**ACTIVITY: WORKING AT LISBAO/VALVANTI PIT PUMP**

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* Objective : - Safe and quality maintenance of pump for optimum out put
* Scope : - All new working pumping stations
* Ref. : - Pumps maintenance manual
* Responsibility : - Engineer In charge & Maintenance Fitter on job

**PPE –s to be used :**

 Helmet, Safety shoes, hand gloves, safety goggle, life buoy and jacket, safety belt/harness

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| Work No 1 : | Changing of pump |
| Work No 2 :    **Aspect - Impact** | Changing of foot valve & hoses |
| Scrap generation | Resource Depletion |
| Oil Spillage | Land contamination |
| Oil traced waste generation | Land contamination & Resource Depletion |
| Fumes  Draining of water  **Hazards identified** | Health  Resource depletion |
| **Physical Hazard -** | Pressure, temperature, dust inhalation, , congestion, drowning in water |

**Mechanical hazard –**

* Trapping in between coupling, impeller, guard, dismantled pump and motor, etc.
* Entanglement in between moving parts, guard, coupling.
* Fall of spare parts, rod, slinged items, tools, hammer, etc.
* Fall of person from platform & height.
* Impact of moving/slinged items.
* Injury from slip of pump component while assembly / dismantling.
* Impingement of fingers, hand while fitting assembly of pump, bearing fixing, impeller fixing

**Electrical Hazard** – Electric Shock due to welding , electrical cable and machine.

**Chemical hazard -** Fire

**Biological Hazard** - Bee sting

**Human Behavior aspect of operators**:

Operator nature, alcoholism, casual approach, horse play, use of mobile at workplace, back pain & non usage of PPE?s

**Workmen carrying out the jobs at Lisbao/Napoli/new pump pits must know swimming and must be equipped with life buoy and jackets**

**Work No 1 : Changing of pump**

1. Take electrical shutdown LOTO, before starting the activities.
2. Remove coupling guards and coupling.
3. Replace the pump and check alignment. Follow work instruction VL/IMS/PID1/MECH/WI/12 for material handling.
4. Check oil level in bearing block and top up if required.
5. Couple the pump and motor and re-fix coupling guard.
6. Clear electrical shut down and take trial.
7. Check vibration reading and water pressure.
8. Check leakages if any.
9. Give clearance to user department.
10. Follow work procedure VL/IMS/PID1/MECH/WI/44 for maintenance of pump

**Work No 2 : Changing of foot valve & hoses on pontoon**

1. Check whether lifebuoys, life jackets, etc. are in place/tack.
2. Take electrical shutdown before starting the activities.
3. Remove the hoses in between pump and pit one by one, and lower pontoon. . Use hydra to get the Pantoon on top of land or nearby to pit side wall to work safely.. Replace foot valve if required or clean the foot valve and place in position. Re-fix the hoses or change the hoses if required.
4. Start priming after fixing foot valve and hoses.
5. Clear electrical shut down and take trial of pump.
6. Check leakages, if any.
7. Check water pressure and current drawn by pump.
8. Give clearance to user department.

Follow housekeeping procedure as per VL/IMS/PID1/MECH/WI/91

Follow lubrication procedure VL/IMS/PID1/MECH/WI/93 for lubrication of equipment if required.

**Do’s and Don’ts**

# DO’s

* Ensure house keeping
* Clear all scraps & unwanted structures from platforms / work area  Use lifebuoy whenever it is required to work in the water.
* Ensure that the people working near water knows swimming
* Report damaged / corroded structures immediately

# Don’t

* Work under the influence of alcohol
* Indulge in the Horse Play



**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** |