



HINDUSTAN ZINC
Zinc & Silver of India

Sustainability Framework

SAFETY STANDARD



HZL Standards “Hand Tools”

Hindustan Zinc Limited



Corporate Standard Rules & Procedure Sub-Committee	Date	31-07-2025
	Standard Document No.	HZL/CSRP/16
Hand Tools Guide	Revision No.	01
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Document Control Details

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Sign.		
Next Revision Date – 30-07-2027		

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Abbreviations

- CSRP- Corporate Standards, Rules and Procedures Subcommittee
- HZL- Hindustan Zinc Limited
- HSE- Health, Safety and Environment
- IMS- Integrated Management System
- CSC- Corporate Safety Council
- UIC- Unit Implementation Committee
- ZSC- Zone Safety Committee
- SRPSC- Standards, Rules & Procedure Subcommittee
- PPE- Personal Protective Equipment
- FAI- First Aid Injury
- MTI- Medical Treatment Injury
- LTI- Lost Time Injury
- HIRA- Hazard Identification & Risk Assessment
- JSA- Job Safety Analysis
- SLI- Safe Load Indicator
- RTO- Road Transport Organisation.
- PUC- Pollution under control certificate
- HIRA- Hazard Identification and Risk Assessment
- SOP- Standard Operating Procedure
- WI- Work Instruction
- OSHA- Occupational Safety & Health Association.
- IS- Indian Standard
- EN- European Standard

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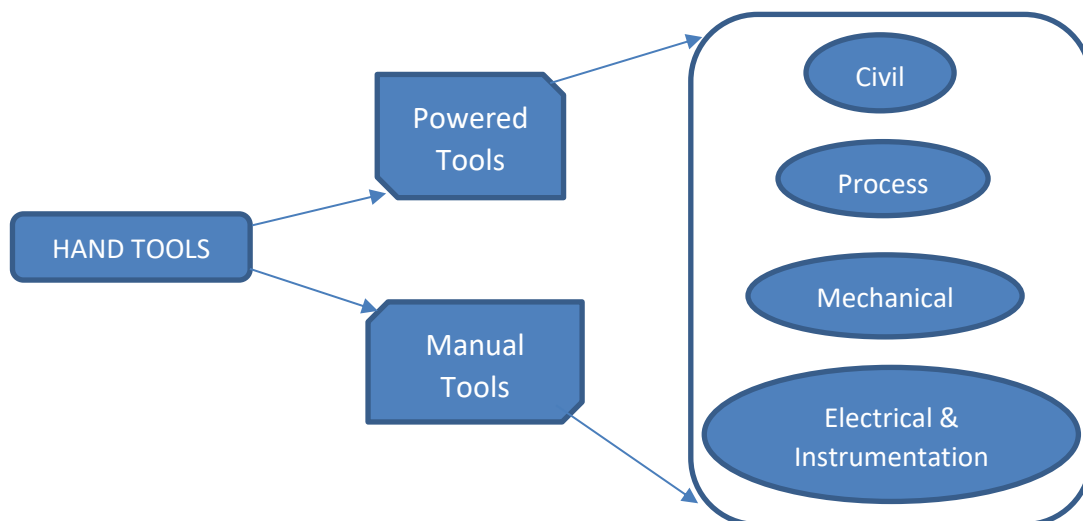
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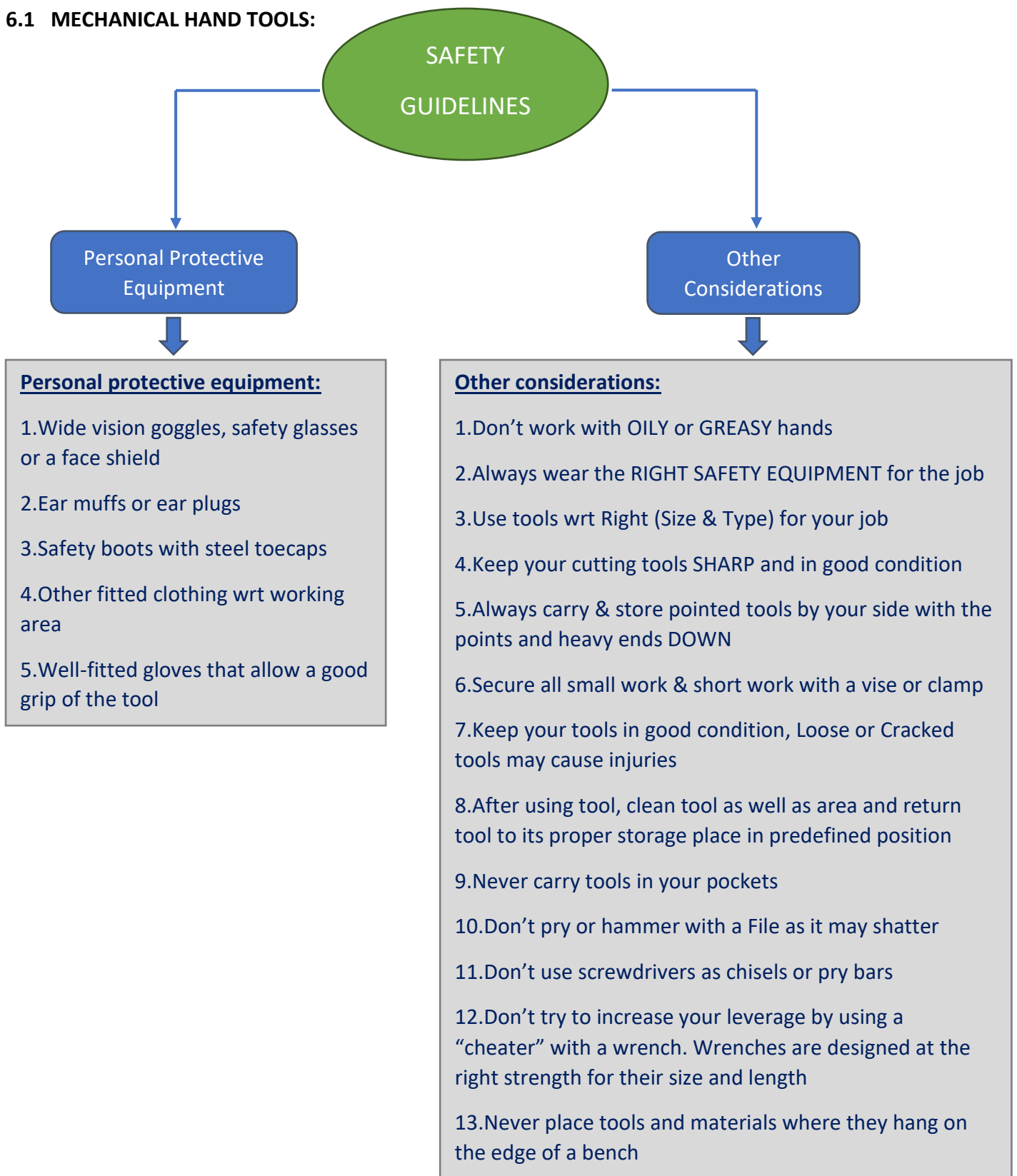
- Purpose:** To provide a guideline not only for usage of hand tools in safe manner as well as identification and selection of right tool for job.
- References:** Following resources are used to prepare the “Hand Tools” standard are:
 - HZL-** IM/ Safety Portal, SAP, Plant Team
 - Google-** OSHA, IS, EN, Benchmark Standards
- Associated Hazards:** Injury at Hand/ Leg/ Shoulder/ other body parts in case of either wrong selection of hand tool or mishandling
- Applicability & Responsibility:** This standard is applicable for all location of HZL, Line Management is responsible to implement this standard at all location
- Hand Tools’ Category:**



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6. Hand Tools' User Guide-

6.1 MECHANICAL HAND TOOLS:



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6.1.1:-

ANGLE GRINDER

TYPES

Applicability Area

Pictures




Material Code

TYPES

Applicability Area

Pictures

Material Code

PNEUMATIC	VARIABLE SPEED	STRAIGHT
For very precise jobs, with throttle levers it allows technical tasks such as feather edging and speed grinding	For wide variety of applications with different speed, paddle switch enhances control	Wheel is positioned at a 90-deg angle, making this the ideal tool for grinding outer edges and inner parts of pieces
		
N/A in HZL	N/A in HZL	N/A in HZL

CORDLESS	CORDED
W@H job (in Ladder/ Scaffold), Confined space	For daily routine jobs with better ergonomics as very lighter & less vibrating than cordless
	
248224003300-GRINDER,PWR TL,8500RPM,125MM,MM:CP-8350	Bosch GWS 900-125 for 125 mm, DeWalt DW824-125mm Angle Grinder, Ralliwolf 35135 125MM,Makita 9558NB 125mm Angle Grinder, Fein make type- WSG 11-125 RT have inbuilt auto stop dead man switch, Type & Model can be changed according to Disc size

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Safety Alert

Safety Alert Description

Safety Alert Recommendation

IM/Zone-5/201920/091

On 08.02.2020 at 11.35AM an incident occurred at ETP where IP was instructed by carpenter to check the grinder and hand over to him for grinding job. While checking IP switched on the grinder and he felt sudden vibration in his hand due to which grinder slipped from his hand and resulted in cut injury on right leg. Immediately IP was shifted to Zinc hospital for first aid treatment and was referred to GBH Udaipur for further treatment.

- 1.Hira register to be updating to mitigate the hazard
- 2.Helpers / unauthorized person must not use the power tools . Display and warning sign to be used and communicated
- 3.SOP of safe usage and necessary PPE for usage of grinding machine and power tools to be made and training to be imparted
- 4.Job specific JSA/ tool box talk to be done
- 5.System to be made for authorisation of power tool usages in plant and in project
System to be made for authorisation of power tool usages in plant and in project
- 6.No modification in grinding wheel to be made .
- 7.No make shift arrangements to be made . this to be included in SOP
- 8.Correct size of guard to be used . Guard size marking to be done on the grinder guard
- 9.authorisation of the person by means of app / ID card provision

IM/20182019/89

Date-24-07-2018-On 25.07.2018 in C Shift at around 01:15 AM at TCL allocation area, while cutting the 3meter poly pipe along its length by use of Hand Grinder, suddenly grinder slipped and it hit to the IP's foot in which IP sustained a laceration injury on his right foot. IP was given first aid at portal first aid station and then sent to the Zinc Hospital for further treatment.

- 1.TBT shall be given to all the persons regarding line of fire hazards
- 2.JSA/Risk assessment shall be conducted before start of the job
- 3.Proper designated place shall be fixed for such jobs
- 4.Pipe shall be secured before doing such critical job
- 5.Some alternate arrangement shall be done for protection of electric cable from flying rocks of blast (GI Pipe arrangement)
- 6.Only skilled person/ competent person must be deployed for the job

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Risk Control Measures

Do's:

1. consider whether an angle grinder is actually the best tool to perform the task, because another tool may be just as, or even more, effective
2. when purchasing a grinder, choose one with adjustable handles that can be moved to suit both left and right-handed operators
3. choose a grinder that has an automatic cut-off or dead-man switch as part of the handgrip. This is designed to cut off power as soon as finger pressure is released. Automatic cut-off switches may not be available on smaller models and may not be practicable for certain tasks.
4. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.
5. do not use a grinder that is larger, heavier or more powerful than is necessary, as it is much easier to control a lighter tool

Don'ts:

1. guards must not be removed. The guard should cover half of the disc and be positioned between the disc and the operator
2. ensure that the correct type of disc is used for the task being performed. The wrong disc could shatter or 'grab' the work piece causing kickback
3. when using a grinder fitted with a cutting disc, keep the depth of cut to no more than double the disc thickness and avoid plunging the disc too far through the work piece

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6.1.2:-

Applicability Area

Pictures

Material Code

Safety Alert

Risk Control
Measures

TABLE or BENCH GRINDER

Grinding/cutting any metal, sharpening any metal, Cutting masonry



Bosch GBG 60-20 Professional Heavy Duty Bench Grinder, Heavy Duty Bench Grinders-Rajlaxmi, or any reupdated

Nil

Do's:

1. Visually inspect the tool and all wheels for possible damage before mounting.
2. Check the mounting flanges for equal and correct diameter. They should be at least one-third the diameter of the wheel and relieved around the hole.
3. Always use a safety guard that covers at least one-half of the grinding wheel.
4. Run a newly mounted wheel at operating speed for at least one minute before grinding

Handle and store wheels carefully. Avoid dropping or bumping them..

5. Store abrasive wheels in a dry area not subject to extreme temperature changes. Some bonds may be adversely affected by excessive humidity and temperature differentials

6. Ensure supply source is provided through 30mA ELCB.

Don'ts:

1. Do not Use a cracked wheel or one that has been dropped or damaged.
2. Do Not Exceed the maximum operating speed specified by the manufacturer.
3. Do Not Overtighten the mounting nut.
4. Do Not Stand in front of the grinding wheel when the grinder is turned on.
5. Do Not Grind material that the wheel is not intended to grind.
6. Force the wheel onto the tool or alter the size of the mounting hole. If it doesn't fit, don't use it.

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6.1.3:-

PENCIL GRINDER(Cordless/Corded)

Applicability Area

To prepare surfaces, light deburring, light grinding/ filing

Pictures



Material Code

Ralliwolf FSG2 Flexible shaft grinder SINGLE SPEED, Ralli Wolf Die Grinder, RDG 25

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always carry out a 'pre-use' check
 - Ensure guarding is correctly adjusted and used
 - Ensure you have the correct drill bit/shape grinder for the material being grinded
 - Ensure any emergency stop devices operate
 - Report any defects promptly
2. Secure the piece with clamps or jigs wherever appropriate
3. Keep work area clean to make it free of obstructions and hazardous.
4. Wear correct PPE – Goggles, hearing protection etc
5. Ensure supply source is provided through 30mA ELCB.
6. Check that the power lead does not create a trip hazard
7. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.

