

Maintenance of Pumping Equipment

1. D' EXAMINATION

1.1. Drawings and Information

- a) Check drawings and supporting literature including O&M manuals, log book are correct and available
- b) Check authorised spares are present, at the correct stock levels and in a serviceable condition

1.2. Controls and Indications

- a) Check control panel for condition and security
- b) Check indicator lights for operation and condition, use test button where fitted or confirm under pump operation
- c) Check switches/buttons for operation and security
- d) Visually examine relay contacts for condition and security
- e) Visually check condition of internal wiring and components
- f) Visually check cable and conduit entries are secure
- g) Check operation of duty priority switch if applicable
- h) Check hours run meter for satisfactory condition, security and correct operation. Record reading
- i) Check flow meter(s) for satisfactory condition, security and correct operation

1.3. Frost Protection

- a) Check immersion heater for satisfactory condition and security
- b) Check trace heating and lagging for satisfactory condition, security and correct operation

1.4. Level Switches/Sensors

- a) Record level switch/sensor operating points
- b) Check level switches/sensors for satisfactory condition, security and correct operation
- c) Manually operate the pumps to reduce the water level to lowest level, whilst not allowing the pumps to run dry

1.5. Pipework Installation

- a) Check pipework, hoses, valves, lagging, mountings, guards, gratings and discharge point for satisfactory condition, security and leaks

1.6. Remote Indications

- a) Check remote indications and alarms for correct operation

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1.7. Functional Test

- a) Check that pumps are operating and cycling as per design
- b) Check discharge for satisfactory condition, that it is clear of obstructions, and that no contaminants present
- c) Check backflush system for correct operation

2. 'F' Examination

2.1. Control Panel

- a) Check contactors/relays/overload/plug-in components for satisfactory condition and security
- b) Check condition and security of fuses, fuse holders and circuit breakers, repair or renew as necessary
- c) Check overload settings and record. Confirm against design and adjust as necessary
- d) Check main isolator and door interlock for satisfactory condition
- e) Check door seals for satisfactory condition and security
- f) Check cables and terminals for satisfactory condition and security
- g) Check conduit, trunking and cable entries for satisfactory condition and security
- h) Check alarms and level switches/sensors operate correctly

2.2. Sump Area

- a) Check weirs, channels and gratings are free from debris
- b) Check depth of silt in all chambers, arrange removal as required

2.3. Motor

- a) Check motor for satisfactory condition and security
- b) Clean exterior and interior of motor
- c) For submersible pumps, carry out electrical insulation resistance tests at cable-end with pump motor connected at opposite end. Record values
- d) Check cables and terminals for satisfactory condition and security
- e) Check conduit, trunking and cable entries for satisfactory condition and security

2.4. Pump

- a) Check pump for satisfactory condition and security
- b) Check hoses and pipe connections for satisfactory condition and security