

TỔNG CÔNG TY CỔ PHẦN
DỊCH VỤ KỸ THUẬT DẦU KHÍ VIỆT NAM
CÔNG TY CỔ PHẦN
DỊCH VỤ KỸ THUẬT PTSC THANH HÓA

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập - Tự do - Hạnh phúc

Số :...../TH-QLT&VHBD

Thanh Hóa, ngày 14 tháng 11 năm 2024.

V/v: Dịch vụ bảo dưỡng, hiệu chuẩn, sửa chữa
thiết bị đo lường điều khiển và cơ cấu chấp
hành của van, damper tại Nhà máy lọc hóa
dầu Nghi Sơn

Kính gửi: Quý Công ty

Công ty Cổ phần Dịch vụ Kỹ thuật PTSC Thanh Hóa (PTSC Thanh Hóa) hiện đang có nhu cầu thực hiện Dịch vụ bảo dưỡng, hiệu chuẩn, sửa chữa thiết bị đo lường điều khiển và cơ cấu chấp hành của van, damper tại Nhà máy lọc hóa dầu Nghi Sơn. Cụ thể như sau:

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
1	Flow Transmitter (FT)					Set	3			
1.1	113-FT-0030	Transmitter	Pressure Max: 5750 (kPag) Calibration Range: 0 - 75 (Kpa) Meter Range : 0 - 280 (t/h) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : 316L SS; IP66/67	Extraction Steam Line	Visual check: - Transmitter body visual check condition - Element visual check condition. Technical check: - Leak test for Mainifold x1.5WP, check with bubble/ pneumatic and ref.			ĐLVN 112:2002	-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)	
1.2	113-FT-0031	Transmitter	Pressure Max: 975 (kPag) Calibration Range: 0 - 25 (Kpa) Meter Range : 0 - 180 (t/h) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : 316L SS; IP66/67		PG - Test pressure with ref gauge and mA at 11 points (up and down) 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Give calib. report with uncertainty and accuracy./ pressure handpump, ref. digital PG and ref. mA				-		
1.3	113-FT-7315	Transmitter	Pressure Max: 14000 (kPag) Calibration Range: 0 - 25 (Kpa) Meter Range : 0 - 450 (t/h) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : 316L SS; IP66/67							-	
2	MOV Valve (HV)					Set	5				
2.1	113-HV-0005	Actuator Body valve	-Type of Body: Concentric Butterfly - Body Size: 32" inch; CL 150. - Type of motor: Electric Motor Actuator - Power supply: 690V AC, 3 Ph/50 Hz - Motor Rating (KW) : 0,21 - EnclosureZone2: EExd, Group IIB, T4 / IP68	Cooling Water Line	Visual check - Open Actuator and visual check inside condition, report with picture. - Oil and grease condition checking, report with picture. Technical check					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
2.2	113-HV-0006	Actuator Body valve	-Type of Body: Concentric Butterfly - Body Size: 32" inch; CL 150. - Type of motor: Electric Motor Actuator - Power supply: 690V AC, 3 Ph/50 Hz - Motor Rating (KW) : 0,21 - EnclosureZone2: EExd, Group IIB, T4 / IP68	Cooling Water Line	- Backup the configuration if any - Insulation test for motor 3 phase type/ megger - Contactor coil test for 3 phase type/ multimeter - Continuity test for DC motor type/ multimeter				-	
2.3	113-HV-0015	Actuator Body valve	-Type of Body: Concentric Butterfly - Body Size: 32" inch; CL 150. - Type of motor: Electric Motor Actuator - Power supply: 690V AC, 3 Ph/50 Hz - Motor Rating (KW) : 0,21 - EnclosureZone2: EExd, Group IIB, T4 / IP68	Cooling Water Line	- Diode test for for DC motor type/ multimeter - Thermal relay test/ multimeter - Manual strock test. - Apply the power, check code error if any.				-	
2.4	113-HV-0016	Actuator Body valve	-Type of Body: Concentric Butterfly - Body Size: 32" inch; CL 150. - Type of motor: Electric Motor Actuator - Power supply: 690V AC, 3 Ph/50 Hz - Motor Rating (KW) : 0,21 - EnclosureZone2: EExd, Group IIB, T4 / IP68	Cooling Water Line	- Local control strock test (Remote/Local/Off). - Test remote control + for on-off, try with different kid of command. + for control type, try and record actual 5 points (0%, 25%,				-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
2.5	113-HV-7341B	Actuator Body valve	-Type of Body: Gate Valve (BB-BG-OS&Y) - Body Size: 2" inch; CL 300. - Type of motor: Electric Motor Actuator - Power supply: 690V AC, 3 Ph/50 Hz - Motor Rating (KW) : 0,15 - EnclosureZone2: EExd, Group IIB, T4 / IP68	Ejector Condenser	50%, 75%, 100%) of feedback signal and mechanical indicator. - Test the digital output feedback.				-	
3	Level Transmitter (LT/LZT)					set	6			
3.1	113-LT-7342	Transmitter	Gauge connection mouting: 1-1/2 inch ASME#300RF Measuring range H (mm): 813 Calibration Range : - 406.5 to 406.5 mm Power supply : 24 VDC (2 wire) Output signal/span: 4-20mA with HART Commuication	Main Condenser	Visual check - Open cover and visual check inside condition, report with picture. - Oil and grease condition checking, report with picture if any.				-	
