ACTIVITY : CERTIFICATION OF WELDERS

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* Objective : - Certification of welder to ensure quality job
* Scope : - Blast Furnace Accessories
* Ref. : -
* Responsibility : - Engineer In charge

PPE –s to be used:

* Helmet, Safety shoes, Cotton cloth, hand gloves, apron and goggles,
* Work No 1 : Certification of welder (Internal Procedure)

Aspect – impact

|  |  |
| --- | --- |
| Scrap generation | Resource Depletion |
| Fumes | Health |

Hazards identified

Electrical Hazard

1. Shock While welding the plates
2. Electric shock due to contact with open end cables & improper earthing
3. Shock due seperation of cable from holder while welding

Mechanical hazard

1. Fall of test plates
2. Cut injury from sharp edges of test plates

Physical hazard

1. Fall of DP spray in eyes
2. inhaling fumes

Chemical Hazard:

Fire

**Human behavior**  **aspects** - workmen nature, alcoholism, casual approach & non usage of correct tools & PPE, back pain, horse play

* Work No 1 : Certification of welder (Internal Procedure)

1. Check knowledge of the welder by asking questions related to welding quality, machines and safety.
2. Check the Experience and the competency of the welder for carrying out the welding activity
3. Weld the V notch plate and double V notch plate in all three directions i.e. in 3G & 4G positions with filler material of 3.15 mm with welding progression from downward for 4G and vertically upward for 3G.
4. Check the welding quality of welding by guidelines given below:

**GUIDELINE FOR POINTING SCHEME FOR WLEDERS QULAIFICATION**

* **Question & Answer session (Oral coordination) - Max 10 Points**
* **Safety care taken by welder - Max 10 Points**
* **Environmental care being taken - Max 10 Points**
* **Parameter selected/taken for welding - Max 10 Points**

**Current selection**

**Fixture selected etc**

**Time taken for welding**

* **DP test clearance - Max 10 Points**

GUIDELINES FOR WELDING & TESTING

* Current range selected by welder (Recommended 80-140 A)
* Travel Speed of welding (Recommended 50 mm/min)
* Length of continuity of welding ( Recommended 5 cm)
* Check for the Quality of the Job carried out visually for any spits of welding
* Check the welding using Dry penetrate test for root welding & access the quality of welding.
* Welder can be Approved if the welder get min 30 points out of 50 as per below pointing scheme & should get a score of min 5 in DP test
* VALIDITY OF CERTIFICATION 1 YEAR. ALL NEW ENTRANTS TO PASS WELDING TEST.

GUIDELINES FOR WELDING MACHINE INSPECTION BEFORE WELDING

**Amendement Record**

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| --- | --- | --- | --- |
| **Date** | **Manual Section Ref. & Para** | **Brief details of Revision** | **New Rev.** |
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| --- | --- | --- |
| **Prepared By:**  Area Engineer | **Reviewed & Issued By:**  Management Representative | **Approved By:**  Mechanical Head |
| **Signature** | **Signature:** | **Signature:** |
| **Review Date: 12.12.22** | **Review Date: 12.12.22** | **Review Date: 12.12.22** |