Pliers 6](#_Toc479696122)

[3.8 Files 6](#_Toc479696123)

[3.9 Pry Bars 7](#_Toc479696124)

[3.10 Raising Tools Aloft 8](#_Toc479696125)

[3.11 Hatchets and Axes 8](#_Toc479696126)

[4. Grinders 9](#_Toc479696127)

[5. Abrasive Blasting and Painting Operations 10](#_Toc479696128)

[5.1 Personal Safety Equipment – General 10](#_Toc479696131)

[5.2 Respiratory Protective Equipment (RPE) 10](#_Toc479696132)

[5.3 Rigging Requirements for Painting or Sandblasting 12](#_Toc479696133)

[5.4 Abrasive Blasting 13](#_Toc479696134)

[5.5 High Pressure Water Blasting 14](#_Toc479696135)

[5.6 Required Personnel Controls 14](#_Toc479696136)

[5.7 Spray Painting Operations 15](#_Toc479696137)

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| Purpose The purpose of this section is to provide requirements for the safe use of tools and equipment, and applies to all hand tools. Personnel who use tools require a particular skill or knowledge and must be deemed competent by a Supervisor.  It is the responsibility of all personnel to inspect tools for damage prior to use. The tool and equipment must be in good condition and "fit for purpose". Scope This procedure applies to tools and equipment within ECDC rig sites facilities & yards. Hand tools      General  1. Site Supervisors will instruct personnel in the use, inspection and maintenance of hand tools. 2. The site will be provided with individual tool lockers or tool boards to aid in tool organization and the prevention of tool loss. 3. Site personnel are expected to return hand tools to the proper place once a job is completed. 4. Site personnel will turn in defective tools to their Supervisor or storekeeper for replacement or repair. 5. Once work is completed in the derrick, personnel will lower all hand tools to the site floor level. Tools are not to be left in the derrick unless properly secured. (an inventory list of equipment taken on to the derrick will be used to ensure all tools are removed) 6. Personnel carrying tools aloft will have them properly secured to their person to prevent them from dropping to a work area below. 7. Frequently inspect the driving faces of chisels, drift pins, bars and similar tools for mushroomed heads, broken faces and other defects. 8. Brass sledgehammers will be used to prevent sparking in an explosive atmosphere. 9. A hand tool must be used for its designed purpose and within its operational limits. The use of a cheater pipe or similar device to increase the limits of a hand tool is not allowed.  Pneumatic (air) Powered Tools  1. Select the proper tool for the job. 2. Remove or repair any tool connections with defects. 3. Use a safety wire to secure all hoses connections. The air hose couplings will be wired and chained together. Where crow's feet are used, they will have the proper tie wire to avoid rotation. 4. Always keep the tool under control. 5. Never hammer or beat on a pneumatic tool. 6. Wear proper personal protective equipment when operating a pneumatic tool. 7. Bleed off the air pressure at the tool before disconnecting it. 8. All pneumatic powered tools must shut off when the pressure is released from the trigger. The locking devices on the trigger will be removed. 9. Do not squeeze the trigger until the tool is on the work. Do not apply pressure until the tool has gained the desired speed. 10. Watch for pinch points. Position your body in case the tool hangs up. 11. All pneumatic (air) powered tools when in use should be covered by an appropriate permit to work  Hammers  1. Inspect all hammer handles regularly for cracks. If the handle is cracked, it will be replaced, immediately, and will not be used until the defective handles are replaced. 2. Wedges will be in the hammer handles to prevent the head of the hammer from flying off during use. 3. Hammer handles will not be used as a pry bar. 4. When using a hammer, keep the handle clean, and wear gloves. 5. The head of a hammer will not be placed beneath the edge of a heavy load being lowered. 6. A hammer must be turned in for replacement or redressed if the driving head becomes mushroomed. 7. A hammer must not be set down in a work area with the handle pointing up. 8. A hammer must not be used around the rotary table or bell nipple while the BOP rams are open. 9. No one will stand within the swing radius or be in the direct line of the swing of the hammer. 10. Do not slide or throw a hammer down the V-door ramp. 11. A hammer will not be used to "chock" equipment or drilling tools. 12. Choose the correct hammer type and size for the job. 13. A claw hammer will be used only for carpentry or nail work. A ball peen or sledgehammer will only be used to drive bars or hit steel equipment. 14. Never strike one hammer face against another.  