

WESFARMERS CSBP LTD

SCOPE OF WORK

KWINANA WORKS

EQUIPMENT NUMBER & DESCRIPTION	REVISION	DATE

SHORT SCOPE DESCRIPTION	WORK ORDER NUMBER	PRINCIPAL'S REPRESENTATIVE
PUMP OVERHAUL (MINIMUM REQUIREMENT)		DAVID SANDON

1. INTRODUCTION

Pump performance has a significant impact on Plant Reliability at CSBP, the standard of overhaul of CSBP pumps is therefore paramount. As an absolute minimum pumps shall be overhauled to manufacturers specification, however overhaul standards and specifications better than manufacturers is preferable.

The following documents shall be applied to pump overhauls, they are listed in order of precedence.

1. ITP
2. SOW
3. CSBP Drawings, Specifications and Engineering Standards
4. Manufacturers Specification.
5. Australian Standards.

Pump Condition Reporting is just as important as the overhaul, on the basis that we need to understand failure modes and root causes of failure. Please note the investigative nature of the disassembly process.

Unless otherwise noted herein the work involves the supply of labour (including supervision) and materials required to complete the work and shall include, but not necessarily be limited to, the work described in Section 2.

2. WORK INCLUDED (use in conjunction with Inspection and Test Plan)

Disassembly, Condition Report and Quoting

- 2.1 Investigate Pump condition, Failure Mode/s and Root Causes of Failure during disassembly of pump. Provision of digital photographs is desirable.
- 2.2 Survey pump (dimensionally) and record results.
- 2.3 Inspect and record condition of all significant faulty components, provide photos if possible.
- 2.4 If not included in section 2.3, provide detailed condition report of shaft, bearings, seals, impeller and clearances which affect performance.
- 2.5 Compile Condition Report and Evaluate Repair Requirements.
- 2.6 Submit Recommendations for repair, condition report and Quotation (as per Purchase Order Requirements) to CSBP.

Repair and Assembly

- 2.7 Repair pump as authorised by CSBP.
- 2.8 Assemble Rotating Element and Balance to Grade G1 @ applicable RPM.
- 2.9 Assemble Pump
- 2.10 Verify pump spins freely.
- 2.11 Hydrostatically Pressure Test Pump to operating pressure + 10% or to mechanical seal max allowable pressure (which ever is less).

- 2.11.1 Drain and dry wet end.
- 2.12 Paint pump to CSBP Engineering Standard ES 14-102-12 Coating system C, colour Blue Grey N53 (AS2700 Colour Code).
- 2.13 Package Pump for long term storage.
- 2.14 Deliver to CSBP Kwinana Store.

3. WORK EXCLUDED

- 3.1 Delivery to the Contractor's premises

4. LIMITS OF WORK

- 4.1 Long Lead time Parts are often held in CSBP Stores, refer to Section 5 Free Issue of Materials.
- 4.2 All other general parts and materials required to complete the overhaul shall be supplied by the contractor.

5. FREE ISSUE OF MATERIAL

- 5.1 CSBP may provide Parts which are applicable to the equipment, these will generally be long lead time items and can be booked out from CSBP Stores using a Work Order. Refer to CSBP Responsible Officer.

6. TESTING AND COMMISSIONING

- 6.1 Testing shall be as per Scope of Work and ITP.
- 6.2 Commissioning will be performed by CSBP.

7. PRODUCTION ACCESS/PRECAUTIONS

Not Applicable.

8. STANDARDS / DRAWINGS

8.1 Australian Standards (as applicable)

- 8.1.1 ANSI Pump Standard
- 8.1.2 ASME B73 Standards

8.2 CSBP Engineering Standards

- 8.2.1 ES 14-102-12 Protective Coatings

8.3 CSBP Drawings

9. CONSTRUCTION SCHEDULE

Not Applicable

10. DOCUMENTATION

Ideally, all documentation shall be sent via Electronic Media, Email is preferable.

- 10.1 As Found Condition Report including Photos
- 10.1.1 CSBP specified Equipment Condition Report (supplied in Word Format)
- 10.2 Repair Recommendations
- 10.3 Itemised Quotation; Detailing Labour, Parts and Contractor Services.
- 10.4 Balance Certificate
- 10.5 Hydro test Certificate or statement of activity and results (can be included in closing report).
- 10.6 Closing report, to include details pertaining to as found (unless already supplied) and as left clearances, floats, impeller settings condition etc.
- 10.7 ITP; Completed Original Document.

11. SITE INSPECTION

Not Applicable

12. TENDERS

Not Applicable

13. PRICING SCHEDULE

- 13.1 Quotation to be submitted to CSBP Responsible Officer, preferably via Email.
- 13.2 Prices shall be ex GST. GST can be displayed as a separate item.
- 13.3 Quotation shall be itemised as per Scope of Works sections 2-10 (including subsections) as applicable or as a minimum include separate costs for;
 - 13.3.1 Labour strip, repair and assembly
 - 13.3.2 Individual Parts/Materials > \$500
 - 13.3.3 Other parts and Materials
 - 13.3.4 3rd Party Contractor Costs (please specify)