Don'ts:

- 1.Never use the equipment without the guarding in place
- 2.Never use defective or blunt drill bits
- 3.Never forcibly drill, always allow the drill bit to do the grinding.
- 4.Never wear ties, loose clothing or jewellery when using rotating machinery

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6.1.4:-

ELECTRIC BUFFING MACHINE(Cordless/Corded)

Applicability Area

To smoothen/polish the uneven area of busbars, angles, steel

Pictures



Material Code

Bosch GPO 12 CE 7-inch 1250-Watt, Makita 1200 Watts Sander Polisher 9227C

Safety Alert

Nil

Risk Control
Measures

Do's:

1. consider whether a buffering machine is actually the best tool to perform the task, because another tool may be just as, or even more, effective
2. when purchasing a grinder, choose one with adjustable handles that can be moved to suit both left and right-handed operators
3. choose a grinder that has an automatic cut-off or dead-man switch as part of the handgrip. This is designed to cut off power as soon as finger pressure is released. Automatic cut-off switches may not be available on smaller models and may not be practicable for certain tasks
4. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated machine
5. do not use a grinder that is larger, heavier or more powerful than is necessary, as it is much easier to control a lighter tool. Use face shield while using buffering machine to prevent bristles scattering.

Don'ts:

1. guards must not be removed. The guard should cover half of the disc and be positioned between the disc and the operator
2. ensure that the correct type of disc is used for the task being performed. The wrong disc could shatter or 'grab' the work piece causing kickback
3. Do not make any adjustment or change the wheel, when the power is in ON condition. Switch off the machine, remove the power plug and do any adjustments.

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6.1.5:-

SAW MACHINE

TYPES

Applicability Area

Pictures

Material Code




METAL	TREE	REFRACTORY
To cut the metal piece of any angle plate or channel	To trimming the tree branches	To cutting the refractory bricks
		
Dewalt 14 Inch Chop Saw, Model Name/Number: D28715, 4000 Rpm, Bosch GCO200 2000-Watt 14-inch Chop-Saw ,Pro Tools 2355 A Chop saw,Ralliwolf RW 14,RW355 Chopsaw	Greenworks 20222 Electric Chainsaw, 14-Inch,WEN 4017 Electric Chainsaw, 16" by WEN, Sun Joe SWJ599E 14-inch 9-Amp Tree Limb Master Electric Handheld Chainsaw with Low-Kickback	Metatherm make MTF-16 & MTF-18, Everon impex make semiauto machine

TYPES

Applicability Area

Pictures

Material Code

RIP CUT	CROSS CUT	HACK
For cutting through material, very often wood though sometimes metal or stone		
		
Nil		

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Safety Alert

Nil

Risk Control Measures

Do's:

1. Always wear rubber, insulated gloves and protective boots or shoes when operating. Safety glasses should be worn at all times.
2. Always carry the vibrator by grasping the motor
3. Caution should be used when handling equipment around water or when working in damp environments.
4. Ensure supply source is provided through 30mA ELCB.
5. Make sure base of saw is locked into place before cutting
6. Check lumber for nails, screws or anything else that is unsafe to cut.
7. Let saw blade reach its maximum speed before cutting.
8. Use blade guard and fences properly.
9. Maintain sure footing and proper balance while operating saw.

Don'ts:



1. Never pull or drag the unit by the shaft, head, or electrical cord.
2. Don't run the vibrator when not in wet concrete, the vibrator head will overheat. The vibrator should be kept moving, in an up and down motion.
3. Don't use if cord is damaged or frayed.
4. Don't allow any person to play with a concrete vibrator. If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator.
5. Don't: Leave saw until it has stopped moving.
6. Don't: Put hands near saw blade unless it has stopped moving and the power has been disconnected.
7. Don't: Cut lumber that is too small to hold safely with your hands.
8. Don't: Operate saw at an unsafe pace.
9. Don't: Operate saw if your arms will cross over one another when making a cut.

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6.1.6:-

POWERED WRENCH

TYPES
Applicability Area
Pictures
Material Code
Risk Control Measures

WIRED	BATTERY OPERATED
To open fasteners in Normal area	To open fasteners in CS/ W@H area
	
DCA APB12 300W Electric Wrench, DeWalt DW292 ELECTRIC Impact Wrench Electric 1/2, Hitachi WR 16SA Electric Impact Wrench, Makita TW1000 - 25.4mm Impact Wrench	Bosch GDX 18 V-EC Professional Cordless Impact Wrench, Cordless Impact Wrench KPAB1685, Makita DTW251RFE Cordless Impact Wrench

Do's:

1. Use proper socket as per the size of fasteners
2. Use the right tool for the job, and the right tool for the user.
3. Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as sockets etc.
4. Use two or three-finger triggers for power tools. Use four-finger triggers only when the tool is balanced.
5. Ensure supply source is provided through 30mA ELCB.
6. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.
7. Check Battery status in case usage of Battery operated M/C

Don'ts:

1. Never carry a tool by the cord or hose.
2. Never yank the cord or the hose to disconnect it from the receptacle
3. Reduce excessive gripping force or pressure.
4. Avoid high-contact forces and static loading.
5. Keep all people not involved with the work at a safe distance from the work area.

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6.1.7:-

BARREL PUMP

TYPES

Applicability Area

Pictures

Material Code

TYPES

Applicability Area

Pictures

Material Code

Safety Alert

ROTARY HAND OPERATED	PISTON HAND OPERATED
Suitable for transfer of low viscous fluids.(Acid, Alkali, Gasoline, Diesel, Oil, Water, Alcohol, Solvents, Chemicals, etc.)	Suitable for transfer of low viscous fluids.(Acid, Oil, Water, various Chemicals, etc.)
	
Nil	Nil

ELECTRICAL OPERATED	PNEUMATIC OPERATED
Suitable for transfer of low viscous fluids.(Diesel, Kerosene, Acid, Alcohol, Oils, Chemicals, Solvents, Gasoline, Water, etc.)	Suitable for transfer of low viscous fluids (Diesel, Kerosene, Alcohol, Oils, Chemicals, Solvents.)
	
Nil	Nil

Nil

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Risk Control Measures

Do's:

1. Always follow all operating instruction as per manufacturer.
2. Ensure to use all PPEs necessary for operating barrel pumps.
3. Ensure direction of rotation CW /ACW before operating to avoid spillage.
4. Ensure to read MSDS of liquid to be pumped & take necessary precautions.
5. Pump should be washed out before it is used since processing lubricants may contaminate the fluids.
6. When using flammable liquids, pump containers should be grounded to avoid static electricity.
7. Wear anti-static or conductive footwear and avoid wearing silk and/or synthetic clothing, unless treated with anti-static solution

Don'ts:-

1. Do not pump with any solvent, chemical, waste oil and stained liquid.
2. Do not allow untrained person to operate the pump.
3. Never operate the pump near fire or source of spark. Some Media may be Explosive & Hazardous
4. Never fill containers in confined areas, e.g. inside a vehicle. Do not operate pump in areas where vapours can accumulate.
5. Avoid prolonged skin contact with petroleum products. Use of protective goggles, gloves and aprons is recommended in case of accidental splashing or spillage. Change clothing and wash skin contact areas promptly with soap and water

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6.1.8:-

HYDRAULIC BEARING PULLER

Applicability Area

To remove bearings from motors/any driven machine

Pictures



Material Code

SKF TMHC 110E

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always use the bearing puller with all the provided arms.
2. Tight the arms of bearing puller using the OEM supplied nut, bolts only.
3. DO choose the right type and size of bearing puller as per application.
4. Use well fitted gloves when using the bearing puller for having a proper grip.
5. Ensure the puller is fixed centrally to the shaft and the jaws are properly fixed on bearing.
6. Ensure that the equipment is stored safely when not in use.
7. Check for any oil leakages in puller.

Don'ts:

1. DON'T operate undersized pullers for oversized applications.
2. DON'T use 2 arms of puller using a 3 arm designed puller.
3. Do not use a puller from straight to body, use it from sideways.
4. Do not make any adjustments while the pressure is built. Release pressure before doing any adjustments.
5. Never place hands or other body parts near rotating or moving parts.
6. Dont use puller, if jaws of puller are not fixing properly on bearing.

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6.1.9:-

HYDRAULIC JACK

Applicability Area

To lift any heavy object/machine

Pictures



Material Code

Nil

Safety Alert

Nil

Do's:

1. Always use the hydraulic jack on level and flat surface.
2. Prior to using this machine the work area must be clear of all hazardous obstructions.
3. DO choose the right size hydraulic jack as per application/job.
4. Check for any oil leakages.
5. Ensure hydraulic jack is fixed at centre of job.
6. Ensure that the equipment is stored safely when not in use

Don'ts:

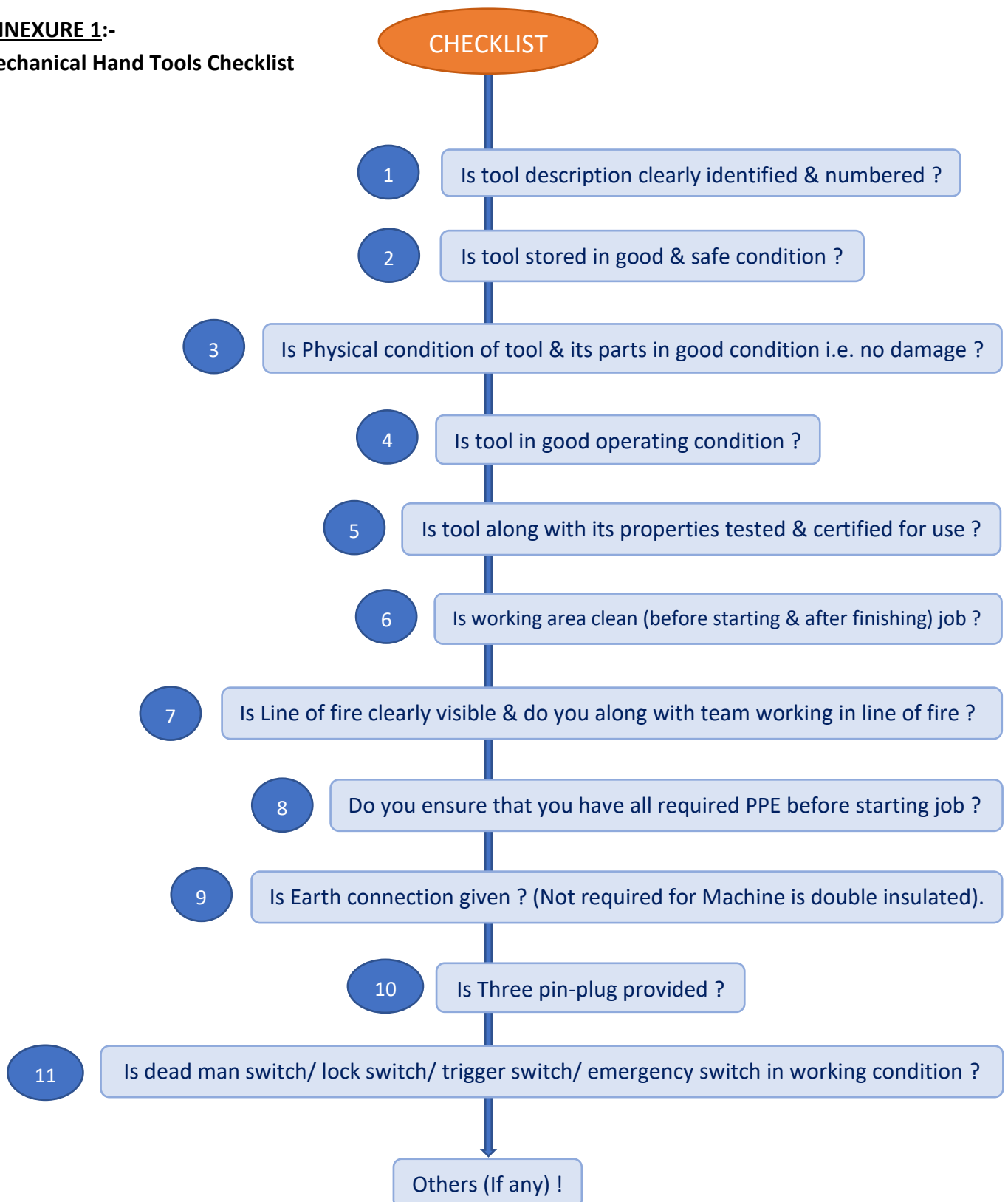
1. DO not use a undersized jack for large application. Cross check with OEM manual when in doubt.
2. Do not store hydraulic jack near sharp edged tools. Chances of damaging hose.
3. Do not work under lifted job. Ensure manual blocking separately in un-avoidable cases.
4. Do not use jack in loose/wet surface.
5. Never place hands or other body parts under lifted portion. Release the hydraulic energy before working on jack.
6. Never leave hydraulic jack which is in pressurised condition.
7. Never store jack when it is pressurised. De-energise before storing.