3.2	113-LT-7356	Transmitter	Gauge connection mouting: 4 inch ASME; CL300 Measuring range H (mm): 1640mm Calibration Range : 0 to 1640 mm Power supply : 24 VDC (Loop power) Output signal/span: 4-20mA with HART (Version 6)	Lube Oil Tank	Technical check - Backup the configuration if any - Insulation test L-N-G with shell./ multimeter - Continuity test for L-N, L-G and N-G/ multimeter				-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)	
3.3	113-LT-7371	Transmitter	Gauge connection mouting: 4 inch ASME; CL300 Measuring range H (mm): 330mm Calibration Range : 0 to 330 mm Power supply : 24 VDC (Loop power) Output signal/span: 4-20mA with HART (Version 6)	Control Oil Tank	<ul style="list-style-type: none"> - Apply the power, check code error if any. - Test actual level with water at 5 points (0%, 25%, 50%, 75%, 100%) of feedback signal and mechanical indicator./ ref. measuring tabe - Test the digital output feedback if any./ multimeter - Record information to report sheet. 				-		
3.4	113-LZT-7343A	Transmitter	Gauge connection mouting: 1-1/2 inch ASME#300RF Measuring range H (mm): 813 Calibration Range : - 406.5 to 406.5 mm Power supply : 24 VDC (2 wire) Output signal/span: 4-20mA with HART Commuication	Main Condenser						-	
3.5	113-LZT-7343B	Transmitter	Gauge connection mouting: 1-1/2 inch ASME#300RF Measuring range H (mm): 813 Calibration Range : - 406.5 to 406.5 mm Power supply : 24 VDC (2 wire) Output signal/span: 4-20mA with HART Commuication	Main Condenser						-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
3.6	113-LZT-7343C	Transmitter	Gauge connection mouting: 1-1/2 inch ASME#300RF Measuring range H (mm): 813 Calibration Range : - 406.5 to 406.5 mm Power supply : 24 VDC (2 wire) Output signal/span: 4-20mA with HART Commuication	Main Condenser					-	
4	Differential Pressure Transmitter (PDT)					set	3			
4.1	113-PDT-7352	Transmitter	Pressure Max: 0.75(MPa) Calibration Range: 0 - 5 (Bar) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/2" (female)	Lube Oil Tank	Visual check - Transmitter body visual check condition - Element visual check condition Technical check - Leak test for Mainifold x1.5WP, check with bubble/ pneumatic and ref. PG			ĐLVN 112:2002	-	
4.2	113-PDT-7371A	Transmitter	Pressure Max: 14(MPa) Calibration Range: 0 - 5 (Bar) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/2"	Control Oil Tank	- Test pressure with ref gauge and mA at 11 points (up and down) 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Give calib. report with uncertainty and				-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
			(female)		accuracy./ pressure handpump, ref. digital PG and ref. mA					
4.3	113-PDT-7371B	Transmitter	Pressure Max: 14(MPa) Calibration Range: 0 - 5 (Bar) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/2" (female)	Control Oil Tank					-	
5	Pressure Transmitter (PT/PZT)					set	9			
5.1	113-PT-7311	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Extraction Steam Line	Visual check - Transmitter body visual check condition - Element visual check condition Technical check - Leak test for Mainifold x1.5WP, check with bubble/ pneumatic and ref.			ĐLVN 112	-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
5.2	113-PT-7315	Transmitter	Pressure Max: 32(MPa) Calibration Range: 0 - 20 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Extraction Steam Line	PG - Test pressure with ref gauge and mA at 11 points (up and down) 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Give calib. report with uncertainty and accuracy. / pressure handpump, ref. digital PG and ref. mA				-	
5.3	113-PT-7371	Transmitter	Pressure Max: 14(MPaG) Calibration Range: 0 - 25 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : 316L SST; IP66/67 Process Connection: NPT1/2" (female)	Control Oil Tank					-	
5.4	113-PZT-7310A	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Extraction Steam Line					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
5.5	113-PZT-7310B	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Extraction Steam Line					-	
5.6	113-PZT-7310C	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Extraction Steam Line					-	
5.7	113-PZT-7372A	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Control Oil					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
