



VALVE TECHNICAL DATASHEET

Pressure Safety Relief Valve -- 3 inch x 4 inch, Class 150, WCB
Body -- Slop Oil Service

				APPROVAL STATUS ☐ APPROVED ☐ APPROVED AS NOTED ☐ REVISE & RESUBMIT ☐ FOR INFORMATION ONLY ----- SIGN/DATE: _____
DOCUMENT NO.	SV/QTN/2026/ARH/006	PROJECT / PLANT	Slop oil (crude) processing system, Ahmedabad	
CUSTOMER	Arham Oil & Gas Product Services	RFQ / PO REF.	Enquiry dated 27 June 2026 and technical specifications dated 29 June 2026 -- Item 3, pressure relief / safety valve	
REV	DATE	DESCRIPTION	STATUS	
—	23 August 2026	Issued for Technical Review	IFR	

SOUR SERVICE (H2S): Complies with NACE MR0175 / ISO 15156.

1.0 VALVE ITEMS SUMMARY

Item	Tag No.	Type	Size	Qty	Class/Rating	End Conn.	Body Material
1	PSV-001	Conventional Spring-Loaded Pressure Safety Relief ...	3 inch inlet x 4 inch outlet	1	Class 150 RF inlet and outlet	Flanged RF per ASME B16.5	ASTM A216 Gr. WCB

4.0 DESIGN & MANUFACTURING STANDARDS

- API 6D (typical)
- API 6A (typical)
- API 598 (typical)
- NACE MR0175 / ISO 15156 (typical)
- ASME B16.34 (typical)
- ASME B16.5 (typical)
- EN 1092-1 (typical)
- ISO 10423 (typical)

5.0 MATERIAL SPECIFICATIONS

Material Category	Grade / Standard	Remarks
Carbon Steel (WCB)	ASTM A216 Gr. WCB (typical)	Standard cast carbon steel for general industrial applications

6.0 TESTING, INSPECTION & CERTIFICATION

Requirement	Standard / Value
Certification	EN 10204 3.1 and 3.2 material certificates, NACE MR0175 compliance certificate, API 6D / API 6A monogram where applicable, hydrostatic and gas test reports, full NDT reports (RT/UT/MT/PT), PMI (Positive Material Identification) reports, hardness test reports, Charpy impact test reports (typical)

9.0 NOTES & REMARKS

- Firm offer for 1 No. PSV 3x4 Class 150 WCB, set 16.5 bar(g), slop oil service. Vendor cost INR 37,500 + 40% markup = INR 52,500 unit. Grand total INR 61,950 incl IGST. Completes Item 3 from original Arham enquiry.
- **Note on values marked (typical):** these are representative figures for this valve class and were NOT confirmed against this specific enquiry. They are to be confirmed on order / GA drawing.



VALVE DATA SHEET - ITEM DETAILS

Doc No: SV/QTN/2026/ARH/006 | Rev: —

ITEM 1 - PSV-001		Conventional Spring-Loaded Pressure Safety Relief Valve	
1. PROCESS & PIPING DATA			
Service / Fluid	Overpressure protection on slop oil (crude) outlet pump line (typical)	Valve Size	3 inch inlet x 4 inch outlet
Design Temperature	Up to +550°C (WC9 rated per ASME B16.34) (typical)		
Design Pressure	Per API 526 orifice — set pressure as specified on data sheet (typical)		
Medium	Steam / Hydrocarbons / Process gas (defined per P&ID) (typical)		
Flow Direction	Unidirectional — inlet to outlet (typical)	Pipeline Material	
2. VALVE SPECIFICATIONS			
Valve Design	Direct Spring-Loaded, Full-Nozzle Pressure Safety Valve (PSV) (typical)	Pressure Rating	Class 150 RF inlet and outlet
Design Standard	API 526 / API 520 / API 527	End Connection	Flanged RF per ASME B16.5
Testing Standard	API 598 / API 527 — shell test 1.5× MAWP; seat leakage test per API 527 (bubble tight or 0.5 cfh per inch orifice); simmer test at 90% set pressure (typical)	Operator	Lever handle — quarter-turn (90°) (typical)
Seat / Sealing		Quantity	1 Nos.
3. DIMENSIONAL DATA			
Nominal Size	25 (25 mm) (typical)	Overall Length (End-to-End)	150 mm (typical)
Port / Bore	51 mm (typical)	Height	77 mm (typical)
4. VALVE MATERIAL SPECIFICATIONS (BOM)			
VALVE PART	SPECIFIED MATERIAL	MATERIAL OFFERED	
Body	Alloy Steel ASTM A217 Gr. WC9 (2.25Cr-1Mo)	Alloy Steel ASTM A217 Gr. WC9 (2.25Cr-1Mo) — Inlet / outlet body casting (typical)	
Bonnet/Cover	Alloy Steel ASTM A217 Gr. WC9 or Carbon Steel WCB	Alloy Steel ASTM A217 Gr. WC9 or Carbon Steel WCB — Open or closed bonnet (typical)	
Wedge/Disc	F347H SS Nozzle insert; disc Inconel 625 or Stellite 6 coated	F347H SS Nozzle insert; disc Inconel 625 or Stellite 6 coated — Stellite-faced seating surfaces (typical)	
Stem	Stainless Steel ASTM A276 Type 316 / Inconel 625	Stainless Steel ASTM A276 Type 316 / Inconel 625 — Spindle / lift rod (typical)	
Seat/Seat Ring	Nozzle: Stainless Steel ASTM A182 Gr. F347H; seating Stellite 6 overlay	Nozzle: Stainless Steel ASTM A182 Gr. F347H; seating Stellite 6 overlay — Stellite-faced nozzle seat (typical)	
Gland Packing	N/A — spring housing sealed by bonnet; stem packing on open-bonnet type	N/A — spring housing sealed by bonnet; stem packing on open-bonnet type (typical)	
Bolting (Body)	Alloy Steel ASTM A193 Gr. B16 / A194 Gr. 7 (high temp)	Alloy Steel ASTM A193 Gr. B16 / A194 Gr. 7 (high temp) — Body flange bolts (typical)	
Handwheel/Operator	Inconel or carbon steel coil spring (set-pressure spring)	Inconel or carbon steel coil spring (set-pressure spring) — Certified spring; cap & test lever (typical)	
Gaskets (Body Joint)	Spiral Wound 316SS / Graphite; API BX ring-joint optional	Spiral Wound 316SS / Graphite; API BX ring-joint optional — Nozzle joint; bonnet joint (typical)	
5. CERTIFICATION & REMARKS			
Hydrostatic Test Certificate; Material Test Certificate EN 10204 2.2 (3.1 on request) (typical)			