Risk Control
Measures

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ANNEXURE 1:-

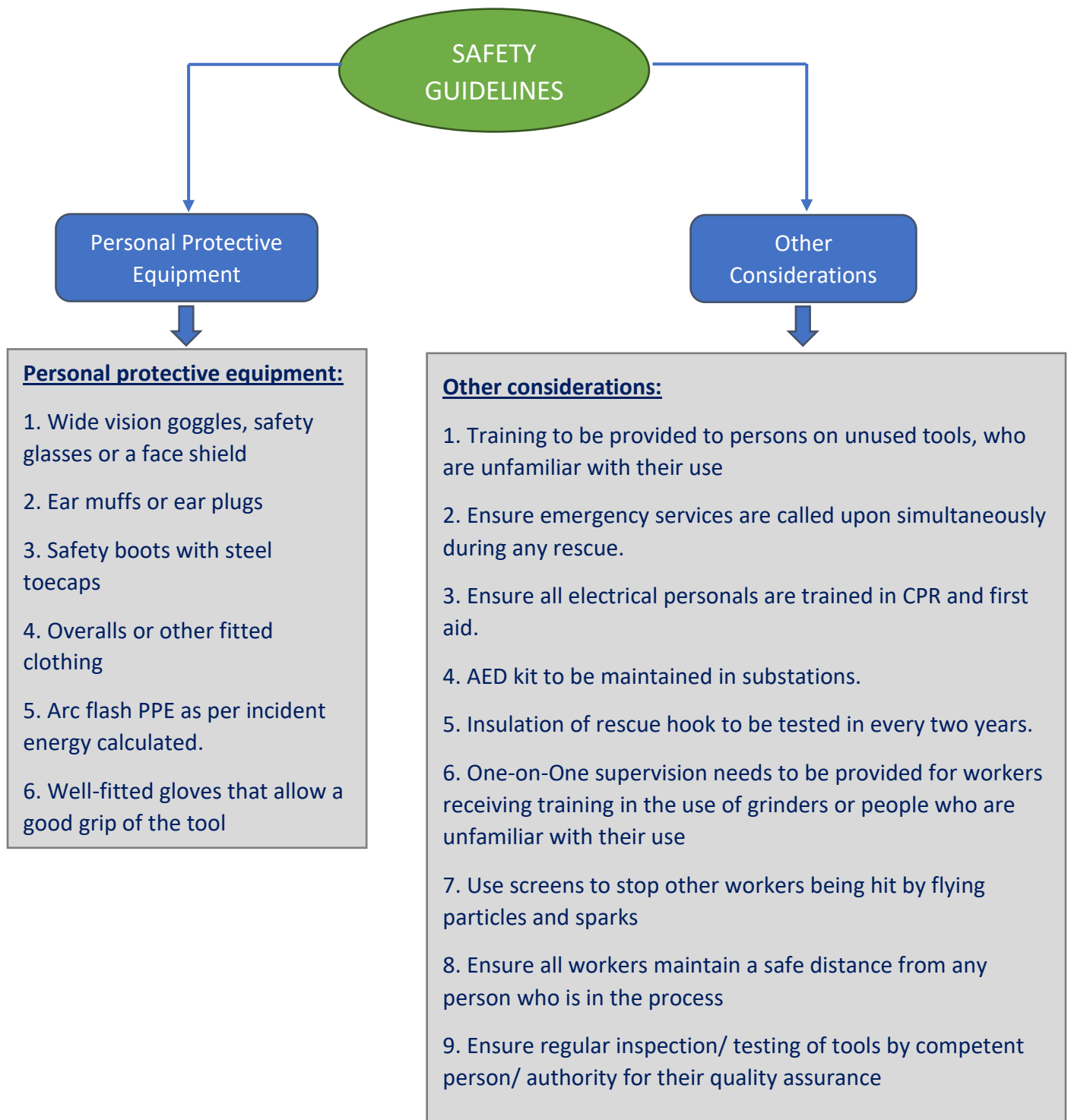
Mechanical Hand Tools Checklist



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Note: All the checklist points to be answered "Yes" to certify the machine

6.2 ELECTRICAL & INSTRUMENTATION HAND TOOLS:



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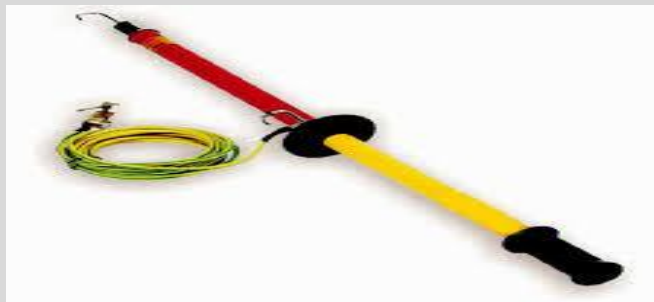
6.2.1:-

EARTH DISCHARGE ROD

Applicability Area

To discharge static energy during Electrical work

Pictures



Material Code

447805006600-ROD,ERTHG,STATIC DISCHARGE STICK,20817, ROD,EARTHING

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Periodical inspection to be carried out to check the healthiness of discharge rod.
- 2.Ensure discharge rod is stored away from rescue hook.
- 3.Standardize the area for storing/placing the discharge rod.
- 4.place the discharge rod horizontally. Vertical storage may cause falling on person/panels.
- 5.Ensure that the equipment is stored safely when not in use.
- 6.TBT to be done for checking supply condition before using discharge rod.

Don'ts:

- 1.DO not use damaged discharge rods.
- 2.DON'T use the discharge rod in live panel/equipment.
- 3.Do not carry out any modifications in discharge rod. OEM certification is must.
- 4.Check for loose connections while connecting to earth. Ensure the connections are not loose.
- 5.Do not store earthing discharge rod near to rescue hook.

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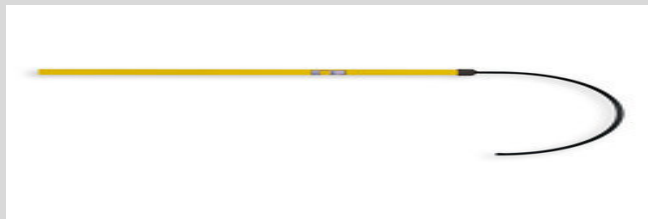
6.2.2:-

RESCUE HOOK

Applicability Area

To rescue/pull persons who are under electric shock/electrocution

Pictures



Material Code

249901002000-HOOK,INSUL RESCUE,OPENING:18IN,11KV HV,PART NAME: HOOK,INSULATED RESCUE,INVALUABLE TOOL FOR ANY WORKPLACE USED TO WITHDRAW AN INJURED WORKER OUT OF A HAZARDOUS AREA, CONFINED SPACES,IN VAULTS, OR JUST NEAR ELECTRICAL CABINETS AND SWITCH GEAR ARE SOME OF THE PLACES WHERE THIS TOOL IS A MUST FEATURING A FOAM FILLED, FIBERGLASS REINFORCED HANDLE FOR SUPERIOR ELECTRICAL INSULATION AND A COATED HEAT

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Regular periodical inspection of rescue hooks to be carried out for checking any damage.
- 2.Assign a particular place in substation for fixing of rescue hook.
- 3.Standardize the rescue hook area, by painting on the area or mentioning the name in paint.
- 4.Always choose rescue hook (while buying) as per the highest voltage level in the plant/area.
- 5.Ensure discharge rod is kept away in a separate place, far from rescue hook.
- 6.Ensure that the equipment is stored safely when not in use.

Don'ts:

- 1.DON'T place rescue hook in a congested place. Ensure it is free to access during emergency.
- 2.DO not store rescue hook vertically. Chances of falling hazard may be on person/panel.
- 3.Do not place discharge rod and rescue hook nearby.
- 4.Do not use rescue hook if insulation is in damaged condition.

TYPES

Applicability Area

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Pictures

Material Code

Safety Alert

Risk Control
Measures



Nil

Do's:

1. Any extension cord used with your leaf blower should also be double insulated.
2. Ensure power is shut off before cleaning or changing attachments.
3. Be sure to change the air filter regularly in order to prolong the life of unit and keep the air cleaner.
4. Ensure supply source is provided through 30mA ELCB.
5. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.
6. Ensure de-energising while cleaning in electrical panel.
7. Arc flash PPE's should be used by operator

Don'ts:

1. Do not use a blower while on a roof or ladder. If, so ensure you're tied off safely, have secure footing and are not overreaching.
2. Ensure no rocks and other debris that could become a dangerous projectile in the event they're blown strongly or sucked into the unit.
3. Never leave blower unattended.

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6.2.4:-

VACCUM CLEANER

Applicability Area

To remove dust or clean panels/ equipment/ areas

Pictures



Material Code

Kent KSL-612 Vacuum Cleaner ,INALSA MAKE,KARCHER MAKE

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Most commercial vacuum cleaners are not intended for outdoor use. Store and use them only indoors.
2. When not in use, unplug the vacuum cleaner from the wall outlet. This protects the cord and plug and helps prevent accidents.
3. Ensure that the area that the machine is to be used in is greater than 500mm wide
4. Ensure supply source is provided through 30mA ELCB.

Don'ts:

1. Never drop a vacuum cleaner. If a machine is accidentally dropped, have it checked by a certified technician before using it again.
2. Do not clean up toxic or flammable materials with a vacuum cleaner; if you are unsure about what a substance is or if it looks unusual, investigate carefully before vacuuming the area.
3. Do not pick up hard or sharp objects, including glass, nails, screws, coins, etc., with the machine.
4. Do not clean the machine by spraying it with water, detergent, or cleaning solutions

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6.2.5:-

PORTABLE COMPRESSOR

Applicability Area

To supply air to any equipment or in HEMM Workshop or Auto garage

Pictures



Material Code

IR MAKE Portable Belt Drive Air Compressor or equivalent as per CFM & pressure requirement

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure all connections and couplings are secure, and hold the open end of the hose firmly to avoid uncontrolled "whipping" of the hose
- 2.Use a safety tip on the air nozzle to maintain air pressure below 30 psi should the tip of the air nozzle become blocked or dead-head
- 3.When using an air nozzle for cleaning equipment, removing dust from hard to reach areas on equipment, clearing lines, etc.,
- 4.Ensure that the air pressure exiting the nozzle is 30 psi or less and use effective chip guarding, such as barriers, baffles or screens
- 5.Ensure supply source is provided through 30mA ELCB.

Don'ts:

- 1.Never point the nozzle of an air hose at anyone and never use compressed air to clean debris from a person's skin or clothing.
- 2.Never use compressed air to transfer flammable liquids.
- 3.Never yank the cord or the hose to disconnect it from the receptacle.
- 4.Remove all damaged portable electric tools from use and tag them: "Do Not Use."

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6.2.6:-

ELECTRICAL SOLDERING IRON

Applicability Area

To solder or jointing in electronic card or any metallic portion

Pictures



Material Code

Anbes Soldering Iron Kit Electronics 60W, Hillgrove Basic Complete 25W Soldering Iron Kit, Visko V1027 30 W Simple (Round Tip)

Safety Alert

Nil

Risk Control Measures

Do's:

1. Hold wires to be heated with tweezers or clamps.
2. Keep the cleaning sponge wet during use. Work on a fire-proof or non-flammable surface that is not easily ignited.
3. Discard lead and silver solder and dross in a container with a lid.
4. Keep cleaning solvents in dispensing bottle to reduce inhalation hazards.
5. Ensure supply source is provided through 30mA ELCB.
6. Prevent damage to electrical cords during soldering.
7. Keep them away from heated tips.
8. Turn unit off or unplug it when not in use.

Don'ts:

1. Never carry a tool by the cord or hose.
2. Never touch the element or tip of the soldering iron. They are very hot (about 400°C) and will burn.
3. Always return the soldering iron to its stand when not in use. Never put it down on your workbench.

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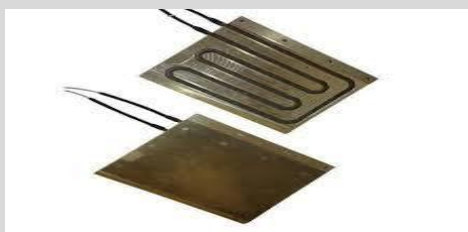
6.2.7:-

ELECTRICAL PLATE HEATER

Applicability Area

Portable Electric Plate heater for FRP related works

Pictures



Material Code

Anbes Soldering Iron Kit Electronics 60W, Hillgrove Basic Complete 25W Soldering Iron Kit, Visko V1027 30 W Simple (Round Tip)

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Prior to using the heater, the work area must be clear of all hazardous flammable items.
2. Ensure use of separate temperature gun to crosscheck the temperature.
3. Ensure the area is clean of any debris to prevent any slip/trip hazard.
4. Use leather hand gloves while handling hot surfaces.
5. Ensure supply source is provided through 30mA ELCB.
6. Ensure that the equipment is stored safely when not in use.

Don'ts:

1. DON'T leave the machine un-attended after turning it on.
2. DON'T use the cord for carrying, pulling or unplugging
3. Do not touch the heater after turning on. Use temperature gun for checking the temperature.
4. Never overheat. Heat only until recommended temperature as per OEM.
5. Do not use the heater for other purposes other than the specific job application.
6. Do not adjust the parts of the machine when the machine is ON.

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6.2.8:-

BEARING INDUCTION HEATER

Applicability Area

For induction heating bearings to easily fit in motor/driven machine

Pictures



Material Code

SKF small induction heater TIH 030m, SKF large induction heater TIH 220m, Pooja International Make UIH2000 or UIH2001 etc.

