

PROJECT:		Shell DEER PARK REFINERY		DOCUMENT NO.: BIC7417_Shell Deer Park_ BOM		
						
1	ISSUED AS PURCHASED	CM	2019-06-04			MC
0	ISSUED FOR PURCHASE	CM	2019-04-30			MC
B	ISSUED FOR APPROVAL	CM	2019-02-25			MC
A	ISSUED FOR APPROVAL	CM	2019-01-14			JT
REV.	DESCRIPTION	BY	DATE	CHK.		
BILL OF MATERIAL - INSTRUMENTS						
ITEM	QTY	CLIENT CODE	DESCRIPTION		MANUFACTURER	
1	8	TT/TE-68734 TT/TE-68736 TT/TE-68738 TT/TE-68740 TT/TE-68735 TT/TE-68737 TT/TE-68739 TT/TE-68741	Temperature Transmitter (pump bearing) Rosemount 3144PD1A2K5DA1B4M5CNQ4U1G1 Calibrated Range: 0-300 F 3144P: Temperature Transmitter, D1: Field Mount Housing, Dual-Compartment Housing, Aluminum, 1/2–14 NPT conduit entry, A: 4-20 mA with digital signal based on HART protocol, 2: Dual-Sensor Input, K5: FM IS, Non-incendive & Explosion-proof, DA1: HART Sensor and Process Diagnostic Suite: Thermocouple Diagnostic, Min/Max Tracking, B4: “U” Mounting Bracket for 2-inch pipe mounting - All SST, M5: LCD Display, CN: NAMUR Alarm and Saturation Levels, Low Alarm, Q4: 5-Point Calibration, U1: Hot Backup, G1: External Ground Lug Assembly Bearing RTDs Model # TR10-2-0-I-S-C-1AF13-1-FS-030-C-F-X-C-1-P-00125-ZANM03000595CA Unit of measure: Imperial (inch), Terminal block / Transmitter: Crastin terminal block, Neck extension: Nipple-union-nipple -, Stainless steel , N-dimension: 3.0 inch (76 mm), RTD Sensor: Pt100, Class A (IEC 60751), Wiring configuration: Dual 3-wire, Sensor diameter:, 1/4 inch (0.250 inch), Sheath material: Stainless steel 316 / 316 L (1.4401 / 1.4435), A-dimension: 1.25, Certificates: Without Documentation: MTR, Calibration Certificate, NACE MR0175/ISO		Rosemount WIKA	
2	2	TT/TE-68730 TT/TE-68731	Temperature Transmitter (on pump body) Rosemount 3144PD1A2K5DA1B4M5CNQ4U1G1 Calibrated Range: 0-650 F 3144P: Temperature Transmitter, D1: Field Mount Housing, Dual-Compartment Housing, Aluminum, 1/2–14 NPT conduit entry, A: 4-20 mA with digital signal based on HART protocol, 2: Dual-Sensor Input, K5: FM IS, Non-incendive & Explosion-proof, DA1: HART Sensor and Process Diagnostic Suite: Thermocouple Diagnostic, Min/Max Tracking, B4: “U” Mounting Bracket for 2-inch pipe mounting - All SST, M5: LCD Display, CN: NAMUR Alarm and Saturation Levels, Low Alarm, Q4: 5-Point Calibration, U1: Hot Backup, G1: External Ground Lug Assembly c/w WIKA Temperature Element TR40 Model # TR10-2-0-I-S-C-1AF13-1-FS-030-C-F-X-C-1-P-00200-ZANM03000670CA Unit of measure: Imperial (inch), Terminal block / Transmitter: Crastin terminal block, Neck extension: Nipple-union-nipple -, Stainless steel , N-dimension: 3.0 inch (76 mm), RTD Sensor: Pt100, Class A (IEC 60751), Wiring configuration: Dual 3-wire, Sensor diameter:, 1/4 inch (0.250 inch), Sheath material: Stainless steel 316 / 316 L (1.4401 / 1.4435), A-dimension: 2, Certificates: Without Documentation: MTR, Calibration Certificate, NACE MR0175/ISO 15156, CoC, SST Tag		Rosemount WIKA	

Shell

Part of Revision 4 Content shall not be altered in subsequent revisions. Any changes to content in subsequent revisions shall be made in a separate revision.

Project No: PD 40700000

Project Name: Hot Pail Tank

Scope: RT-62670 and RT-62671

Drawn By	Checked By	Reviewed By	Approved By
DN/JS	JD	JD	JD

Delivered By: [Signature]

Accepted as Submitted: Final

Accepted with Comments: Incorporate comments (provide with 1 page and Revisions to this Work May Proceed)

Revised and Resubmit: Incorporate comments (1 page and Revisions to this Work May Proceed)

Revised not required: No further action

Rejected: Incorporate comments given and resubmit Work may NOT Proceed

Date: [Signature]

