

# Overhaul Report

Date: 2nd August 1995

Report of Overhaul Operation:

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Location: [Specify Location Here]

This report details the overhaul procedure carried out on the centrifugal pump system, as depicted in the machine diagram.

Components:

- Motor
- Flexible Coupling
- Pump DE Bearing (Double-Row Spherical Roller Bearing for Radial Load)
- Pump NDE Bearing (Angular Contact Bearing for Thrust Load)
- Pump Casing

Procedure:

1. Initial Preparations:

- Closed suction and discharge valves.
- Disconnected the pump from the main power supply.

2. Disconnection from Power:

- Electrical connections were safely disconnected from the motor.

### 3. Removal of Coupling Bolts:

- Coupling bolts were removed to separate the motor from the pump.

### 4. Motor Removal:

- The motor was horizontally mounted. The motor base bolts were loosened, and the motor was safely slid away from the pump.

### 5. Impeller and Seal Removal:

- The washer and guide nut were loosened.
- The impeller was unscrewed and removed using a pulley.
- The mechanical seal was carefully removed.

### 6. Bearing and Shaft Removal:

- Lock ring and bearing guide pin were removed.
- Bearings were removed from the shaft after tapping gently with a wooden hammer.
- The shaft and bearing housings were thoroughly cleaned.

### 7. Inspection:

- Bearings were inspected and found to be in [State condition - e.g., "worn out and replaced with new bearings."].
- Mechanical seals were [State condition - e.g., "replaced due to wear."].

### 8. Reassembly:

- New bearings were installed and lubricated on the shaft.

- The impeller, mechanical seals, washers, and guide nuts were reinstalled and tightened securely.

- The shaft was rotated to confirm free movement.

#### 9. Motor Reinstallation:

- The pump and motor were aligned properly before securing them with bolts.
- The coupling bolts were reinstalled and tightened.

#### 10. Final Checks:

- Electrical connections were reattached to the motor.
- The assembly was rotated to check for any obstructions.

#### 11. Testing:

- The power supply was reconnected, and the motor was started.
- The discharge valve was opened gradually while monitoring the pump's performance.
- No leaks were detected, and the pressure was within the desired range.

#### Conclusion:

The overhaul operation was successfully completed, ensuring that the centrifugal pump system is operational and in optimal condition.