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Prior to using this machine the work area must be clear of all hazardous obstructions.
2. Ensure use of separate temperature gun to crosscheck the bearing temperature.
3. Ensure the area is clean of any debris to prevent any slip/trip hazard.
4. Use leather hand gloves while handling hot bearings.
5. Ensure supply source is provided through 30mA ELCB.
6. Ensure that the equipment is stored safely when not in use

Don'ts:

1. DON'T leave the machine un-attended after turning it on.
2. DON'T use the cord for carrying, pulling or unplugging
3. Do not touch the bearing after turning on the machine. Use temperature gun.
4. Never overheat the bearing. Heat only until recommended temperature as per OEM.
5. Do not remove the bearing while the machine is on.
6. Do not adjust the parts of the machine when the machine is on. 6. Do not adjust the parts of the machine when the machine is ON.

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6.2.9:-

WELDING ELECTRODE BAKING OVEN

Applicability Area

To remove moisture from welding rods

Pictures



Material Code

Reputed vendors- Portable Welding Electrode Drying Oven make Supertech

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Keep your head out of fumes.
- 2.Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as blades, bits, and cutters.
- 3.Keep flammable materials away
4. Insulate yourself from work and ground.
- 5.Ensure supply source is provided through 30mA ELCB.

Don'ts:

- 1.Do not touch electrically live parts or electrode with skin or wet clothing.
- 2.Keep all people not involved with the work at a safe distance from the work area.
- 3.Do not wind the cord around body of the hot oven as it still hot.
- 4.Never yank the cord or the hose to disconnect it from the receptacle

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6.2.10:-

ELECTRICAL HAND BLENDER/ MIXER

Applicability Area

For blending/mixing of liquids

Pictures



Material Code

Any reputed make like Bosch, Philips

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always carry out a 'pre-use' check
 - o Ensure you have the correct machine for the application
 - o Ensure protective devices are in line
 - o Report any defects promptly
2. Ensure use of blender in liquids as per OEM manual
3. Keep work area clean and free of obstructions and hazards.
4. Ensure supply source is provided through 30mA ELCB.
5. Check that the power lead does not create a trip hazard and that it is well clear of the workpiece.

Don'ts:

1. Do not use the blender near sharp edges. Chances of blender blade damage.
2. Do not use blender on liquids which are not compatible to work. Check OEM manual.
3. Do not use without any protection/slippage guards.
4. Do not use blender if there is a damage in blender or cable.
5. Do not connect to power source until all adjustments have been made in blender.

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6.2.11:-

HYDRAULIC CRIMPING MACHINE

Applicability Area

To crimp lugs in cables using hydraulic lug crimping machine

Pictures



Material Code

Dowell's make SYT-102 Hand Tool, 50 - 400 mm, Jainson Make Tejas 630

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Check for any oil leakages before using.
2. Prior to using this machine the work area must be clear of all obstructions.
3. DO choose the right size crimp die as per cable size.
4. Use hand gloves for proper gripping of cable and crimping machine.
5. Do choose right type of crimping machine as per size of cable and space available.
6. Ensure that the equipment is stored safely when not in use
7. Start crimping of lug from connection side to cable side.

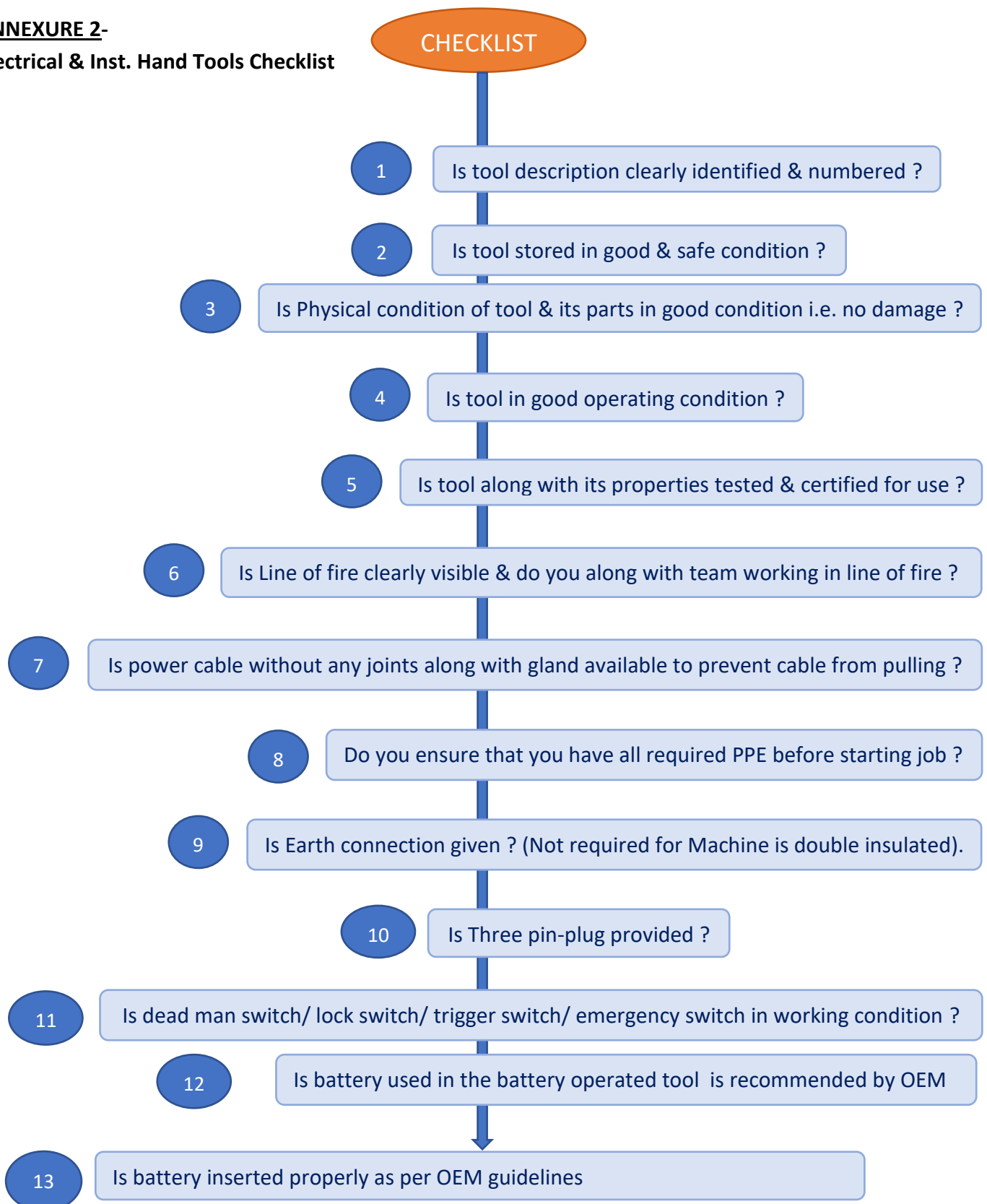
Don'ts:

1. DON'T operate if any oil leakages are observed in the machine.
2. DON'T place the hand near the crimp die while crimping.
3. Do not adjust the die when the pressure is built up. Release the pressure, before any adjustments.
4. Never operate machine for long periods. Operator fatigue may cause slipping of crimping while pressing.
5. Never place hands or other body parts near moving parts.

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ANNEXURE 2-

Electrical & Inst. Hand Tools Checklist



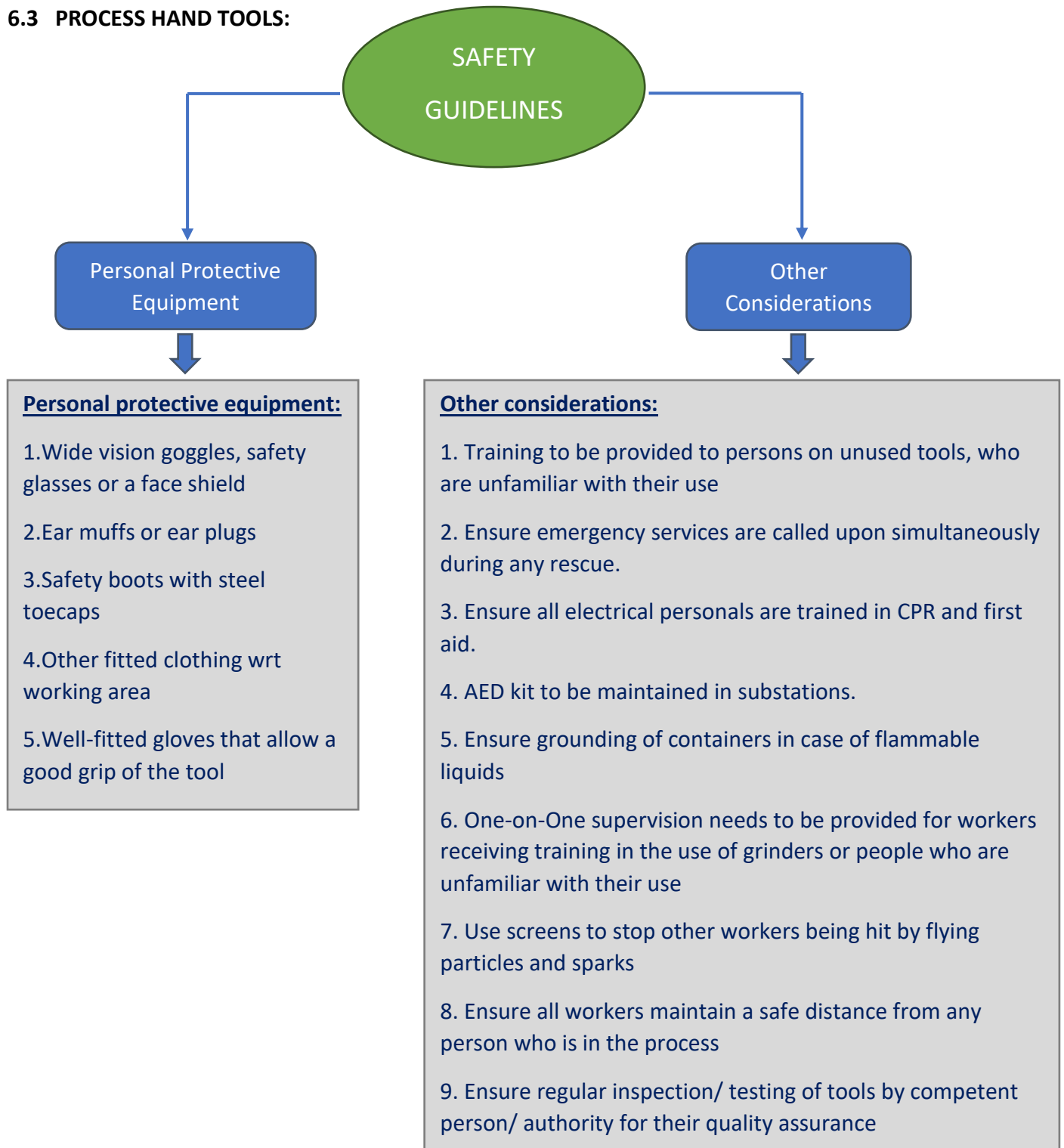
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Note:

- Audit for certification of the electrical and Instt tools to be conducted at every 3 Months by internal team as per the checklist. Same applicable for battery operated tools.
- All the checklist points to be answered "**Yes**" to certify the machine

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6.3 PROCESS HAND TOOLS:



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6.3.1:-

MUD GUN

Applicability Area

For drilling ,digging, breaking lumps/boulders , remove choking etc.

Pictures



Material Code

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure usage of mandatory PPEs like balaclava
- 2.Maintaining Runner depth
- 3.Development & adherence to SOP (Safe Operating Procedure)
- 4.Timely closing of Tap holes after blow
- 5.Regular inspection & checking of Mud gun machines
- 6.Development & adherence to SOP
- 7.Ensure Dust and fume collectors ESP /Bag filter system is effective and running
- 8.Provision of covers on hot metal and slag runners
- 9.Ensure both quality and quantity of clay is available

Don'ts:

- 1.NO person shall work without PPE wrt Job/ working area
- 2.NO non-working/ unauthorized person shall be present in working area, nearby walkways during job

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6.3.2:-

IMPACT WRENCH(Cordless/Corded)

Applicability Area

For tightening & loosening of fasteners

Pictures



Material Code

Indian Standard: IS 8067-1986

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Use proper socket as per the size of fasteners
2. Use the right tool for the job, and the right tool for the user.
3. Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as sockets etc.
4. Use two or three-finger triggers for power tools. Use four-finger triggers only when the tool is balanced.
5. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.
6. Keep work area clean and free of obstructions and hazardous
7. Wear correct PPE – Goggles, hearing protection, hand gloves, face shield etc.
8. Ensure to fix air hose pipe & secure with locking with impact wrench

Don'ts:

1. Never carry a tool by the cord if electrical or hose if Pneumatic
2. Reduce excessive gripping force or pressure.
3. Avoid high-contact forces and static loading.
4. Keep all people not involved with the work at a safe distance from the work area.
5. Never wear ties, loose clothing or jewellery when using rotating machinery.