5.8	113-PZT-7372B	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Control Oil					-	
5.9	113-PZT-7372C	Transmitter	Pressure Max: 16(MPa) Calibration Range: 0 - 8 (MPa) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART Material Body : ASTM CF-8M (316SST); IP66/67 Process Connection: NPT1/4" (female)	Control Oil					-	
6	Pressure Gauge (PG)					pcs	18			
6.1	113-PG-7315	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0~20MPaG Case Diameter : 100mm Liquid Filled: Not required	Extraction Steam Line	Visual check - Gauge body visual check condition - Element visual check condition			ĐLVN 76	-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)	
6.2	113-PG-7320	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: - 100~300kPaG Case Diameter : 100mm Liquid Filled: Not required	Extraction Steam Line	Technical check - Leak test for Mainifold x1.5WP, check with bubble/ pneumatic and ref. PG - Test pressure with ref gauge 5 points (up and down) 0%, 25%, 50%, 75%, 100%. Give calib. report with uncertainty and accuracy. / pressure handpump, ref. digital PG and ref. mA - do adjustment if require.				-		
6.3	113-PG-7330	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 400kPaG Case Diameter : 100mm Liquid Filled: Not required	Extraction Steam Line						-	
6.4	113-PG-7332	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: '- 0.1~0.2MPa Case Diameter : 100mm Liquid Filled: Glycerine	Extraction Steam Line						-	
6.5	113-PG-7340	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 400kPaG Case Diameter : 100mm Liquid Filled: Not required	Cooling Water Line						-	
6.6	113-PG-7341A	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 10MPa Case Diameter : 100mm Liquid Filled: Glycerine	Ejector Condenser						-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
6.7	113-PG-7341B	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 10MPa Case Diameter : 100mm Liquid Filled: Glycerine	Ejector Condenser					-	
6.8	113-PG-7351	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
6.9	113-PG-7352	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
6.10	113-PG-7353	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
6.11	113-PG-7355A	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
6.12	113-PG-7371	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 25MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
6.13	113-PG-7344A	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: - 100 - 300kPaG Case Diameter : 100mm Liquid Filled: Not required	Main Condenser					-	
6.14	113-PG-7344B	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: - 100 - 300kPaG Case Diameter : 100mm Liquid Filled: Not required	Main Condenser					-	
6.15	113-PG-7345A	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1000kPaG Case Diameter : 100mm Liquid Filled: Not required	Main Condenser					-	
6.16	113-PG-7345B	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1000kPaG Case Diameter : 100mm Liquid Filled: Not required	Main Condenser					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
6.17	113-PG-7355B	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
6.18	113-PG-7355C	Pressure Gauge	Size connection: NPT 1/2" inch Pressure Measuring Range: 0 - 1MPa Case Diameter : 100mm Liquid Filled: Yes	Lube Oil					-	
7	Temperature switch (TS)					pcs	2			
7.1	113-TS-7356	Temperature switch	Flange connection: 6" inch; ANSI #150 Design Temperature : 90 (oC) Power rating: 690VAC, 3 phase, 15KW Heating element Lenght: 1200 mm	Lube Oil	Visual check - TS body visual check condition - Element visual check condition Technical check - Test resistance of			O&M	-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
7.2	113-TS-7371	Temperature switch	Flange connection: 6" inch; ANSI #150 Design Temperature : 90 (oC) Power rating: 690VAC, 3 phase, 3 KW Heating element Lenght: 600 mm	Control Oil	switch / multimeter - Test temperature switch with ref metrology well, do 3 times to give average set-point. / Metrology well and ref. thermol meter - do adjustment if require. Noted: This is protection themorstat, that attaches on immersion heater. No Standard Function test thermostat: Put thermostat in to the water tank, heats water with portable heater near trip boil, check teamperature with ref. themormeter. - Thermostat will be testing with temp bath if they are compatible				-	
8	Temperature Gauge (TG)					pcs	5			

