OVERHAUL SCOPE FOR WORKS

FOR RELIEF VALVES

Capability Statement for Pressure Safety Valves (PSV)

Berg has over 15 years PSV experience and is capability of servicing all makes and models of valves up to 6000 Psig (41,000 kPag) up to DN150 flanges and valves up DN600 150LB. Utilizing the up to date equipment including Kemet 20 lapping machine to archive the correct flatness and exemplary quality.

Introduction

This document lists the standard scope of works and other requirements for the overhaul of Pressure Relief Valves (PRV's).

Our Objective

- Reduce total lifecycle cost of pressure safety valves.
- Improve efficiency and turnaround.
- Maintain inventory levels of refurbished valves onsite for emergency/unplanned exchange.
- Package valves by location to improve the timing of exchanges during shutdowns (optional).
- Remove valve exchange from critical path activities.
- Create more time for maintenance activities in other areas of the plant.

Background

Berg has an extensive history in valve refurbishment and maintenance across mining & refining, oil & gas and power generation.

With contracts in place for critical caustic slurry valve refurbishment and for the supply of pressure safety valves (PSV) refurbishment services for eight (8) sugar refineries, Berg is positioned to apply its experience to deliver advantageous outcomes.

Desired Outcome

The opportunity to work collaboratively with Commercial, Contract Management, Engineering, Reliability and Owner personnel to deliver pressure safety valve reliability that leads to improved productivity and efficiency. Improved inventory certainty will assist cash management and demonstrate Berg's ability.

Site Audit

To facilitate the establishment of a valve inventory list, at no cost, Berg will provide personnel for a site visit. This inventory list will be compared to in-service valves and used to create a recommended buy-list of supplementary valves to establish a rotable program.

Product Deliverables

- Pressure safety valves refurbished and certified for use on steam, slurry and water service applications.
- Supply of new pressure safety valves.
- Option for dedicated, transport cages for valves with gaskets, fasteners and tags for ease of identification. Transport cages ensure valves are maintained in the vertical position at all times.

Service Deliverables

We recognise the importance of simplified supply chains with single-point accountability. To facilitate this, Berg proposes the following service deliverables:

- Specialised, single point of contact in Berg for the rotable program.
- Packaged documentation in hardcopy with the valves and electronically transferred for site records.
- Onsite support upon request.

Scope of Work

The standard scope of work performed in the overhaul of a PRV will entail the following activity:

- Pre-test in accordance with API527. Test leakage rate at 90% of set pressure. Check set pressure. Record and report results of both tests separately.
- Record critical adjustments. Ensure valve Blowdown adjustment mechanism positions are accurately recorded to ensure reinstatement to original position
- Dismantle valve to individual components
- Inspect & report (additional repairs not covered by this scope of work)
- Blast valve and components if required (additional cost)
- Machine valve seat and disc if required to return to OEM dimensions
- Machine and lap seat
- Machine and lap disc
- Replace corroded fasteners if required (additional cost)
- Machine valve flanges if required (additional cost)
- Replace gaskets if required (additional cost)
- Re–assemble components, returning Blowdown components to as supplied position and lock
- Adjust set pressure to nominated set pressure as per API527 & Certify
- Leakage Test to API527 & Certify
- Paint if required (additional cost)
- Seal and wire valve & attach test tag
- Blank inlet/outlet prepare valve for transport
- Install valve into transport frame (if provided in one)
- Supply test documentation and certificate

Reporting and Documentation (Before Overhaul)

The client to supply Berg Engineering the information listed below for each PRV scheduled for overhaul:

- Despatch date
- Site name & address
- Valve location and duty
- Valve Fluid or medium
- Valve serial number
- Valve manufacturer
- Valve size
- Valve required set pressure
- Site contact person
- Purchase order/line item number
- Required return delivery date

(After Overhaul)

Berg Engineering will supply, via email, the following information after completion of the overhaul program:

- Overhaul certificates for each PRV listing pre-test inspection results and certification set pressure as per requirements contained in AS 3788 Appendix P

- Site name
- Valve location and duty
- Valve Fluid or medium
- Valve serial number
- Valve manufacturer
- Valve nominal size
- Valve actual orifice diameter
- Valve required set pressure
- Valve pre-test set pressure measured
- Final valve certified set pressure
- Valve pass/fail pre-test set pressure test result
- Valve pre-test leakage test pressure
- Valve pass/fail pre-test leakage test result
- Valve certified leakage test pressure
- Valve certified leakage rate
- Work undertaken not in the standard scope of works listed in section 2 above
- Requirement for major replacement parts
- Final cost of overhauled valve
- Purchase order/line item number

For additional information on our range of valve services please visit our website at **bergengineering.com.au**