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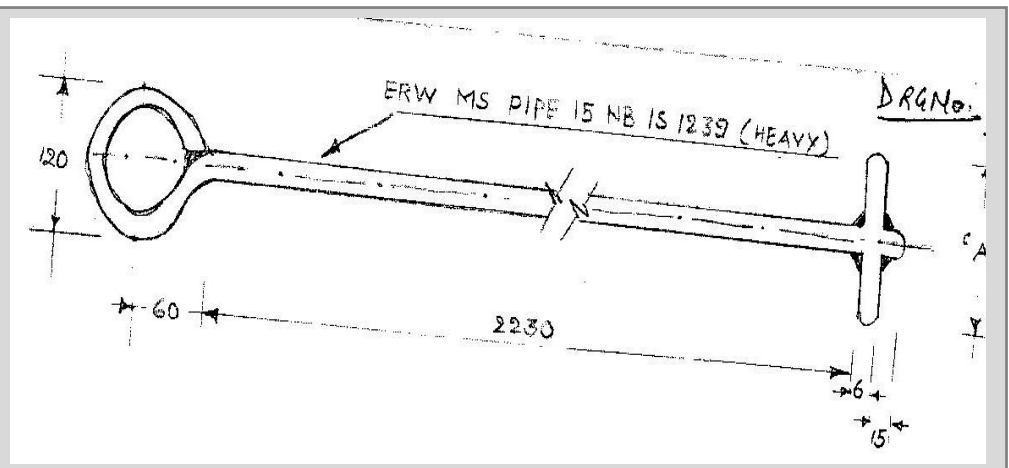
6.3.3:-

DOLLY BAR

Applicability Area

For Tap hole plugging

Pictures



Material Code

675177961100

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Should be single handed.
2. Use the tool for the specific job only .
3. Only skilful operator should handle the dolly-stick for plugging the tap hole..
4. Safe distance to be maintained while operating it in hot molten metal bath.
5. Hammer to be used at tail end to fix it properly.
6. Keep work area clean and free of obstructions.
7. Use good quality clay cone at its end .
7. Wear correct PPE – Goggles, hearing protection, hand gloves, face shield, Balaclava, fire retardant clothes etc.

Don'ts:

1. Don't use the overlength dolly stick , avoid more than 4m
2. Don't use loose clay cones which may result in greater exposure to metal bath. .
3. Reduce excessive gripping force or pressure.
4. Keep all people not involved with the work at a safe distance from the work

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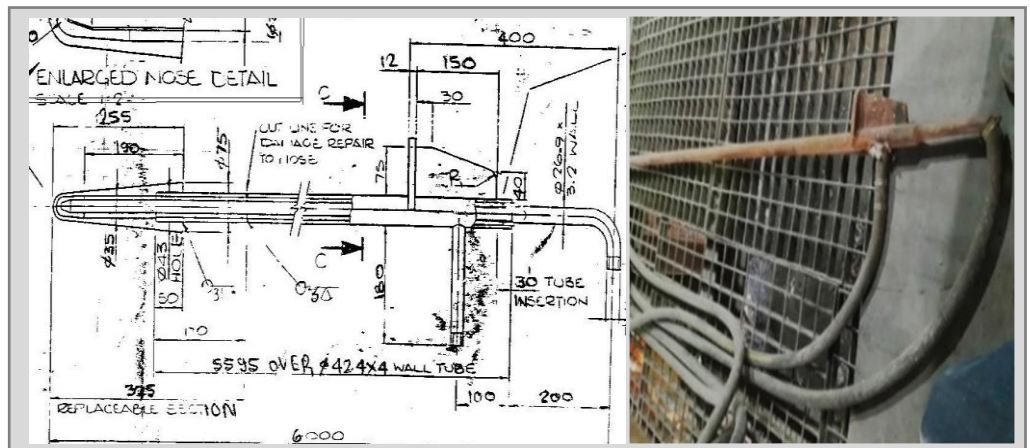
6.3.4:-

RESTRICTOR BAR

Applicability Area

For Tap hole plugging

Pictures



Material Code

675170597000

Safety Alert

Nil

Risk Control Measures

Do's:

1. Should be single handed.
2. Use the tool for the specific job only .
3. Only skilful operator should handle the dolly-stick for plugging the tap hole..
4. Safe distance to be maintained while operating it in hot molten metal bath.
5. Hammer to be used at tail end to fix it properly.
6. Keep work area clean and free of obstructions.
7. Ensure water cooling is proper.
7. Wear correct PPE – Goggles, hearing protection, hand gloves, face shield, Balaclava, fire retardant clothes etc.

Don'ts:

1. Don't use the overlength and overweight bars .
2. Ensure water flow is proper to avoid melting of cone .
3. Reduce excessive gripping force or pressure.
4. Keep all people not involved with the work at a safe distance from the work area

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6.3.5:-

BATTERY POWERED STRAPPER

Applicability Area

For strapping of bundles & blocks

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure prechecks as per user guide before using strapping tool.
- 2.Do check all safety switches & guards in healthy condition.
- 3.Always position yourself to one side while tensioning strap.
- 4.Always use new straps for strapping.
5. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated machine.
6. Battery to be inserted in the machine as per the OEM guidelines.
7. keep your hands & fingers away from strap while tensioning the strap.

6.Inspect and clean the tool properly after use.

Don'ts:

- 1.Do not wear loose clothing while strapping.
- 2.Do not use strapping machine in an explosive environment.

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6.3.6:-

TUYER POCKING ROD

Applicability Area

For Furnace Tuyers poking

Pictures



Material Code

675177961100..TUYERS POCKING BAR, SPL TOOLS, G9-004 M12

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Use the tool for the specific job only .
2. Only skilful tapper should handle the poking rod for clearing the choking in Tuyers.
3. Safe distance to be maintained while operating it in hot Tuyers.
4. Keep work area clean and free of obstructions to avoid any slip/fall.
5. Wear correct PPE – Goggles, hearing protection, hand gloves, face shield, Balaclava, fire retardant clothes while doing poking of Tuyers.

Don'ts:

1. Don't use the overlength poking rod , avoid more than 4m
2. Don't use if slide gates of the Tuyers are open as the blast may come from that Tuyers..
3. Reduce excessive gripping force or pressure.
4. Keep all people not involved with the work at a safe distance from the work area.
5. Don't place the poking rod after immediate poking on the floor as it remains red hot and is zone of slagger to watch the Tuyers.
6. Don't use the poking rod with cone's damaged or tapered.
7. Without handle no tuyer poking rod to be used.

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6.3.7:-

CROW BAR

Applicability Area

To open nailed wooden crates or pry apart boards/ remove break the boulders

Pictures



Material Code

Indian Standard: IS 704 - 1984

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.The crowbar should have a point or toe of such shape that will grip the object to be moved.
- 2.The crowbar should have a heel to act as a pivot or fulcrum.
- 3.Ensure pre checks before using the tools.
- 4.Secure the object to be removed or demolished, if excessive force is applied you could end up throwing the object through the air and hitting yourself or others.
- 5.See if there are any breakables or nails attached before you lever an object apart. Flying glass and boards with nails can cut you and result in injury to others.
- 6.Always pry with the bar away from yourself.
- 7.Make sure the area is clear so that if you are prying apart something that can fall or fly through the air you won't hurt other people.

Don'ts:

- 1.Do not leave crowbars lying on shop floors or work areas; they may cause a tripping hazard.
- 2.Never put fingers in line of fire while using crowbar.
- 3.Never use undersized crowbar for heavy rocks or objects.
- 4.Do not use crowbar with any cracks or welded joints.
- 5.Never quickly break something apart, especially if you have no idea what is behind it or inside of it.

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6.3.8:-

EXPLODER

Applicability Area

For blasting operations in mines

Pictures



Material Code

Indian Standard: IS: 9836-1981 (Circuit tester: IS:9836-1981 Appendix I), DGMS

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Check the Instrument by inserting the key and turning it clockwise for the condition of the battery. "L" indicates low battery and dot (n) indicates that the Exploder is "ON". Switch off the exploder.
3. Keep the exploder in dry place.
4. Remove Blasting cable leads from the terminal of exploders before entering the blast face area.
5. Always keep the exploder key with the person authorized to do so.
6. Always check continuity of firing circuit before firing exploder with ohm meter. Testing current should not exceed 50mA.
7. Sufficient warning like display of red flag, warning sirens shall be given to public before blasting. Also display blasting time.

Don'ts:-

1. Under no condition the exploders should be opened for overhaul / repairs / maintenance / study at mine or construction site as it is not permitted as per regulation.
2. Never used exploders which are not Tested & approved by approval authority.
3. Never allow unauthorised person to perform blasting using exploders.
4. Don't abandon any explosive material after use at site.
5. Don't attach detonator to detonating cord until everything is ready for blast.

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6.3.9:-

STEMMING PLUG & STICK

Applicability Area

For plugging explosives in UG mines

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure only trained person to be allowed for stemming the explosive holes.
- 2.Stemming stick to be checked for any cracks or joints.
- 3.Ensure to plug and stemming standing a side outside line of fire.
- 4.Always ensure to wear all necessary PPEs while stemming.
- 5.Always provide barricading near area where explosive holes are stemmed.
- 6.Always check blast holes before stemming for any obstruction.

Don'ts:

- 1.Do not leave Stemming stick on floors or work areas; they may cause a tripping hazard.
2. Do not hold stick with one hand.

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6.3.10:-

CRUCIBLE TONGS

Applicability Area

For plugging explosives in UG mines

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure tips of the tongs should be dry & clean before handling crucible.
- 2.Use insulated handle tongs for handling hot crucibles.
- 3.Ensure to wear proper PPEs like hand gloves (heat resistant for hot crucible) , Mask, Safety goggles while handling crucibles with tongs.
- 4.Ensure the crucible or beaker is not fully filled with sample.
- 5.Check for any crack or bolts condition before using the tong.

Don'ts:

- 1.Never Hold red hot crucible with tong.
- 2.Never Place crucible directly on desk, it should be placed on proper insulated mat.
- 3.Never hold completely filled crucible, since it may splash during moving and holding.
- 4.Do not use loose tongs.
- 5.Crucible thongs are not shock-resistant; hence, they should not be used for electrical purposes.

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6.3.11:-

SEAL CUTTER

Applicability Area

For cutting seals

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always wear Eye protection.
2. Wear the RIGHT SAFETY EQUIPMENT for the job.
3. Use tools that are the RIGHT SIZE & RIGHT TYPE for your job.
4. Follow the correct procedure for using EVERY tool.
5. Keep your cutting tools SHARP and in good condition.
6. Handle SHARP-EDGED and POINTED TOOLS with care.
7. Always carry pointed tools by your side with the points and heavy ends DOWN.
8. SECURE all small work & short work with a vise or clamp.
9. AFTER USING A TOOL — clean it and return it to its proper storage place.
10. If anything breaks or malfunctions — report it to your supervisor AT ONCE.

Don'ts:

1. NEVER place tools and materials where they hang on the edge of a bench.
2. Don't use tools for things they weren't meant for.
3. DON'T work with OILY or GREASY hands.
4. NEVER carry tools in your pockets.
5. DON'T use tools which are LOOSE or CRACKED.

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6.3.12:-

WATER JETTING MACHINE

Applicability Area

For cleaning , clearing choking etc

Pictures



Material Code

Indian Standard: IS 11387

Safety Alert

Nil

Risk Control
Measures

Do's:

1. When starting to jet, one operative should start up the unit while another holds the jetting gun with the nozzle facing the floor.
2. If there is only one operative, the jetting gun should be placed at a safe distance with the nozzle facing away from the unit and operative, or in the jetting gun holster if one is available.
3. Carry out the cleaning operation in full PPE in the enclosed area.
4. Always use two hands when carrying out operations.

Don'ts:-

1. Don't point the jetting gun at anyone at any time.
2. Don't leave the unit running unattended.
3. Don't lock the trigger on.
4. Don't Change the jetting nozzle while the unit is running
5. Don't use on a ladder.

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6.3.13:-

PNEUMATIC JACK

Applicability Area

To lift any heavy object/machine

Pictures



Material Code

Indian Standard: IS 11387

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always use the Pneumatic jack on level and flat surface.
2. Prior to using this machine the work area must be clear of all hazardous obstructions.
3. DO choose the right size pneumatic jack as per application/job.
4. Check for any air leakages.
5. Ensure pneumatic jack is fixed at centre of job.
6. Ensure that the equipment is stored safely when not in use

Don'ts:

1. DO not use a undersized jack for large application. Cross check with OEM manual when in doubt.
2. Do not store pneumatic jack near sharp edged tools. Chances of damaging hose.
3. Do not work under lifted job. Ensure manual blocking separately in unavoidable cases.
4. Do not use jack in loose/wet surface.
5. Never place hands or other body parts under lifted portion. Release the pneumatic energy before working on jack.
6. Never leave pneumatic jack which is in pressurised condition.
7. Never store jack when it is pressurised. De-energise before storing.

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6.3.14:-

SKIMMING TOOL

TYPES

Applicability Area

Pictures

Material Code

TYPES

Applicability Area

Pictures

Material Code

Safety Alert

Laundry skimmer	SOW skimmers
For skimming molten metal	For skimming sow moulds
	
Nil	Nil

Staggered skimmer	Deep Dish Skimmer
For skimming molten metal	For skimming deep moulds
	
Nil	Nil

Nil

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Risk Control Measures

Do's:

- 1.Ensure only trained person to be allowed for stemming the explosive holes.
2. Skimming to be checked for any cracks, welded joints or looseness.
- 3.Ensure to do skimming standing a side outside line of fire.
- 4.Always ensure to wear all necessary PPEs related to Hot metal handling while skimming.
- 5.Ensure skimmer is clean and dry for use.
6. Maintain frequent breaks while skimming to reduce heat stress.

Don'ts:

- 1.Do not leave Skimmers stick on floors or work areas; they may cause a tripping hazard.
2. Do not hold skimming with one hand.
3. Do not Allow any person in nearby while stemming.
- 4.Do not allow any unauthorised person to do skimming.
5. Avoid low level ingot skimming as it may result in sickness.

