



OPERATIONAL CONTROL PROCEDURE

Doc. No.: HSEOCP:11

Rev. No.: 00

Rev. Date: 10/01/2018

OCP No. : 11

MANUAL ARC WELDING

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Purpose	To avoid damage / personal injury during Manual Arc Welding	Scope	ISG
Responsibility	Concerned Head/SOX		
Performance criteria	Exception points at management reviews		
Cross reference	OHSAS : 18001, ISO : 14001		

PPEs and Precautions

	Insulated rubber gloves		Eye protection as identified in SDS must be worn at all times		A welding mask is required for this process
	Insulated rubber shoesto be worn		Ensure working Fire Extinguisher of correct type near work area		

Procedures and Controls

ELECTRICAL HAZARDS

S. No.	Activity	Responsibility
1.	All electrical equipment and the work-pieces should be grounded	Supervisor
2.	Work piece should be grounded from a separate connection.	Supervisor
3.	Work lead should not be grounded by mistake	Supervisor
4.	The work area, equipment and clothing should be kept dry at all times.	Supervisor
5.	Dry gloves and rubber soled shoes should be worn	Welder
6.	The welder should stand on a dry board or insulated platform	Welder
7.	Cables and connections should be kept in god condition	Supervisor
8.	Worn, damaged or bare cables should not be used	Supervisor
9.	In case of electric shock, the power should be turned off immediately and non-conducting materials should be used to pull the victim from the live contact. A physician should be called and CPR continued until breathing has been restored, or until a physician has arrived.	Supervisor

FUMES & GASES

1.	Sufficient ventilation, exhaust at the arc, or both should be used to keep fume and gases from breathing zones and the general work area.	Supervisor
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NOISE

1.	Ear muffs or earplugs may be used	Supervisor
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BURN PROTECTION

1.	Worker should wear protective clothing made of fire resistance material	Supervisor
2.	Pant cuffs or clothing with open pockets or other places on clothing that can catch and retain molten metal or sparks should not be worn.	Supervisor
3.	High top shoes or leather leggings and fire resistance gloves should be worn	Supervisor
4.	Helmets or hand shields that provide protection for the face, neck and ears should be worn	Supervisor
5.	Clothing should be kept free of grease and oil.	Supervisor
6.	Consumable materials should not be carried in pockets	Welder
7.	Appropriate eye protection should be used at all times	Supervisor
8.	Goggles or equivalent also should be worn to give added eye protection	Supervisor
9.	Insulated gloves should be worn at all times when in contact with hot items or handling electrical equipment.	Supervisor

FIRE PREVENTION

1.	Welding should not be done in atmospheres containing dangerously reactive or flammable gases, vapours, liquid or dust.	Supervisor
2.	All combustible materials should be removed from the welding place.	Supervisor

RADIATION

1.	Welding arcs should not be viewed except through welding filter plates	Welder
2.	The casual passers-by or welding operations should be protected by the use of screens, curtains or adequate distance from aisles, walkways, etc.	Supervisor
3.	Exposed skin should be protected with adequate gloves and clothing as specified.	Supervisor

SAFETY MEASURES IN RADIOGRAPHY

1.	Permission from M/s BARC, Mumbai for use of radiography source.	Site Incharge
2.	Deployment of supervisor duly certified by M/s BARC, Mumbai	Site Incharge



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3.	Deployment of certified Radiographer	Site Incharge
4.	Review the periodic dosage report of personnel engaged in radiographic operation	Site Incharge
5.	Ensure availability of necessary radiation survey meters.	Site Incharge
6.	Ensure "Members of Public" are removed to safe distances while performing radiography	Supervisor
7.	Suitable warning lamps/warning boards to be displayed and area of radiography to be cordoned off.	Supervisor
8.	Only personnel certified by the site in-charge shall perform NDE	Site Incharge

Site Safety department to identify all possible Hazards related to Manual Arc Welding and ensure control as per this OCP.

In addition, relevant records pertaining to actions taken to be prepared and kept.

Records:

Record Title	Record No.	Location	Responsibility	Retention Period

Verification, Corrective and Preventive Action:

HOD / Site In-charge shall ensure effective implementation of the above procedure. In case of any deviation, shall take suitable corrective and preventive action.

Revision History

Revision Date	Revision No.	Old Text	New Text	Reason	Revised by (with sign)