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
8.1	113-TG-7309	Temperature Gauge	Size connection: NPT 1/2" inch Dial Size: 100mm; Temperature Range : 0~700 (oC) Case Material : 304SS	Extraction Steam Line	Visual check - TG body visual check condition - Element visual check condition Technical check - Test temperature gauge with ref metrology well at the 5 points, give accuracy and uncertainty./ Metrology well and ref. thermol meter			ĐLVN 138:2004	-	
8.2	113-TG-7343	Temperature Gauge	Size connection: NPT 1/2" inch Dial Size: 100mm; Temperature Range : 0~100 (oC) Case Material : 304SS	Main Condenser		-				
8.3	113-TG-7344	Temperature Gauge	Size connection: NPT 1/2" inch Dial Size: 100mm; Temperature Range : 0~100 (oC) Case Material : 304SS	Main Condenser		-				
8.4	113-TG-7356	Temperature Gauge	Size connection: NPT 1/2" inch Dial Size: 100mm; Temperature Range : 0~100 (oC) Case Material : 304SS	Lube Oil		-				
8.5	113-TG-7371	Temperature Gauge	Size connection: NPT 1/2" inch Dial Size: 100mm; Temperature Range : 0~100 (oC) Case Material : 304SS	Control Oil		-				

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VND)	Thành tiền (VND)
9	Level Gauge (LG)					pcs	3			
9.1	113-LG-7356	Level Gauge	Process Connection: ANSI 1" #300 Visible Length: 1735mm; Body Material: SUS304L	Lube Oil	Visual check - Cleaning and check the float and indicator report with picture. Technical check - Test actual level with water at 5 points (0%, 25%, 50%, 75%, 100%) check mechanical indicator./ Metrology well and ref. thermol meter - Record information to report sheet.			O&M	-	
9.2	113-LG-7371	Level Gauge	Process Connection: ANSI 1" #300 Visible Length: 375mm; Body Material: SUS304L	Control Oil					-	
9.3	113-LG-7343	Level Gauge	Process Connection: ANSI 1" #300 Visible Length: 580mm; Body Material: SUS304L	Main Condenser					-	
10	Temperature Transmitter (TT)					pcs	6			
10.1	113-TT-7312A	Transmitter	Element Type: TC Type-K Housing Material: Cast Aluminum Alloy; IP66/67 Temperature range: 0 - 450 (oC) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART	Extraction Steam Line	Visual check - Transmitter body visual check condition - Element visual check condition Technical check - Test temperature			SOTEC.HC.01:2020	-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
10.2	113-TT-7312B	Transmitter	Element Type: TC Type-K Housing Material: Cast Aluminum Alloy; IP66/67 Temperature range: 0 - 450 (oC) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART	Extraction Steam Line	transmitter with ref metrology well at the 5 points, give accuracy and uncertainty./ Metrology well and ref. thermol meter				-	
10.3	113-TT-7315	Transmitter	Element Type: TC Type-K Housing Material: Polyurethane-covered Aluminum; IP66/67 Temperature range: -180 to 1372 (oC) Power supply : 24V DC Output Signal: 4-20 mA HART	Steam Turbine					-	
10.4	113-TT-7330	Transmitter	Element Type: RTD Pt100 3-Wire Housing Material: Cast Aluminum Alloy; IP66/67 Temperature range: 0 - 100 (oC) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART	Cooling Water Line					-	
10.5	113-TT-7340	Transmitter	Element Type: RTD Pt100 3-Wire Housing Material: Cast Aluminum Alloy; IP66/67 Temperature range: 0 - 100 (oC) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA	Cooling Water Line					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
			HART							
10.6	113-TT-7371	Transmitter	Element Type: TC Type-K Housing Material: Cast Aluminum ; IP66/68 Temperature range: 0 - 100 (oC) Power supply : 24V DC, Loop powered Output Signal: 4-20 mA HART	Control Oil					-	
11	Temperature Element (TE)					pcs	8			
11.1	113-TE-7312A	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 - 450 (oC) Length: 150mm	Extraction Steam Line	Visual check - Element visual check condition Technical check - Insulation test for wire-shell/ megger - Test temperature Element with ref metrology well at the 5 points, give accuracy and uncertainty. / Metrology well and ref. thermol meter			ĐLVN 125:2003 for RTD, O&M for TC	-	
11.2	113-TE-7312B	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 - 450 (oC) Length: 150mm	Extraction Steam Line					-	
11.3	113-TE-7315	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: -180 to 1372 (oC) Length: 150mm	Extraction Steam Line					-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
11.4	113-TE-7330	Sensor	Element Type: RTD Pt100 3-Wire Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 to 100 (oC) Length: 400mm	Cooling Water Line					-	
11.5	113-TE-7340	Sensor	Element Type: RTD Pt100 3-Wire Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 to 100 (oC) Length: 400mm	Cooling Water Line					-	
11.6	113-TE-7356	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 to 100 (oC) Length: 350mm	Lube Oil					-	
11.7	113-TE-7371A	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 to 100 (oC) Length: 350mm	Control Oil					-	
11.8	113-TE-7371B	Sensor	Element Type: TC Type-K Size : 1/2 in NPT; Material: 316 SS Temperature range: 0 to 100 (oC) Length: 350mm	Control Oil					-	
12	Control valve (UV/TV/PV)					set	5			