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6.3.15:-

GRIT/ SLAG BLASTING MACHINE

Applicability Area

For slag jet blasting for cleaning

Pictures



Material Code

Indian Standard: IS 1477 (Part 1):1971 Appendix-A&B ; IS 5894:2005; ISO 3861:1995

Safety Alert

Nil

Risk Control
Measures

Dos:-

1. When starting to jet, one operative should start up the unit while another holds the Blasting gun with the nozzle facing the object.
2. Ensure proper exhaust ventilation system where grit blasting is done.
3. Proper respiration & full body covering safety PPEs to be wear while doing sand / grit blasting.
4. Ensure safe distance from where hose is to be hold to prevent from rebounded particles.
- 5 In order to prevent blocking of the nozzle by the abrasive, the abrasive used shall generally be not larger than one-third the diameter of the nozzle.
6. Always hold the hose pipe with proper grip & both hands.

Don'ts:-

1. Don't point the Hose at anyone at any time.
2. Don't leave the unit running unattended.
3. Don't lock the trigger on.
4. Don't Change the jetting nozzle while the unit is running
5. Never stand or hold hose very close to the object which is being cleaned.
6. Never operate sand blasting machine in inflammable area without grounding to dissipate static charge.

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6.3.16:-

VALVE WRENCH

TYPES

Applicability Area

Pictures



Material Code



TYPES

Applicability Area

Pictures

Material Code

CLAW TYPE	SUPER CLAW TYPE
Allow 1.3/8 X 1 (inch) in opening, used for fastening purpose and available in 21.3/8 (inch) length.	Heavy duty opening like 225, 250, 300, 350, 400, 450, 500. Wrench is available in wide range of lengths such as 1/2-1, 1-3, 3-4, 6-8, 10-14, 16-20 and 22-24 for varied valve size
	
Nil	Nil

Single Open Wheel Type	Double Open Wheel Type
allows a generous of 1, 1.3/8 and 2 degree turning radius on the ratchet and helps for working in tight areas. Available in 15, 15.1/2 and 27 lengths	made of ductile iron wrenches are safer and easier to use because the head design provides a better grip
	
Nil	Nil

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TYPES

Applicability Area

Pictures

Material Code

TYPES

Applicability Area

Pictures

Material Code

Surgrip Single Open Type

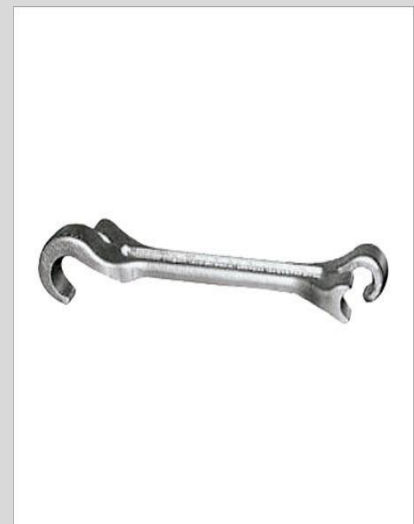
This wrench provides maximum opening sizes like 1, 1.5/16 and 2 for easy operation



Nil

Surgrip Double Open Type

Available in 8, 10, 15 and 22 lengths (inch), this wrench is used for opening the stubborn valve easily



Nil

F TYPE

Opening and closing valves easily without slippage when working in overhead or crowded position



Nil

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Safety Alert

Nil

Risk Control Measures

Do's:

1. Use the correct wrench as per the valve type & size to avoid slip & uncomfortable which may result into injury
2. Discard any damaged wrenches (e.g., open-ended wrenches with spread jaws or box wrenches with broken or damaged points).
4. Wear safety glasses or a face shield (with safety glasses or goggles) where there is a hazard of flying particles or falling debris.
5. Position your body in a way that will prevent you from losing balance and hurting yourself if the wrench slips or something (e.g., a bolt) suddenly breaks.
6. Use a wrench with proper handling grip to avoid slippage during turning valve.
7. Ensure that the jaw of an open ended wrench is in full contact (fully seated, "flat", not tilted) with the valve.
8. When turning valve with a wrench, the direction of force should be away from the person turning the valve.
9. Ensure that the jaw of wrench are clean and free of oil and debris and that the valve wheel is clean to prevent unexpected slippage and possible injuries.
10. Apply a small amount of pressure to a wrench initially to ensure that the jaw or claw is engaged with the pawl wheel for the direction you are applying pressure.
11. Stand aside when work is done with wrenches overhead.
13. Always clean and place tools and wrenches in a tool box, rack or tool belt after use.

Don'ts:

2. Do not use a wrench that is bent handle or damaged.
3. Do not use worn adjustable wrenches. Inspect the knurl, jaw, and pin for wear.
4. Do not pull on an adjustable wrench that is loosely adjusted.
5. Do not use valve wrenches on any other equipment.
6. Do not use a wrench on auto motorised MOV without isolation.
7. Never use welded or non-standard F Rods instead of a wrench for opening valve.
8. Do not use a make-shift wrench.
9. Do not insert a shim in a wrench for a better fit.

10. Do not strike a wrench (except a "strike face" wrench) with a hammer, or similar object, to gain more force.

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6.3.17:-

PNEUMATIC DRILL MACHINE

Applicability Area

For drilling in process area & construction jobs

Pictures



Material Code

Indian Standard: IS 5441 : 1986

Safety Alert

IM/20162017/681-HIPO

Safety Alert
Description

On 07.09.2016 at about 10.00 AM, A Crew of two people was deployed for the cable dressing job near the diesel pump area. The person was using the Electric operated hand drill for the floor chipping work to grout the tray support by mason work. During the inspection it was found that No hot work permit was taken be the initiator.

Safety Alert
Recommendation

1-Awareness training sessions to workers who will work near this area.

2.Sign board is to be display at this area as USE OF ELECTRICALLY OPERATED MACHINES ARE PROHIBITED.

Risk Control
Measures

Do's:

- 1.Ensure guarding & drill bit is wrt material being drilled
- 2.Ensure any emergency stop devices operate & report any defects promptly
- 3.Keep work area clean and free of obstructions and hazardous
- 4.Wear correct PPE- Goggles, hearing protection, hand gloves, face shield
- 5.Ensure to fix air hose pipe & secure with locking before drill

Don'ts:

- 1.Don't operate on materials that is not ferrous & rusty surfaces
- 2.Don't carry drill by holding hose pipe as it's unstable & steel as it's very hot
- 3.Never operate machine for long periods to avoid Operator & machine fatigue
- 4.Never leave machine running when not in use or leaving unattended
- 5.Never use underrated air hose than rated pressure & defective/ blunt drill bits

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6.3.18:-

EOT OPERATED- LIFTING DROSSING SKIP

Applicability Area

For refineries for dross handling

Pictures



Material Code

566300000400

Safety Alert

Safety Alert
Description

IM/20182019/1275-Fatality

IP came on duty as per schedule in A shift on dated 31.08.2018 in Lead Refinery Plant. IP reported in control room and came to site for routine job. Total 05 persons reported at Copper Drossing area for handling and refining of hot liquid metal received from ISF as well as Ausmelt area. There were 02 permanent Workman and 03 were contractor employees. 2 persons were carrying out the job of molten metal handling & treatment where as other 2 (including IP) were carrying out other miscellaneous job

- 1.Operation of crane to be done by authorized personnel only
- 2.Line of fire must be familiar to all persons and shall be followed
3. Two skips must be kept @ marked place i.e. having sufficient space wrt each other.
4. Visual line of fire marking must be available & authorized crane operator shall always operate from out of line of fire.
5. Hot metal handling FSIPP must be established & made effective @ ground floor.
6. Crane remote lock must be provided for authorized usage only
- 7.Risk & it's mitigation regarding job must be explained to every person of unit.
8. Job related PPEs to be ensured

Safety Alert
Recommendation

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Risk Control Measures

Do's:

- 1.Ensure there is enough space between the dross skips.
- 2.Use the tool for the specific job only .
3. Only skilful operator should handle the hot dross skips
4. Safe distance to be maintained while operating it in hot dross skips
5. Avoid pendent and use only remote operated crane.
- 6..Keep work area clean and free of obstructions.
7. Physically check the crane hoist for any kinks, cuts etc
- 8..Wear correct PPE – Goggles, hearing protection, hand gloves, face shield,Balaclava,fire retardant clothes etc.
- 9.Ensure the trunnions in the skips are properly fixed and not wearied .
10. Ensure the slings/chains used are standard for lifting or shifting the hot dross skip

Don'ts:

- 1.Never lift the hot dross skip after immediate Drossing.
- 2.Don't overfill the dross skip.
- 3.Avoid swinging of the dross skip while lifting &shifting.
- 4.Keep all people not involved with the work at a safe distance from the work area.
5. Don't use heavy deposited bumper's for metal baths and remove the accretion first by burners
- 6.Avoid any ingress of moisture as it may result in blast.

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6.3.19:-

MANUAL OPERATED- TILTING DROSSING SKIP

Applicability Area

For refineries for dross handling

Pictures



Material Code

566300000400

Safety Alert

Safety Alert
Description

IM/20162017/795- LTI

On 24th Sept 2016 at 05:40 hrs the ISF Plant has started and IP came on duty in "A" shift at 06:00 hrs . At 07:35 hrs metal circulation was started from Pump Sump to ICL and back to condenser through the return Launder and thereafter flux bath Drossing was started, as during metal circulation huge amount of dross accumulation takes place in flux bath. At 08:25 hrs IP started removing the skip which was full of dross from the flux bath box area, while handling the skip lock got detached and the dross fell on the floor near the water hose

- 1.Risk & it's mitigation regarding job must be explained to every person of unit.
- 2.Water drainage facility to be made in that area for no accumulation.
- 3.Quality of local & exhaust ventilation be improved
- 4.Scheduled maintenance for Skips & Trough must be developed & maintained in SAP
- 5.Operation Checklist and rejection system before use must be developed & followed
- 6.Job cycle checks & risk assessment review for WI need to be created
- 7.Enforcement for FR suit usage for Forklift operators to be done
- 8.Forklift specification must be upgraded
- 9.Suitable wind shield to be made available

Safety Alert
Recommendation

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Risk Control Measures

Do's:

- 1.Ensure the dross tilting skips is properly hooked up .
- 2.Ensure double locking system in place.
3. Ensure the skip is not paced near the area where ingress of water is possible.
- 4.Ensure the hot dross kips is being operated by skilful fork lift driver.
- 5.Ensure no immediate shifting of hot dross till its temperature falls.
- 6.Ensure there is enough space between the dross skips.
- 7.Use the skips is being used for the specific job only .
- 8.Safe distance to be maintained while operating it in hot dross skips
- 9.Keep work area clean and free of obstructions.
- 10.Wear correct PPE – Goggles, hearing protection, hand gloves, face shield,Balaclava,fire retardant clothes etc.

Don'ts:

- 1.Never lift the hot dross skip after immediate Drossing.
- 2.Don't overfill the dross skip.
- 3.Avoid single locking of the skip.
- 4.Keep all people not involved with the work at a safe distance from the work area.
- 5.Avoid any ingress of moisture as it may result in blast.

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6.3.20:-

EOT OPERATED- HOT METAL LADLE

Applicability Area

For Metal handling across smelters

Pictures



Material Code

566300000400

Safety Alert

IM/Zone-2/202021/018-FAC

Safety Alert
Description

The FAC incident happened at 8:00 PM (11th May'20) at ISF Slagging floor with below details : While slagging ,there was some water spread in 2nd ladle pit due to granulation launder jamming. 2nd empty ladle was taken out to remove the water from pit. After removing water metal tapping started in 1st ladle and 2nd ladle positioning was under progress. The 2nd ladle had not yet come in position, the 1st ladle slightly tilted due to uneven surface, thus little metal spilled and after rushing away IP opened his face shield near porta cabin but some dust particles entered his left eye. Shift in charge call ambulance and send IP to plant dispensary for treatment. Where nursing staff ash the eye & applied eye drop and thereafter he resumed his normal duty within 20 minutes

Safety Alert
Recommendation

- 1.Both ladle must be placed @ designated place before tapping
- 2.Line of fire must be familiar to all persons and shall be followed
- 3.Lead raiser/ slag launder chocking all possibilities i.e.:
 - a. Due to metal water over flow from slag launder second pit moisture
 - b. Due water blasting in pit Ladle concrete base damaged water seepage from ground
4. SOP must be followed of slagging floor
- 5.Visual line of fire marking must be available
6. Crane remote lock must be provided for authorized usage only
- 7.Risk & it's mitigation regarding job must be explained to every person of unit.
8. Job related PPEs to be ensured

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Risk Control Measures

Do's:

- 1.Ensure there is enough space between the dross skips.
- 2.Use the tool for the specific job only .
3. Only skilful operator should handle the hot dross skips
4. Safe distance to be maintained while operating it in hot dross skips
5. Avoid pendent and use only remote operated crane.
- 6..Keep work area clean and free of obstructions.
7. Physically check the crane hoist for any kinks, cuts etc
- 8..Wear correct PPE – Goggles, hearing protection, hand gloves, face shield,Balaclava,fire retardant clothes etc.
- 9.Ensure the trunnions in the skips are properly fixed and not wearied .
10. Ensure the slings/chains used are standard for lifting or shifting the hot dross skip

Don'ts:

- 1.Never lift the hot dross skip after immediate Drossing.
- 2.Don't overfill the dross skip.
- 3.Avoid swinging of the dross skip while lifting &shifting.
- 4.Keep all people not involved with the work at a safe distance from the work area.
5. Don't use heavy deposited bumper's for metal baths and remove the accretion first by burners
- 6.Avoid any ingress of moisture as it may result in blast.