Pipe Wrenches  1. Pipe wrenches will not be used as a substitute for tubing tongs on tubing being tripped in or out of the hole. 2. Wire rope or manila rope will not be attached to pipe wrenches for pulling purposes. 3. Pipe wrenches will be properly adjusted and placed on the pipe for the proper bite. 4. When tightening pipe, swab nuts, swab rods, etc., a person will not stand on the wrench for additional force. Anchor objects to be tightened or place them in a vice. 5. Pipe wrench handles will not be used as pry bars. 6. Pipe wrenches will not be placed on moving pump rods or other items. This precaution pertains especially to catheads. 7. A pipe wrench will not be placed on an object with the intention of using the pipe wrench as a step. 8. A Pipe wrench will not be used as a substitute for a hammer. 9. A pipe wrench will not be struck on the handle with a sledge hammer. 10. Do not slide a pipe wrench down the V-door ramp.  Screw drivers  1. Only properly insulated screwdrivers will be used for electrical work. Only a qualified Electrician is authorized to do electrical work. Caution must be exercised. 2. A screwdriver will not be used as a substitute for a chisel, chipper, or scraper. 3. The handle end of screwdrivers will not be struck with hammers for driving purposes. 4. A screwdriver will not be used to test for electrical current. 5. The user will not turn the point of a screwdriver toward the body or limbs. 6. Screwdrivers will not be used as pry bars. 7. Screwdrivers with deformed heads will not be used until the heads have been properly repaired. 8. Screwdrivers will not be used around moving machinery. 9. Screwdrivers will not be carried in a person's pockets. 10. Screwdrivers will not be thrown to a fellow worker, but will be handed handle first. 11. Screwdrivers will not be used to open cans and like containers.  Knives The knife is one of the most versatile and useful tools ever invented, but present an inherent danger of serious injury when abused or used improperly. Alternative cutting tool kits and individual pouches will be made available for employees to use for all work on the site. Care must be taken when using any sharp cutting tool, and the alternative cutting tools supplied provides better protection than pocket knives. Personal pocket knives will not be allowed for use while on tour except for justifiable emergency use. Personnel using a personal pocket knife while off tour must follow all safety precautions for its use.   1. Only pocket knives with locking blades are allowed for personal use on sites. 2. A knife with a push-button spring release (switchblade) is prohibited. 3. Straight blade (hunting) knives are prohibited. 4. When using a personal pocket knife off tour, the following safety precautions should apply: 5. Knives must not be pulled or pushed toward the body or limbs when cutting. 6. Open-blade knives must not be used to punch or gouge holes in objects. 7. An open knife must not be tossed to a fellow worker, but will be handed handle first. 8. Knives must not be used to work on electrical components. 9. Knives must not be used to cut wire or metal. 10. Personnel must not play with knives. 11. Open knives must not be left lying around. 12. Personnel must not cut toward other workers. 13. A knife must not be used in an area above other personnel. Personnel will remain clear of an area directly beneath where a knife is being used.  Pliers  1. Only insulated pliers that are designed for electrical use will be used near or on electrical equipment, including batteries, and then only by a qualified Electrician. 2. Pliers will not be hammered on to drive objects. 3. Pliers will not be used to tighten nuts. 4. Sharp-nosed pliers will not be carried in a person's pocket. 5. Only wire-cutting pliers will be used to cut wire. 6. Do not leave vice-grip pliers attached to an object that is subject to turning. 7. Inspect pliers to make sure that the pins and nuts are tight.  Files  1. Consider the job task and select a file of the correct design. 2. Files of any design will not be hammered. 3. A protective handle will be placed on the tail (tang) of each file. 4. A file will not be used as a pry bar. 5. Objects being filed will be secured and placed in a vise if possible. 6. A file will not be used as a substitute for a punch or chisel. 7. Knives will not be made from files. 8. A file will not be tossed but handed to a fellow worker.  Pry Bars  1. To prevent a trip and fall hazard, bars will not be left lying near openings in floors or decks, or lying on the floor, decks, or ground. 2. Nail bars, pry bars, crowbars, and wrecking bars will only be used for jobs for which they are intended. 3. Bars will not be inserted into moving machinery. 4. Bars will not be used on or near electrical equipment, panels or wiring. 