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
12.1	113-UV-7306	Actuator Body valve Solenoid Limit Switch Regulator	Body Type: Ball Valve Size: 1" inch, CL 600 Solenoid type: 3/2 way Limit Switch: Open/close	Extraction Steam Line	Visual check - visual check outside condition, report with picture. Technical check - Continuity test for solenoid/ multimeter - Regulator function test/ ref. gauge - Small Pressure Gauge of Regulator and Positioner will be checking with 3 points - Actuator leak test, "don't do the leak test for valve-body" - Strock test with hand wheel if any - Apply the power, check code error if any. - Test remote control + for control type, try and record actual 5 points (0%, 25%, 50%, 75%, 100%) of feedback signal and mechanical indicator. - Test the digital output feedback if any.			O&M	-	
12.2	113-UV-7311	Actuator Body valve Solenoid Limit Switch Regulator	Body Type: Globe Valve Size:2-1/2 " inch, CL 600 Solenoid type: 3/2 way Limit Switch: Open/close	Extraction Steam Line		-				
12.3	113-UV-7331	Solenoid Limit Switch Regulator Transmitter	Body Type: Globe Valve Size: 3 " inch, CL 600 Solenoid type: 3/2 way Limit Switch: Open/close	Ejector Condenser		-				
12.4	113-TV-7305	Actuator Body valve	Body Type: Globe Valve Size:1 " inch, CL 600 Solenoid type: 3/2 way Limit Switch: Open/close	Steam Turbine		-				
12.5	113-TV-7312	Actuator Body valve	Body Type: Globe Valve Size: 2 " inch, CL 600 Solenoid type: 3/2 way Limit Switch: Open/close	Extraction Steam Line		-				
13	Junction Box (JB)					pcs	9			