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6.3.21:-

FLOOR CLEANING MACHINE

Applicability Area

To clean floors in Office area, Shift rooms and Plain cemented surface

Pictures



Material Code

Auto Scrubber Dryer Machine-Make New age cleaning services

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Always run this machine flat and level and transport in the upright position. Never lay machine on its side.
2. Prior to using this machine the work area must be clear of all hazardous obstructions.
3. DO choose the right machine for right application. Refer OEM manual for checking working environments.
4. Use vibration-damping gloves when using the machine.
5. Ensure supply source is provided through 30mA ELCB.
6. Ensure that the equipment is stored safely when not in use.

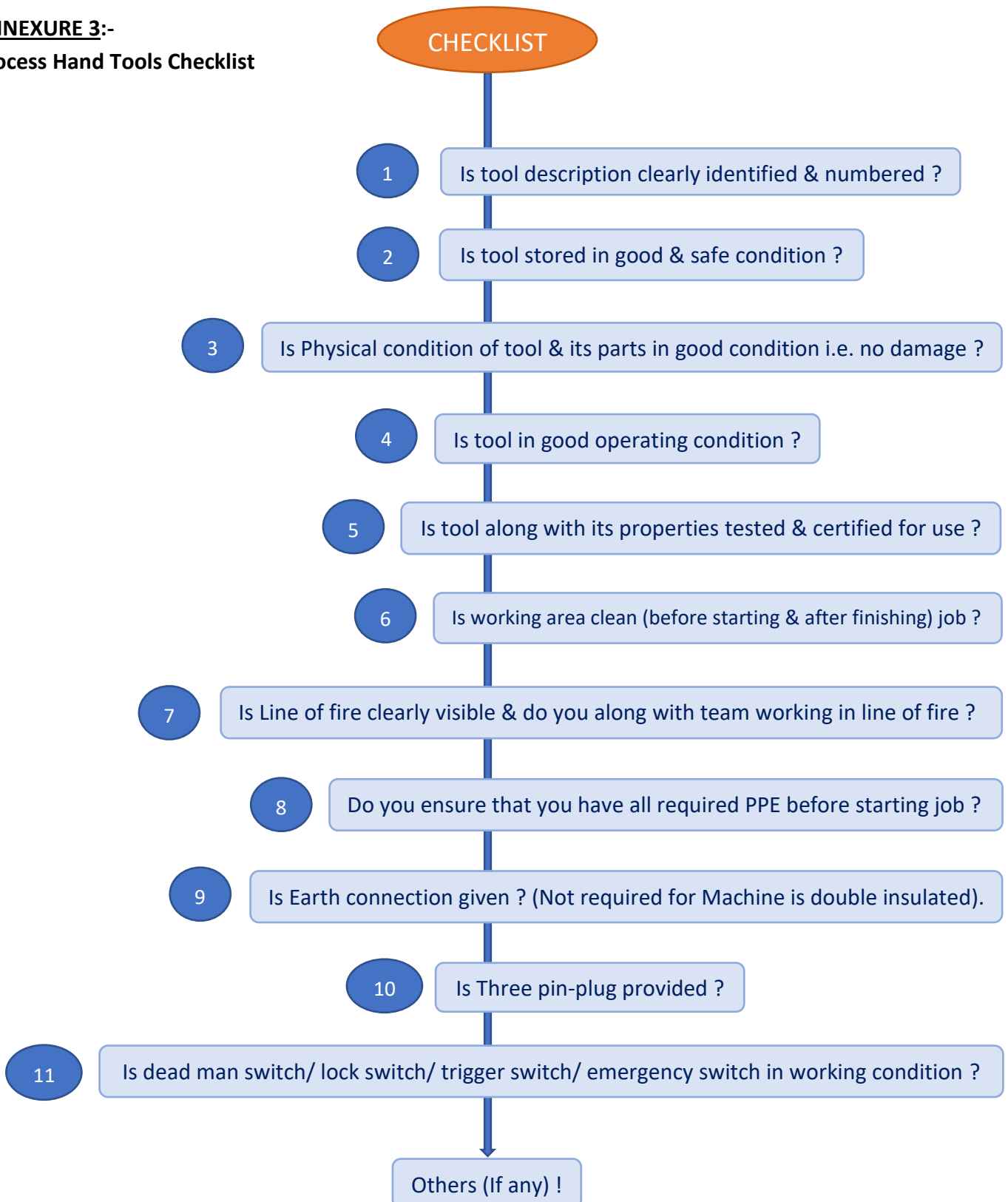
Don'ts:

1. DON'T operate on hazardous materials
2. DON'T use the cord for carrying, pulling or unplugging
3. Do not adjust any parts of the machine, when it is in running condition. Ensure to switch off and remove power plug, before doing any adjustments.
4. Never operate machine for long periods. Operator fatigue & over heating of machine can result if used for long periods
5. Never place hands or other body parts near rotating or moving parts.
6. Never leave machine running when not in use or leaving unattended.

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ANNEXURE 3:-

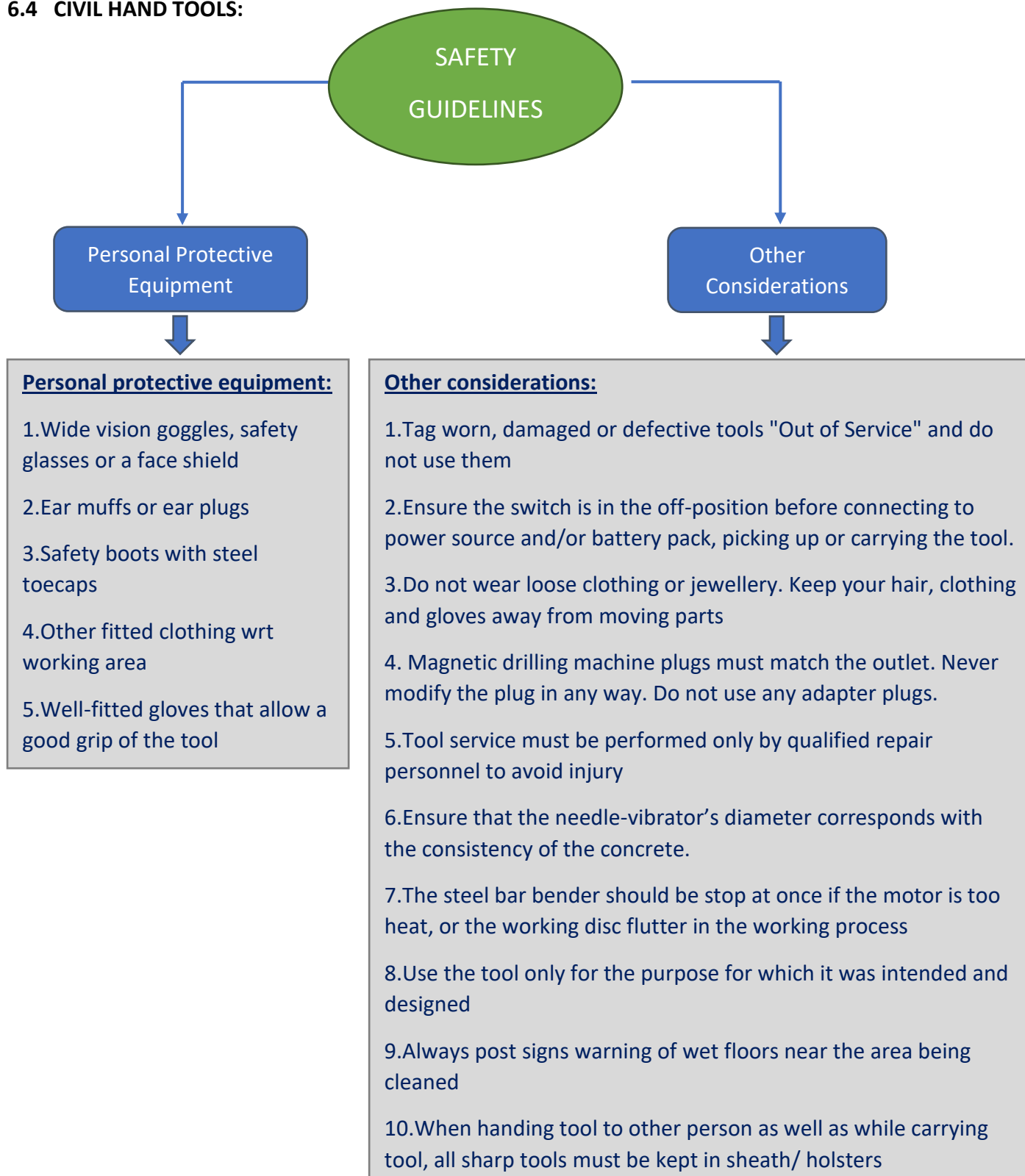
Process Hand Tools Checklist



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Note: All the checklist points to be answered "Yes" to certify the machine

6.4 CIVIL HAND TOOLS:



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6.4.1:-

JACK HAMMER

TYPES

Applicability Area




Pictures

Material Code

Safety Alert

Safety Alert
Description

Safety Alert
Recommendation

PNEUMATIC	ELECTRICAL	
For drilling ,digging, breaking lumps/boulders , remove choking etc.	For demolition of concrete	For chipping concrete or bricks
		
Nil	Indian Standard: IS: 3559-1966	

IM/Zone-1/201920/284- LTI

After cleaning of slag launder with help of jack hammer IP kept it inside hygiene chamber vertical position. IP was cleaning slag launder surrounding accretion with help of cleaning tool. This cleaning tool hit jackhammer and it fell down over IP right leg. IP leg observed swelling , Immediately send him HZL hospital for further checks.

- 1.Hira register to be update to mitigate the hazard
- 2.Jack hammer safe handling to be incorporated in launder cleaning SOP & training to be given for the concerned persons
- 3.Designated location and fixing arrangement to be done for Jack hammer storage
- 4.Cleaning activity to be carried after removal of jack hammer from the room to be ensured
- 5.Jack hammer hanging arrangement to be explored to eliminate the jack hammer falling
- 6.Wheel /trolley based jack hammer usage possibility to be explored
- 7.Light weight jack hammer/breaking tool for slag cleaning to be explored

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Risk Control Measures

Do's:

1. Always run this machine flat and level and transport in the upright position. Never lay machine on its side.
2. Prior to using this machine the work area must be clear of all hazardous obstructions.
3. DO choose the right chipper M/C
4. Use vibration-damping gloves when using the chipper machine
5. Ensure supply source is provided through 30mA ELCB.
6. Ensure that the equipment is stored safely when not in use
7. Use proper & sharpen Bit for Electrical Demolition hammer

Don'ts:

1. DON'T operate on hazardous materials
2. DON'T use the cord for carrying, pulling or unplugging
3. Do not touch steel during or immediately after operation. The steel becomes very hot during operation and could cause serious burns.
4. Never operate machine for long periods. Operator fatigue & over heating of machine can result if used for long periods
5. Never place hands or other body parts near rotating or moving parts.
6. Never leave machine running when not in use or leaving unattended.

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6.4.2:-

CONCRETE VIBRATOR

TYPES

Applicability Area

Pictures

Material Code

Safety Alert

Risk Control
Measures

NEEDLE VIBRATOR

For Concrete



SHUTTER VIBRATOR

For large concrete structure with prefab formwork



SURFACE VIBRATOR

For floor, slab



Bosch Gvc 20 Plastic 35mm Concrete Vibrator, Rams 1100W Heavy Duty Electric Concrete Vibrator, Immersion Concrete Needle Vibrator

Nil

Do's:

1. Always wear rubber, insulated gloves and protective boots or shoes when operating. Safety glasses should be worn at all times.
2. Always carry the vibrator by grasping the motor
3. Caution should be used when handling equipment around water or when working in damp environments.
4. Ensure supply source is provided through 30mA ELCB.

Don'ts:

1. Never pull or drag the unit by the shaft, head, or electrical cord.
2. Do not run the vibrator when not in wet concrete, the vibrator head will overheat. The vibrator should be kept moving, in an up and down motion.
3. Do not use if cord is damaged or frayed.
4. Do not allow any person to play with a concrete vibrator. If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator.

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6.4.3:-

BAR BENDING MACHINE

Applicability Area

For bending reinforcement bars

Pictures



Material Code

Indian Standard: IS:2502-1963 (reaffirmed 1994)

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Disconnect tools when not using them, before servicing and cleaning them, and when changing accessories such as sockets etc.
2. Use two or three-finger triggers for power tools. Use four-finger triggers only when the tool is balanced.
3. Ensure supply source is provided through 30mA ELCB.

Don'ts:

1. Do not change the core shaft, adjust the angle and the speed while the machine operates.
2. Do not add oil or clean the machine while the machine work.
3. Do not process max. rebar than the machine allowing.
4. Do not adjust higher speed than the machine allowing.
5. Do not let anyone stand at the side of the steel bar bender without setting fixing.
5. Do not let anyone at the place of dia of the steel bar bending working.