5. Bars will not be used in jacks that are too small for the load being lifted. 6. No one will place and continue to hold a bar beneath a load being lowered. 7. To prevent strain, an adequate number of persons will assist when using a bar on a heavy load. 8. Bars will not be used on or near rotating equipment while it is in use, including the Top Drive and rotary. 9. Personnel will not attempt to lift drill pipe or collars by placing a bar in the ends of it. 10. Drill pipe and collars will not be permitted to roll off the racks onto a bar being held by someone. 11. Bars will not be used to start an engine by turning the flywheel. 12. Personnel will not stand or sit on a bar to gain additional leverage. 13. A rope will not be placed on a bar under tension for the purpose of exerting additional pull. 14. Bars will not be used inside mud pumps to tighten gland packing while the pump is in motion. 15. 1Methods of extending the handle of a bar to gain additional leverage are not allowed.  Raising Tools Aloft  1. When tools are taken into the derrick, they must be entered in the Derrick Tool Log prior to being taken aloft, and signed in on the log when they are brought down. 2. They must be placed inside a tool bag, toolbox or other container to prevent them being dropped while they are being raised or lowered. 3. All tools used while working aloft must be fitted with a suitable lanyard to prevent dropping.  Hatchets and Axes  1. Inspect all axe handles regularly for cracks. If the handle is cracked, it will be replaced, 2. immediately. An ax will not be used until the defective handle is replaced. 3. Hatchets and axes will not be used for hitting steel, cutting wire rope, cleaning mud off collars or pipe, or chiseling. 4. Only fire axes will be used for cutting through steel bulkheads during fire or an emergency. 5. Fire axes will be kept in their designated hanging brackets. 6. Only swing a hatchet or axe in a direction away from your body. 7. A hatchet or axe will not be used in close quarters. 8. Hatchets and axes will not be stored with the blade pointing up. 9. Persons who cannot swing a hatchet or axe accurately will not be allowed to use them. 10. No one will stand within the swing radius or be in the direct line of the swing of the axe.  Grinders  1. No employee will be allowed to operate a grinder or change a disk until they have received adequate training. 2. Goggles and a full-face shield will be worn when working on or near an operating grinder. The grinder must have a spark shield. It must be properly placed, clean and in good condition. 3. The work rest will not be more than 1/8 inch from the abrasive wheel surface. The peripheral protecting member will be maintained 1/4 inch from the edge of wheel surface. 4. Grinding wheels must be inspected before use for defects. Any defects must be brought to the attention of an appropriate Supervisor or the employee's the immediate Supervisor. Only properly trained personnel will re-dress a grinding stone. 5. Always stand to one side when the grinder is started and let it come up to full speed. When finished grinding, shut off the power before leaving the machine. Do not force the grinding wheel to stop. 6. The grinder will not be used to grind soft materials such as brass, aluminum, lead, wood, etc. These non-porous materials can cause the grinder wheel to explode. A good rule of thumb is: "If it doesn't spark, don't grind it!" 7. Prior to installing new a grinder wheel, ensure that the proper size and RPM rated wheel is used. A grinding wheel of the wrong size or RPM rating may explode. 8. Never grind on the side of the grinding stone. 9. Do not use an amount force on the stone that will "bog it down" or cause the grinder speed to be greatly reduced. 10. A safety sign detailing PPE requirements and instructions on how to operate a grinder must be posted next to fixed bench grinders. 11. Each bench grinder will have a full-face shield and goggles stored in the immediate vicinity. 12. All fixed electrically operated grinders must be fitted with a foot operated isolation switch that will isolate the grinder when the operator removes his foot from the switch. 13. The Grinder must be isolated from its main switch after use. 14. Grinder guards should where possible be interlocked such that electrical power is isolated if the guard is not in the working (protecting position)  Abrasive Blasting and Painting Operations It is frequently necessary to carry out abrasive blasting and spray painting in the course of maintaining and offshore drilling site. The following section contains guidance on the minimum requirements and precautions to be followed and included in a JSA.      Personal Safety Equipment – General  1. Sandblasters and Painters are required to wear proper PPE, hearing protection and clothing, which includes long sleeves and gloves. 