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
13.1	113-JBA-003	Box	Size: D400xH200xW400 (mm) Terminal block: 49 point Material : 316L SS IP 66		Visual check - Open cover and visual check inside condition and clean, report with picture. Technical check - Insulation test for L-N-G with shell./ megger - Insulation test for single terminal with case - Continuty test for internal wire and pin. / multimeter			O&M	-	
13.2	113-JBA-004	Box	Size: D400xH200xW400 (mm) Terminal block: 49 point Material : 316L SS IP 66						-	
13.3	113-JBL-0005	Box	Size: D450xH200xW400 (mm) Terminal block: 73 point Material : 316L SS IP 66						-	
13.4	113-JBL-0010	Box	Size: D400xH200xW400 (mm) Terminal block: 49 point Material : 316L SS IP 66						-	
13.5	113-JB-A-7331	Box	Size: D300xH200x300 (mm) Terminal block: 24 point Material : 316L SS IP 66						-	
13.6	113-JB-A-7341	Box	Size: D300xH200x300 (mm) Terminal block: 24 point Material : 316L SS IP 66						-	

No.	Tag name	Sub-part	Specification	Location	Method Statement for investigation (Biện pháp đánh giá)	Unit	Q'ty	Applier Standard	Đơn giá (VNĐ)	Thành tiền (VNĐ)
13.7	113-JB-L-7342	Box	Size: D300xH200x300 (mm) Terminal block: 24 point Material : 316L SS IP 66						-	
13.8	113-JB-L-7343	Box	Size: D300xH200x300 (mm) Terminal block: 24 point Material : 316L SS IP 66						-	
13.9	113-JB-LZ-7344	Box	Size: D300xH200x300 (mm) Terminal block: 24 point Material : 316L SS IP 66						-	
Tổng cộng trước VAT										

Ghi chú:

- Đơn giá trên chưa bao gồm thuế GTGT;

3. Thời gian và địa điểm cung cấp dịch vụ

- Thời gian cung cấp dự kiến: Ngay sau khi ký kết hợp đồng, theo kế hoạch của PTSC Thanh Hóa
- Địa điểm thực hiện: Nhà máy Lọc hóa dầu Nghi Sơn – Xã Hải Yến, Tx. Nghi Sơn, tỉnh Thanh Hóa hoặc địa điểm khác theo yêu cầu của PTSC Thanh Hóa
- Người liên hệ thực hiện: Ngụy Như Lập (Mr.)-SĐT: 0966862615

4. Thời gian và hình thức nhận thư chào giá:

- Thời gian: Bảo đảm PTSC Thanh Hóa nhận được thư chào giá trước 09 giờ ngày 17/01/2025.
- Hình thức nhận chào giá: Nộp trực tiếp/ chuyển phát nhanh bằng phong bì kín
- Địa chỉ: Công ty Cổ phần Dịch vụ Kỹ Thuật PTSC Thanh Hóa – 268 Trần Nhật Duật, Phường Trúc Lâm, Tx. Nghi Sơn, tỉnh Thanh Hóa

- Người liên hệ: Lê Thị Hương Thanh (Ms.)-SĐT: 0977104527

5. Điều kiện xem xét trúng thầu:

- Báo giá được tiếp nhận trước 09 giờ ngày 17/01/2025
- Đáp ứng yêu cầu kỹ thuật.
- Đáp ứng thời gian giao hàng
- Có giá chào thấp nhất

Xin chân thành cảm ơn!