3	2	PT-68732 PT-68733	Pressure Transmitter (Steam Supply) Rosemount 3051S2CG5A2F12A1ADA2K5M5Q4Q8 Calibrated Range: 0-300 psig 3051: Scalable Pressure Transmitter, 2: Classic: 0.035 percent span accuracy, 150:1 rangedown, 15-yr stability, C: Coplanar, G: Gage, 5A: Range -14.2 to 2000 psig, 2: 316L SST isolating diaphragm, F12: Process Connection Traditional flange SST, 1/4-18 NPT, A: 4-20 mA with digital signal based on HART protocol, 1A: PlantWeb housing, DA2: Advanced HART Diagnostics Suite, B4: Coplanar flange bracket, all SST, 2-in. pipe and panel, K5: FM Explosion-proof, Dust Ignition-proof, Intrinsically Safe, Division 2, M5: PlantWeb LCD display, Q4: Calibration certificate, Q8: Material traceability certification per EN 10204 3.1	Rosemount
4	8	VE-68742 VE-68744 VE-68746 VE-68748 VE-68743 VE-68745 VE-68747 VE-68749	Accelerometer (Pump Body) Model: 330400-01-05 50 G (490 m/s ²) peak, 316 SST case material, 1/4" NPT stud, Multiple approvals (CSA, ATEX, IECEx,), Sensitivity: 10.2 mV/m/s ² (100 mV/g) ±5%. c/w SEIS/ACCL Extension Cable, 3-wire, 25 ft length Model: 16925-25 3-conductor shielded 22 AWG cable	Bently Nevada
5	2	RV-05160 RV-05161	Pressure Relief Valve (shipped loose) Model: 6Q8JLTJBS-E45S6L-N2 Set @ 340 psi Sized for Blocked Flow 6# 600# RF x 8" 150# RF, Q Orifice SS SA351-CF8M Body, Inconel® X750 Spring, NACE MR0175 (2002)	Crosby
6	2	-	Steam Trap (Steam return) Model: PC4000, L - R Trap Station Connection: 3/4" SW Body Material: carbon steel c/w UFT32-21 Universal Float & Thermostatic Steam Trap SST	SpiraxSarco
7	2	TV/TY-68730 TV/TY-68731	FisherEZ Body Control Valve Assembly (Steam supply) 1" Class 300# RF Globe Valve Trim Style/Characteristic=Micro-Form (Eq Pct), Port Diameter=3/8 Inch, Travel=3/4 Inch c/w pneumatic actuator c/w DVC6200 SAD positioner Note: Instrument Air supply and hook up by others)	Fisher
8	2	KE-68774 KE-68775	Key Phasor (Pump Motor) Model: 3300 By motor vendor.	Bently Nevada
9	8	VE/VT-68766 VE/VT-68768 VE/VT-68770 VE/VT-68772 VE/VT-68767 VE/VT-68769 VE/VT-68771 VE/VT-68773	Vibration Probes and Transmitter (Pump Motor) Model: 3300 by motor vendor.	Bently Nevada

10	4	TT/TE-68750 TT/TE-68752 TT/TE-68751 TT/TE-68753	Temperature Transmitter (motor bearing) Rosemount 3144PD1A2K5DA1B4M5CNQ4U1G1 Calibrated Range: 0-300 F 3144P: Temperature Transmitter, D1: Field Mount Housing, Dual-Compartment Housing, Aluminum, 1/2–14 NPT conduit entry, A: 4-20 mA with digital signal based on HART protocol, 2: Dual-Sensor Input, K5: FM IS, Non-incendive & Explosion-proof, DA1: HART Sensor and Process Diagnostic Suite: Thermocouple Diagnostic, Min/Max Tracking, B4: “U” Mounting Bracket for 2-inch pipe mounting - All SST, M5: LCD Display, CN: NAMUR Alarm and Saturation Levels, Low Alarm, Q4: 5-Point Calibration, U1: Hot Backup, G1: External Ground Lug Assembly Bearing RTDs (Pump Motor) Model: R-13476-1 100 Ohm RTDs, dual-elements, 3-wire supplied by motor vendor.	Rosemount Measurement Specialties
11	12	TE-68754 TE-68756 TE-68758 TE-68760 TE-68762 TE-68764 TE-68755 TE-68757 TE-68759 TE-68761 TE-68763 TE-68765	Winding RTDs (Pump Motor) Model: 10772-1 by motor vendor.	Measurement Specialties
12	4	TI/TW-68776 TI/TW-68778 TI/TW-68777 TI/TW-68779	Temperature Gauges (Lube Oil Return Pump) Model: 50EI60EXC4NH 0 250F BI-METAL THERMOMETER, 5" DIAL, STAINLESS STEEL HERMETICALLY SEALED CASE, 1/2" NPT CONNECTION TO THERMOWELL, EVERY ANGLE STEM, 0 to 250°F SCALE c/w Thermowell Model: 15W0400SF260SR150 THERMOWELL, 1.5" 150# RF CONNECTION, STAINLESS STEEL CONSTRUCTION, STRAIGHT SHANK, 4" INSERTION LENGTH	Ashcroft
13	4	TI/TW-68780 TI/TW-68782 TI/TW-68781 TI/TW-68783	Temperature Gauges (Lube Oil Return Motor) Model: 50EI60EXC4NH 0 250F BI-METAL THERMOMETER, 5" DIAL, STAINLESS STEEL HERMETICALLY SEALED CASE, 1/2" NPT CONNECTION TO THERMOWELL, EVERY ANGLE STEM, 0 to 250°F SCALE c/w Thermowell Model: 15W0400SF260SR150 THERMOWELL, 1.5" 150# RF CONNECTION, STAINLESS STEEL CONSTRUCTION, STRAIGHT SHANK, 4" INSERTION LENGTH	Ashcroft
14	4	-	Sight Glasses (Lube Oil Return Pump) Model: KE KSF-ST-2.00-V-S-R CAST BODY SIGHT FLOW INDICATOR, 2.0" 150# FLANGE CONNECTION, VITON SEALS, 316 SS BODY, ROTOR INDICATOR	Kenco
15	4	-	Sight Glasses (Lube Oil Return Pump Motor) Model: KE KSF-ST-1.50-V-S-R CAST BODY SIGHT FLOW INDICATOR, 1.5" 150# FLANGE CONNECTION, VITON SEALS, 316 SS BODY, ROTOR INDICATOR	Kenco

