STANDARD OPERATING PROCEDURES					
DOC NO. :	**SOP- 24**	**REVISION NO. :**	1	**EFFECTIVE DATE :**	10/10/2025
SECTION:	Mining, PBCMP	**Pakri Barwadih Coal Mining Project (PBCMP)**			
DOC NAME :	Standard Operating Procedure	**TITLE: Hot Work (Welding, Cutting & Grinding Work)**			
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APPROVED BY	Shri K.B Desai (Mine Manager)	**SIGN :**	**DATE :**	10/10/2025	

Step No.	Activity (What)	Associated Reqt./ Hazards	Resp.	Process/Tools/PPEs (How)	Remarks / Reference
1.	Basic Safety Rules	To safeguard the deployed manpower	As mentioned in the SOP	Each individual is required to adhere to the Standard Operating Procedure (SOP) No. 83, framed for Core Safety Guidelines pertaining to all Operational Activities.	
2.	Special Instructions	To safeguard the person involved	Person involved, Permit Seeking Permit & Safety Dept. (TSMPL)	1. Hot work is any type of work which produces heat / spark capable of igniting any flammable or combustible material. 2. In general, Hot Work permit procedure is applicable to all restricted areas. However,same may not be applicable for the following areas / activities: Routine welding / cutting / grinding and similar maintenance / fabrication jobs carried out inside or adjacent to any plant unit workshops and central workshops or the area demarcated / allotted for same job. 3. Hot work permit must be ensured in case if any hot work is to be done in plants / equipments. 4. This permit will be issued in form which is attached as **Annexure A.** 5. Ensure proper ventilation at Hot Work Area.	IS 17893 : 2023 (Clause 1.2)

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3.	Use of PPEs	Burn / Eye injury	Welding / Cutting / Grinding Supervisor (TSMPL) Section Incharge (TSMPL)	1. Use helmets or hand shields with filter lenses and cover plates to view the arc when arc welding and arc cutting. 2. Use face shields or goggles when operating resistance welding or brazing equipment. 3. Wear protective flame-resistant gloves & apron when welding or cutting.	
4.	Readiness of welding & grinding machine prior to welding or grinding work	Electrocution / Risk of fire	Electrical Engg. (TSMPL), Welding / Grinding Supervisor (TSMPL), Section Incharge (TSMPL)	1. Ensure body earthing of welding machine before starting any welding work. 2. Healthiness of welding / grinding machine cables to be checked and ensure its proper laying. 3. Check the availability of RCCB of adequate rating & ensure its proper functioning. 4. Keep adequate number of fire extinguishers at the location where welding / grinding is to be done.	
5.	Cylinder Handling	Explosion / Injury	Cutting / Welding Section Supervisor (TSMPL)	1. Do not transfer gases from one cylinder to another or mix gases in a cylinder. 2. Keep all unused (not in use) cylinders capped and secured with safety chain in specified storage area. 3. Do not use oxygen from a cylinder or cylinder manifold unless a pressure-regulating device intended for use with oxygen is provided. 4. Check all cylinders and equipment (e.g., hoses, regulators, etc.) for leaks before and after use. Do not use if leaking. 5. Do not handle oxygen cylinders, apparatus, and fittings with oily hands, gloves, or other greasy materials. 6. When moving compressed gas cylinders by crane, cradles shall	

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				7. be used in order to reduce the possibility of dropping. Do not use electromagnets or rope when moving compressed gas cylinders. 8. Place oxygen, DA cylinders and generators away from the welding and cutting position so that they will not be unduly heated by radiation from heated materials, by sparks or slag, or by misdirection of the torch flame. Never drag, roll or slide cylinders. Use specified cart provided for the purpose.	
6.	Welding Works	Fire / Physiological effect of fumes	Welding Supervisor (TSMPL) Section Incharge (TSMPL)	1. Only competent and trained welder shall be allowed to perform any welding work. 2. Use blanket / protective sheet / shields to isolate the welding area. 3. In case of gas welding, take proper precaution while handling of cylinders.	
7.	Cutting Works	Fire / Physiological effect of fumes	Cutting Supervisor (TSMPL) Section Incharge (TSMPL)	1. Only competent and trained person shall be allowed to perform any cutting work. 2. Keep adequate number of fire extinguishers at the location where cutting work is to be done. 3. Check availability of asbestos cloth roll as per requirement. 4. Ensure that gas cylinder for cutting set is vertically mounted on trolley. 5. Check if there is smell for leakage of any gas. 6. Check torch and nozzle for proper functioning and flashback arrestor. 7. Check the functioning of regulator, connecting pipes and pressure gauges.	

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8.	Grinding Work	Fire / Physiological effect of fumes	Grinding Supervisor (TSMPL) Section Incharge (TSMPL)	1. Ensure the work area free from inflammable materials. 2. Ensure that cutting machine and wheel are in good condition. 3. Check that guards and handles are secured. 4. Avoid loose clothes while performing such job. 5. Use ear protection to reduce exposure of loud noise. 6. Control the sparks and debris away from yourselves and other persons working nearby.	
9.	After Welding / Cutting / Grinding Work	Fire / Physiological effect of fumes	Welding Section Supervisor (TSMPL)	Ensure proper housekeeping of the area after completion of job.	