2. During blasting operations an approved blast hood with inner and outer shields must be worn. 3. A safety harness with a lanyard is required at heights above six feet. 4. An approved hard hat is required. 5. Approved steel toed shoes are required 6. Approved safety glasses and/ or goggles are required.  Respiratory Protective Equipment (RPE)  1. At no time will anyone be allowed to dry-blast or spray paint without proper respiratory protection. Respiratory protection for buffing, chipping, sand blasting, spray painting or any other task that creates airborne paint particulate shall be the approved organic vapor/acid gas respirator, the approved air-fed type, or paint hood. 2. All Helpers or other personnel working in the immediate area of dry-blasting or spray painting will be required to wear appropriate PPE and RPE as stated in the JSA. 3. All Painters, while engaged in spray painting, will be required to wear the proper respiratory protection for the product in use. Air-fed masks or paint hoods with breathable-quality air will be required while spray painting in enclosed or confined spaces. 4. An air-purifying mask and face shield is required while spray painting outside. 5. The compressor for supplying air must be equipped with the necessary safety devices and alarms. Compressors must be constructed and situated to avoid any entry of contaminated air into the system, and must be equipped with suitable in-line, air-purifying absorbent beds and/or filters installed to assure air quality. The system must also have a receiver of sufficient capacity to enable the wearer to escape from a contaminated atmosphere in the event of compressor failure, and alarms to indicate compressor failure and overheating. If an oil-lubricated compressor is used, it must have a high temperature and carbon monoxide alarm. 6. Airline couplings must be incompatible with outlets for other gas systems to prevent accidental servicing of airline respirators with non-respirable gasses or oxygen. 7. All personnel involved will review the JSA, including the requirements of the Material Safety Data Sheet (MSDS) pertaining to the paints and solvents being used. 8. PPE, including eye protection is to be worn while mixing paints and solvents, and while cleaning painting equipment.  Rigging Requirements for Painting or Sandblasting  1. Rigging will be erected where the use of ladders and scaffolds are impractical. All cable used will be 3/8 inch or greater with appropriate clamps and spacing (Jubilee clamps are not permitted) 2. Cable being erected for the purpose of supporting safety nets will be secured in such a manner as to withstand 7,500 pounds of impact. 3. Separate lifelines will be erected whenever an existing structure is not available for attaching safety lanyards. Lifelines will be arranged to enable a new lanyard connection to be made without having to disconnect the existing lanyard. 4. The lifeline load capacity must be sufficient to hold five times the combined weight of the worker and his equipment. 5. Where safety nets are installed, nets will not exceed 6" by 6" mesh, and will be capable of withstanding 7,500 pounds of impact with edge ropes having a breaking strength of no less than 5,000 pounds. 6. Nets will be erected as close to the working surface as possible, and not to exceed 25 feet below the working surface. Nets will not be used as a working surface. 7. All personnel working over water will be required to wear an approved work vest. 8. No painting is to be done in the area of blasting, including the opposite side of a bulkhead. 9. All hose connections are to be wired or clipped together. 10. Dead man controls are required on all blast nozzles. 11. All blasting lines are to be inspected by the Supervisor in charge prior to each shift change to determine that they are in working order, and that all safety appliances are in place. 12. No painting is to be done in a confined area until it has been inspected for oxygen levels and explosive hazards and a proper means of ventilation has been established for the operation. 13. Any lighting used must be approved and explosion proof. 14. Each worker working over a height of 5 feet will be connected to an individual safety line. There will be no more than one worker on a safety line. The safety lanyard attached to the harness will be no longer than 5 feet. No rigging is to be attached to the handrails. The safety line must be attached to a portion of the site capable of holding five times the combined weight of the worker and his equipment and has been suitably load tested and certified. 15. When working over the side of a site, personnel will use an approved certified work basket best suited for the work task. Do not use the personnel transfer basket.  