BILL OF MATERIAL - VALVES				
ITEM	QTY	CLIENT CODE	DESCRIPTION	MANUFACTURER
16	4	TBA	2" Gate Valve (Pump Drain) Valve, Gate, DSI, 2.00 Inch, CI 300, Std Port, RF, BB, A105 Body, API Trim 12, HWO, Graphite Pkg & Spiral Wound SS Gskt, API 602, Nace DSI 3C-2"-2131 A12-18	DSI
17	2	GLVF	2" Globe Valve (Steam CV bypass) Valve, Globe, DSI, 2.00 Inch, CI 300, Std Port, RF, BB, A105 Body, API Trim 5, HWO, Graphite Pkg & Spiral Wound SS Gskt, API 602, Nace DSI 3C-2"-2231 A5-18	DSI
18	8	GAVF	2" Gate Valve (Steam return, Double Block and Bleed) Valve, Gate, DSI, 2.00 Inch, CI 300, Std Port, RF, BB, A105 Body, API Trim 12, HWO, Graphite Pkg & Spiral Wound SS Gskt, API 602, Nace DSI 3C-2"-2131 A12-18	DSI
19	8	GABT	1" Gate Valve (LPDs and HPVs) 1" Gate Valve CL800, A105, THD, FHF, WB, 321SS Bellow Seals (Modified to THD x SW) c/w hex plug Bonney SHWL-12-T 1 321SS NACE	Bonney
20	2	GLBT	1" Globe Valve (LPD upstream of Steam Trap) 1" Globe Valve CL 800, A105, THD, FHF, WB, 321SS Bellow Seals (modified to THD x SW) Bonney SHWL-32-T-LE 1 321SS NACE	Bonney
21	2	GABT	3/4" Gate Valve (PT Block Valve) 3/4" Gate Valve, CL800, A105, THD, FHF, WB, 321SS Bellow Seals (modified to THD x SW) Bonney SHWL-12-T-LE 3/4 321SS NACE	Bonney
22	2	TBA	3/4"x1/2" Multiport Valve (PT Bleed Valve) 3/4 MNPT X 1/2 FNPT GAUGE VALVE 316SS BODY & TRIM, GAFOIL PACKING CM111M64TCNG c/w 1/2 316 S/S BLEED VALVE CM41M4 c/w 1/2 316 S/S HEX PLUG CM4P1M4	CENTURY
23	2	TBA	1" Ball Valve (Lube Oil HPV) Ball Valve, M2-SS Series, 1 Inch, 3-piece Bolted, CL 800 - 1920 psi, FP, SW x SW, SS Latch Lock Handle, CF8M Body, 316SS Trim, R-TFM Seats, Graphite Seals, ASME B16.34, API 608, API 607 Firesafe, NACE c/w hex plug Quadrant M2FSSRGLWW100	Quadrant
24	16	TBA	3/4" Ball Valve (Seal Flush LPDs) Ball Valve, M2-SS Series, .75 Inch, 3-piece Bolted, CL 800 - 1920 psi, FP, SW x SW, SS Latch Lock Handle, CF8M Body, 316SS Trim, R-TFM Seats, Graphite Seals, ASME B16.34, API 608, API 607 Firesafe, NACE c/w hex plug Quadrant M2FSSRGLWW075	Quadrant
25	8	TBA	1/2" Ball Valve (Seal Flush LPDs) Ball Valve, M2-SS Series, .50 Inch, 3-piece Bolted, CL 800 - 1920 psi, FP, SW x SW, SS Latch Lock Handle, CF8M Body, 316SS Trim, R-TFM Seats, Graphite Seals, ASME B16.34, API 608, API 607 Firesafe, NACE c/w hex plug Quadrant M2FSSRGLWW050	Quadrant
Notes:				
1. DELETED. 2. For details on seal system instruments and valves, please refer to Seal System BOM. 3. Tag Numbers: even numbers applicable to RP-62670, odd numbers applicable to RP-62671.				