Work instruction for painting

Objective          Safe working procedure for painting/copper slag blasting

Responsibility  Engineer In charge and workmen on job

PPEs to be used Helmet, Safety shoes, Hand gloves, Dust mask, safety harness and safety

goggle. (Depending upon type of job)

Aspect & Impact

Paint/thinner Spillage Land contamination

Waste generation Land contamination & Resource Depletion

Empty paint drums, brushes Land contamination

Oil Spillage Land contamination

Oil traced waste generation Land contamination & Resource Depletion

Hazards identified

Mechanical Hazard Contact, trapping, Slip & Falling from height.

Chemical Hazard fall of paint / waste in eyes, Fumes.

 Physical Hazard Fall of objects in eyes while chipping,

Fire & Explosion while painting inside poorly ventilated area.

Fire due to cutting/ welding spatter in open tin at store yard

Electric hazard  Electric shock on equipment

Fire due to electrical short circuit in paint store yard

PRECHECKS and PROCEDURE

Take clearance from shift in charge if the work is related to production after following all the related safety indicated in the work instruction.

If the job is near gas-affected area take co monitor and confirm CO concentration is almost negligible.

If the painting is to be done at height make the proper scaffolding arrangement. (Steel Scaffolding are preferred) & ensure the usage of safety harness belt. Scaffolding should be done authorized scaffolder as per SP44G specifications with hand rail and toe guards. Person having height pass should only work at height for painting.

Make sure that pipes used for scaffolding are not protruding in workable area of other workmen or not in danger position (to hit someone).

Each supporting member for scaffolding, stair, and runway shall be placed on firm, rigid smooth foundation that prevents lateral displacement and cordon the area coming under painting.

Ensure scaffolding is certified for use with green tag for painting by authorized scaffolding inspector.

Before painting, all the dirt, oil tracings etc, has to be remove from surface by chipping or cleaning by cotton cloth hand brush or certified grinder.

Ensure proper locking of the grinder supply cable using cable hitch to avoid falling from height. Also ensure usage of completely seal safety goggles to avoid dust going in the eyes.

Select the correct color code for each. Follow color coding & painting scheme given below

Study the environment, which will affect the parent material and select the paint quality accordingly. (Like for heat affected area Use heat resistance paint)

Apply paint on the clean surface. Ensure proper locking of the tin (4litre capacity only) on the structure to avoid falling from height.

Avoid fall of paint on ground and direct contact by hand. Use hand gloves for the same

If the job to carry out is in closed compartment, ensure proper ventilation and illumination in the area.

While carrying paint tins for painting ensure that the paint tins are closed

Empty paint tins should be stored under proper canopy so as to avoid fire

Storage of paint container should be properly examined by the concerned Engg

If cutting and welding is to be done near paint storage area prior permission of the same has to be obtained from concerned department. shift the paint containers before starting any gas cutting / welding activity.

Ensure return of all scrap paint containers to store for proper disposal.

Clean the paint traced cover/paint traced material with excess quantity of water or liquid blue to dilute the paint and leave the same nature so that it is less harmful to environment.

Ensure the proper usage of CO detector while working on the gas prone area.

While working on or near electrical appliance ensures the shutdown of the same. Also do not work near live cables.

Safety Information

As per the safety measures, inhalation of solvent vapor or paint mist and contact of liquid paint with skin an eyes should be avoided. Forced ventilation should be provided when applying paint in confirmed space or stagnant air. Even when ventilation is provided, respiratory, skin and eye protection is always recommended while spraying Paint.

Working near the electric line to be done under complete close supervision and only after suitable authorization for the job by area engineer both Electrical and mechanical.

PLEASE REFER MATERIAL SAFETY DATA SHEET PRIOR TO USING THE PRODUCT.

**PAINT COLOUR COADING**

|  |  |  |
| --- | --- | --- |
| Sr. No. | Area of use | Finish Colour |
| 1 | Steel Structure & Equipment | Gray |
| 2 | Water piping & equipment | Green |
| 3 | Fire hydrant Line | Red |
| 4 | Compress air line | Satin blue |
| 5 | Steam Line | Aluminum Insulation |
| 6 | Gas line | Yellow |
| 7 | Blower duct | Aluminum |
| 8 | Chimney | Black/Aluminum |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PAINTING SCHEME PAINTING APPLICATION/DATAS FOR GERNERAL ITEMS | | | | | | |
|  | | | | | | |
| Sir No. | Description | Mixing | 1 st coat | 2 ndcoat | 3 rd coat | 4 th coat |
|  |  | (by volume) |  |  |  |  |
| 1 | Painting of structure | Thinner 800 (10-15%) | Bison HB Zinc phosphate primer | Bison High Build MIO coating | Smog gray | Smog gray |
|  | Recommended Thinner |  | Thinner 800 ( 5% ) |  |  |  |
|  | Recommended DFT/coat |  | 30-50 |  |  |  |
| 2 | Painting of pipeline | Thinner 800 (10-15%) | Bison HB Zinc phosphate primer | Bison High Build MIO coating | Bus green | Bus green |
|  | Recommended Thinner |  | Thinner 800 ( 5% ) |  |  |  |
|  | Recommended DFT/coat |  | 30-50 | 65-75 |  |  |
| 3 | Gas line | Thinner 800 (10-15%) | Bison HB Zinc phosphate primer | Bison High Build MIO coating | Golden yellow | Golden yellow |
|  | Recommended Thinner |  | Thinner 800 ( 5% ) |  |  |  |
|  | Recommended DFT/coat |  | 30-50 | 65-75 |  |  |
| 4 | Corrosive area with no direct sun light | Thinner 844 (10-15%) | Epliux 555 | Epliux 555 |  |  |
|  | Recommended Thinner |  |  |  |  |  |
|  | Recommended DFT/coat |  |  | 150-200 |  |  |
| 5 | Air Line | Thinner 800 (10-15%) | Bison HB Zinc phosphate primer | Bison High Build MIO coating | Saturn Blue | Saturn Blue |
|  | Recommended Thinner |  | Thinner 800 ( 5% ) |  |  |  |
|  | Recommended DFT/coat |  | 30-50 | 65-75 |  |  |
| 6 | Chimney | Nil | Heat resistance Al paint | Heat resistance Al paint |  |  |
|  | Recommended Thinner |  |  |  |  |  |