Abrasive Blasting  1. **Types of Abrasives**   Various types of abrasive materials are used in abrasive blasting operations, each having its own particular advantages in producing the quality of work desired. Hazard potential of the abrasive in use varies considerably, ranging from the health hazard potential of silica sand abrasives to the relatively non-hazardous metal shot or grit. When several abrasives can meet the job specifications, the least hazardous material shall be used in accordance with the following priorities:   1. Metal shot or grit (steel or chilled cast iron). 2. Mineral grains (non-toxic) 3. Silica sand. 4. Organic abrasives. 5. **Health Hazards** 6. Both abrasive materials and abraded pulverized coatings can impact the health of exposed workers due to inhalation. Inhalation of paints containing toxic components can produce severe body trauma. Heavy metals such as lead, chromate or organic tin compounds present in vessel primer, anti-fouling paints and primer coatings can accumulate in the body from ingestion and/or inhalation. 7. All abrasive blasting operations produce noise levels in excess of acceptable limits. Even short-term exposure on a regular basis may result in hearing loss. Earplugs and/or ear Defenders must be worn during abrasive blasting operations. 8. Oil, water, carbon monoxide and other products of incomplete combustion may be present in breathing air if proper precautions are not taken.  High Pressure Water Blasting  1. All pumping units will have a pressure regulator. 2. All high-pressure hoses and fittings will test rate at 50% above operating pressure. 3. Employee using pressure wand will be the only operator of the foot and hand control bypass. 4. All employees will wear proper protective equipment such as feet and leg guards. 5. All wands will have material on the outside surface that will provide a good grip surface. 6. All third party personnel will bring their company's safe operating procedures for personnel and equipment to the job site for review by the RIG MANAGER.  Required Personnel Controls  1. The operator must inspect the abrasive blasting equipment before beginning each operation. 2. The operator must understand the operating instructions before operating the equipment. 3. The operator must inspect each hose connection to insure the couplings are secure before the hose is pressurized.  Spray Painting Operations  1. **Types of Painting and Paint Materials** 2. Spray painting presents significant hazards not usually found in brush or roller painting because of the atomization and dispersion of paint particles and the solvent vehicle into the surrounding air. Many paints used may contain toxic pigments, chromates and lead which can cause harm to the environment. The possibility of ingestion or inhalation into the body is greatly increased during spraying operations. 3. Where job specifications allow, paint application by brush or roller is preferred and recommended. 4. **Health Hazards** 5. All personnel are to be made aware of the requirements of the JSA, including the MSDS pertaining to the paints, solvents, and soaps being used. The MSDS will be read to all involved prior to starting the job. Strictly adhere to the precautions of the hazardous materials. 6. PPE for face, hands, body, lungs, etc. shall be provided and used by all personnel when performing specific jobs such as mixing, handling, or using chemicals and paints this means: 7. Splash proof chemical goggles and a full face shield must be worn when mixing or pouring paints or when there exists the possibility of paint and chemicals splashing into the face. 8. Safety glasses are the minimum eye protection to be used when painting by spray, brush, or roller. The Safety Representative may deem that more protection is required as circumstances dictate, such as spray painting in a small confined room. 9. Proper and approved type respiratory protection equipment is required at all times when solvents and vapors may be inhaled. 10. Air purifying organic/acid type must be worn during painting operations including mixing, filling paint pots, spraying and wash - up of equipment. 11. Air-fed type must be worn while spray painting in enclosed or confined spaces. 12. Painters and Helpers must wear adequate protective clothing to protect the skin from paints and solvents. 13. Long sleeve shirts meet this requirement while spray painting. 14. Aprons, rubber gloves and face shields are required while mixing and pouring paints and solvents, and also while washing spray pots. 15. Supervisors shall ensure cleanliness and hygiene for workers spraying hazardous materials. Emphasis will be place on washing hands and face before smoking or eating and leaving work. Washing facilities will be conveniently located to the spray paint area. |