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6.4.4:-

TILE/ PLYWOOD CUTTER

Applicability Area

For Floor finish/ Plywood cutting works

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Ensure you fully understand and are familiar with its operation including emergency shut off procedures.
2. Ensure that the equipment is assembled and used according to the manufactures and hires instruction.
3. Check controls and any other safety devises.
4. Ensure secure footing and clear access to the work area

Don'ts:

1. Do not force or overload the tool

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6.4.5:-

FLOOR POLISHING MACHINE

Applicability Area

For heavy-duty standard speed floor machine may be used for spray buffing, dry buffing, scrubbing and stripping applications

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure secure footing and clear access to the work area.
- 2.Always unplug the floor buffer before changing the buffing pad or cleaning block.

Don'ts:

- 1.Do not run the floor buffer over electrical cords, door stops, or other obstructions.

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6.4.6:-

HAMMER

TYPES

Applicability Area

Pictures

Material Code

TYPES

Applicability Area

Pictures

Material Code

TYPES

Applicability Area

Pictures

SLEDGE	BRASS SLEDGE	COPPER HEAD SLEDGE
In Construction, Demolition, Mining, Bending & Shaping metals	In Oil Rigs, Gas industry, Automotive applications where struck surface is soft	Underground coal mining, Metal forming
		
Nil	Nil	Nil

CLAW	BRICK
For Pulling Out Nails, Lifting Floorboards, Carpentry Work	For Brickwork
	
Nil	Nil

CROSS PEIN	BALL PEIN
For, Heavy Forging• Bending & Shaping Metal• Spreading Metal• Driving Punches & Chisels• Driving Masonry Drills• Concrete & Stone Work• Starting Panel Pins & Tacks	For, Bending & shaping metal• Driving punches & chisels• Concrete & stone work• Setting rivets• Texturing face of metal
	
Nil	Nil

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Material Code

Safety Alert

Safety Alert
Description

Safety Alert
Recommendation

IM/Zone-5/201920/032- LTI	IM/Zone-6/201920/040- LTI
During 07 door periphery lead repairing work, the IP was fixing lead sheet. He had a hammer in his left hand and his right hand was positioned near the point of lead dressing area. The hammer slightly slipped from his hand and made impact on the right hand index finger glove. The IP then removed his hand gloves and found avulsion in his right index finger. He was immediately sent to plant dispensary for treatment	On 03.12.2019 at 11:15am in 325/6p3/1st X-cut Cabletech machine was deployed. From last shift shank was broken and 7 rods were jammed in hole so at 11 am operator left 4 rods in the hole. IP was hammering at thread part of rod to pull out broken part of shank. At that time when he hammered a small part of thread of rod broken and one small metal chip pierced in to his right thigh. First aid was given at site and IP was taken to Dariba Zinc Hospital further IP was referred to Udaipur for treatment
1.Hira register to be updating to mitigate the hazard	1.Hira register to be update to mitigate the hazard
2.Wooden block redesigning to be done	2. SOP should be prepare for shank changing.
3.Short handle hammer usage to be procured for restricted places	3.Proper tools for fishing the broken pieces should be provided.
4.Pipeline rerouting to be done	4.TBT to operators about such incidents
5.MOC (Technology) to be complied for any change	5.Proper Tools for rod recovery to be made available and procedure to be trained for operator

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Risk Control Measures

Do's:

1. ALWAYS wear safety glasses & gloves before starting job
2. ALWAYS check to make sure no one is in the way of your swing before you use the hammer
3. ALWAYS hold onto the handle with your dominant hand
4. ALWAYS place your work piece on a hard surface
5. ALWAYS check your surroundings to make sure you won't hit anyone when you swing the hammer
6. ALWAYS swing with your whole arm and elbow
7. ALWAYS hit your work piece squarely with the head of the hammer
8. ALWAYS inspect the hammer before beginning the task to be sure it is not damaged and that all parts are secure. Be certain that replaceable faces are fitted securely into the head. On split-head hammers, be sure that the face and handle securing screws are periodically retightened, as necessary
9. ALWAYS replace striking faces before they wear down far enough to allow the body of the hammer head to contact the work surface.

Don'ts:

1. NEVER strike with the sides, top or bottom of the hammer
2. NEVER use this tool to strike nails
3. NEVER use your hands to remove any stuck burrs
4. NEVER use a light weight hammer on tasks that require heavy blows. Choose a hammer of sufficient weight so that only a natural swing is required. Let the weight of the hammer do the work.
5. NEVER use a hammer with a split or damaged handle. The practice of taping a cracked handle is dangerous and can result in injury to the user as well as nearby personnel.
6. NEVER use a hammer with a loose handle. Loose handles should be replaced or fitted with new wedges of the proper size. Replacement handles should be of the same length and quality as the original.
7. NEVER tap objects with handle of hammer or use them as pry bars

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6.4.7:-

CHISEL

Applicability Area

For dressing, shaping or working on solid material like, wood/ stone/ metal

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Prior to use, always inspect hand tools for defects or damage (e.g., splintered, loose, bend, or cracked tool handles, mushroomed tool heads, sprung tool joints, worn tool teeth)
2. Hold a chisel by using a tool holder if possible.
3. Clamp small work pieces in the vise and chip towards the stationary jaw when working with a chisel
4. Carry all sharp tools in sheath or holsters

Don'ts:

1. Do not use a chisel that has a dull cutting edge
2. Do not use a tool if the handle surface has splinters, burrs, cracks or splits.
3. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
4. Do not carry sharp or pointed hand tools such as probes or knives in your pocket unless the tool or your pocket is sheathed.
5. Do not perform "make-shift" repairs to tools.

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6.4.8:-

HAND FILE & RASP

Applicability Area

For coarsely shaping wood & other materials

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Prior to use, always inspect hand tools for defects or damage (e.g., splintered, loose, bend, or cracked tool handles, mushroomed tool heads, sprung tool joints, worn tool teeth)
2. Hold a chisel by using a tool holder if possible.
3. Clamp small work pieces in the vise and chip towards the stationary jaw when working with a chisel
4. Carry all sharp tools in sheath or holsters

Don'ts:

1. Do not use a chisel that has a dull cutting edge
2. Do not use a tool if the handle surface has splinters, burrs, cracks or splits.
3. When handing a tool to another person, direct sharp points and cutting edges away from yourself and the other person.
4. Do not carry sharp or pointed hand tools such as probes or knives in your pocket unless the tool or your pocket is sheathed.
5. Do not perform "make-shift" repairs to tools.

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6.4.9:-

SHOVEL & HOE

Applicability Area

For digging, lifting, and moving bulk materials, such as soil, coal, gravel, & ore

Pictures



Material Code

Nil

Safety Alert

Nil

Risk Control
Measures

Do's:

1. Prior to use, always inspect hand tools for defects or damage (e.g., splintered, loose, bend, or cracked tool handles, mushroomed tool heads, sprung tool joints, worn tool teeth)
2. Always keep the cutting edges of shovel when digging, always keep a safe distance from body
3. Adequate PPE wrt job/ working area shall be ensured before starting job

Don'ts:

1. Do not use a tool if the handle surface has splinters, burrs, cracks or splits.
2. Do not perform "make-shift" repairs to tools.
3. Don't lift too much weight on each dig. Only lift what you can handle to avoid putting extra strain on muscles.
4. Do not horseplay with hand tools

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6.4.10:-

DRILL MACHINE

TYPES

Applicability Area

Pictures


Material Code



TYPES

Applicability Area

Pictures

Material Code

Pistol Grip	Hammer
To drill hole in any light weight or thin sheets which are metal/ non-metallic	To Drill hole in any Wall or civil structure
	
Cheston 10mm Powerful Drill Machine, CAMEL BRAND Drill Machine .KHADIJA Powerful Simple Electric Drill Machine ,Bosch Drill Machine Kit, 0 - 2600 Rpm,Ralliwolf 12063D	Bosch make Rotary Hammer with SDS plus GBH 2-22 E,SDS max GBH 5-40 Tiger Rotary Hammer TGP 220,Tiger Rotary Hammer TGP 220,KHADIJA TIGER TGP-226 800WATTS 26MM,POWERTEX Rotary Hammer (PPT-RH-20-E)

Bench/ Magnetic Press	Cordless
To drill holes in large steel/other metals with precision	To drill big hole in electrical panels to fix cable gland
	
DeWalt DWE1622K 2 Speed Magnetic Drill, Magnetic Drill Machine-CI ,RPM-560 reputed manufacture,RALLIWOLF COMMANDO 40 40MM × 50MM	Bosch make hole saw Bi-metal hole saw,[Daredevil® Carbide Hole Saws, Recessed Lighting Hole Saws, Carbon Hole Saws]

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Safety Alert

Safety Alert Description

Safety Alert Recommendation

Risk Control Measures

IM/20162017/681-HIPO

On 07.09.2016 at about 10.00 AM, A Crew of two people was deployed for the cable dressing job near the diesel pump area. The person was using the Electric operated hand drill for the floor chipping work to grout the tray support by mason work. During the inspection it was found that No hot work permit was taken be the initiator.

1-Awareness training sessions to workers who will work near this area.

2.Sign board is to be display at this area as USE OF ELECTRICALLY OPERATED MACHINES ARE PROHIBITED.

Do's:

- 1.For Magnetic drill machine to stick properly on surface, base needs to be of ferrous metal. Always use this machine on flat and level surface.
- 2.Prior to using this machine the work area must be clear of all debris, chips, hazardous items.
- 3.Use right cutter for application as per OEM manual.
- 4.Use coolants while drilling. coolants increase the life of drill and avoids overheat/redness.
- 5.After fixing the drill, check the tightness of machine with respect to base, manually.
6. Batteries recommended by OEM only to be used and stored at designated place in case of battery operated tools.
- 7.Ensure that the equipment is stored safely when not in use

Don'ts:

- 1.DON'T operate on materials that is not ferrous.
- 2.DON'T use the magnetic drill in un-even surfaces.
- 3.Dont use the drill on rusted/painted surfaces. It reduces the magnet effectiveness. Clean the surface prior to use.
- 4.Do not touch steel during or immediately after operation. The steel becomes very hot during operation and could cause serious burns.
- 5.Never operate machine for long periods. Operator fatigue & over heating of machine can result if used for long periods
- 6.Never place hands or other body parts near rotating or moving parts.

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6.4.11:-

GRASS CUTTING MACHINE

Applicability Area

Grass cutting in lawn/beautification

Pictures



Material Code

Kent KSL-612 Vacuum Cleaner ,INALSA MAKE,KARCHER MAKE

Safety Alert

Nil

Risk Control
Measures

Do's:

- 1.Ensure shields are available at the lower deck of mower. The shields should be adequate to prevent operators for or any other body part coming in contact with mower.
- 2.Ensure wheel height is proper as per cutting object.
- 3.Always working area to be away from any other persons working nearby.
- 4.Area to be barricaded or have proper supports on top of cord, in case cords are laid on walkway.
- 5.Ensure supply source is provided through 30mA ELCB.

Don'ts:

- 1.Avoid accidental starting. Do not hold fingers on the switch button while carrying a plugged-in tool.
- 2.Do not operate machine at wet areas.
- 3.Never yank the cord or the hose to disconnect it from the receptacle.

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6.4.12:-

DIGGING TOOLS

TYPES




Applicability Area

Pictures

Material Code

Safety Alert

Risk Control
Measures

SHOVELS	SCOOP	SPADE
Bulk material handling, shifting and sample collection of coal, coke etc.	Sample collection	Digging, bulk material handling, breaking lumps of raw material, gardening
		
IS 274-1 and 2		

Nil

Do's:

1. Prior to use, always inspect hand tools for defects or damage (e.g., splintered, loose, bend, or cracked tool handles, mushroomed tool heads, sprung tool joints, worn tool teeth)
2. Always keep the cutting edges of shovel when digging, always keep a safe distance from body
3. Adequate PPE wrt job/ working area shall be ensured before starting job

Don'ts:

1. Do not use a tool if the handle surface has splinters, burrs, cracks or splits.
2. Do not perform "make-shift" repairs to tools.
3. Don't lift too much weight on each dig. Only lift what you can handle to avoid putting extra strain on muscles.
4. Do not horseplay with hand tools

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Standard Renewal Process: -

This standard shall be reviewed and revised as necessary and, at a minimum, not later than two years from the date of the last revision.

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ANNEXURE 4:-
Civil Hand Tools Checklist



Note: All the checklist points to be answered "Yes" to certify the machine

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ANNEXURE A:-
TEST CERTIFICATE (Passed/ Defective)

	TEST CERTIFICATE <u>PASSED</u>	 Hindustan Zinc Limited
Tool/ Machinery/ Equipment Name: _____		
Make/ In-House: _____		
Testing Date: ____/____/____		Time: ____ AM / PM
Due Date: ____/____/____		Time: ____ AM / PM
Agency/ Department Name: _____		
Checked By & Sign: _____/_____		
Remarks: _____		
TESTING FREQUENCY		
DAILY / WEEKLY / FORTNIGHTLY / MONTHLY / QUARTERLY / YEARLY		

	TEST CERTIFICATE <u>"REPAIR" DEFECTIVE</u>	 Hindustan Zinc Limited
Tool/ Machinery/ Equipment Name: _____		
Make/ In-House: _____		
Testing Date: ____/____/____		Time: ____ AM / PM
Reapiring Last Date: ____/____/____		
Agency/ Department Name: _____		
Checked By & Sign: _____/_____		
Remarks: _____		
" DO NOT USE TILL REPAIRED "		



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	TEST CERTIFICATE "DISCARD" DEFECTIVE	
Tool/ Machinery/ Equipment Name: _____		
Make/ In-House: _____		
Testing Date: ____/____/____ Time: ____ AM / PM		
Agency/ Department Name: _____		
Checked By & Sign: _____/_____		
Remarks: _____		
" DO NOT USE "		