


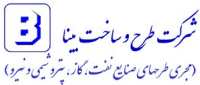















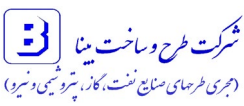
Owner:							PARS PETROCHEMICAL COMPANY		Contractor:		
							PROPANE DEHYDROGENATION (PDH) PROJECT				
MC:	Duty Specification for Corrosion Inhibitor Dosing Package (81-W-503)										
Document Number:		Project Code	Sec.	Phase Code	Department	Doc. Type	Serial No.	Rev.:	Page		
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<div style="text-align: center;"> <h2>Duty Specification for Corrosion Inhibitor Dosing Package (81-W-503)</h2> </div>											
07	27-Sep-25	Final Issue			M.Fallahi	M.Jamshidi	M.H.Eshraghi				
06	25-Aug-25	Final Issue			M.Fallahi	M.Jamshidi	M.H.Eshraghi				
05	7-May-25	Final Issue			M.Fallahi	M.Jamshidi	M.H.Eshraghi				
04	26-Feb-25	Issued For Approval			M.Fallahi	M.Jamshidi	E.Shafaghathi				
03	27-Jan-25	Issued For Approval			M.Fallahi	M.Jamshidi	E.Shafaghathi				
02	11-May-24	Issued For Approval			M.Afsar	A.Hadipour	A.Aghaei				
01	25-Dec-23	Issued For Approval			M.Afsar	A.Hadipour	A.Aghaei				
00	22-Nov-23	Issued For Approval			F.Ebrahimi	A.Hadipour	D.Mirblouki				
Rev.	Date	Purpose of Issue			Prepared	Checked	Approved				
										Class: 1	

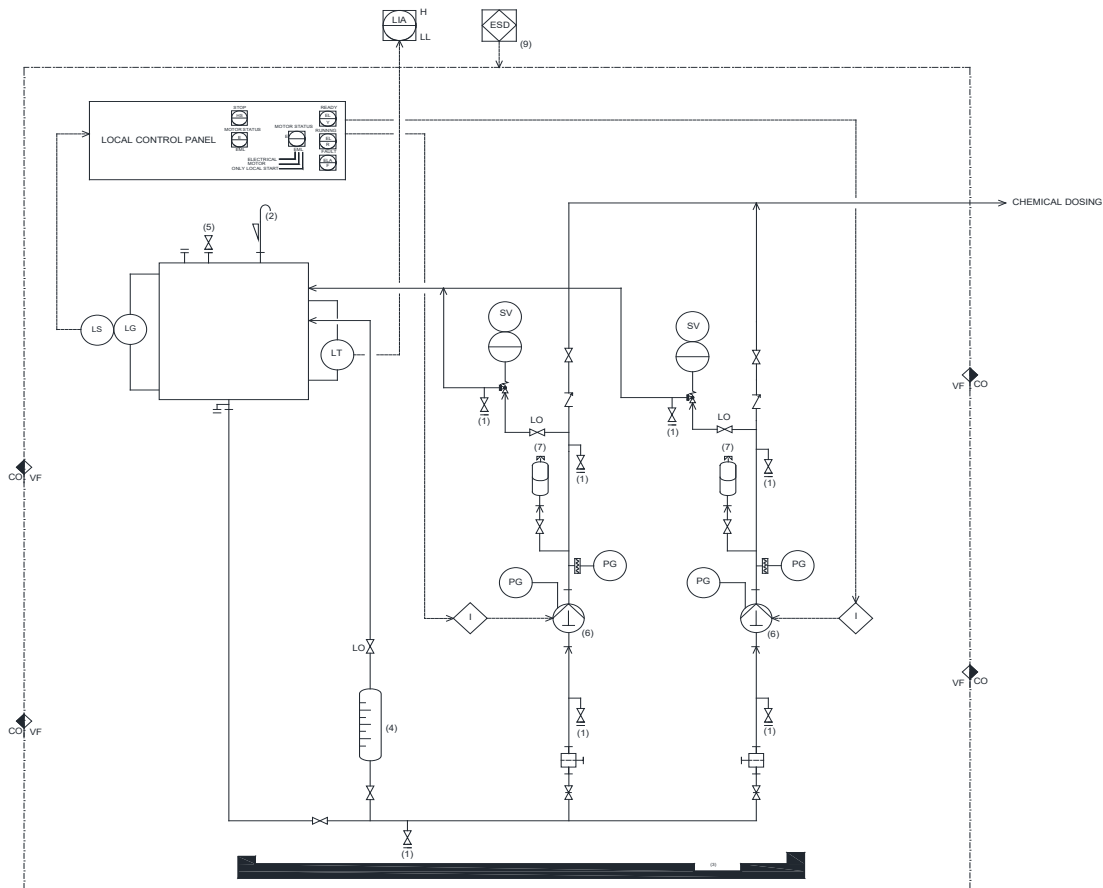
OWNER:  شرکت پتروشیمی پارس Pars Petrochemical Co.	Pars Petrochemical Company						contractor:  پناه صنعت پارت Panah Sanat Part شرکت طرح و ساخت پناه (گروهی فرمای صنایع نفت، گاز، پتروشیمی و نیرو)																			
	Propane Dehydrogenation (PDH) Project																									
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TABULATION OF REVISED PAGES																										
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1	x	x	x	x	x	x	x	x	37									73								
2	x	x	x	x	x	x	x	x	38									74								
3	x	x		x		x			39									75								
4	x	x	x	x	x	x			40									76								
5	x	x			x	x	x		41									77								
6	x	x	x	x		x			42									78								
7									43									79								
8									44									80								
9									45									81								
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OWNER:		 Pars Petrochemical Company Propane Dehydrogenation (PDH) Project Duty Specification for Corrosion Inhibitor Dosing Package (81-W-503)					contractor:	
MC:								
Document Number :		3981-50-DE-PR-DSP-016					Rev:	Page:
							07	3 of 6
1	Note	General Information						Rev
2		Project Description						
3		Project Description						
4		Pars Petrochemical Company intends to build Propane Dehydrogenation (PDH) Plant for Producing Propylene as Product near Bushehr, Pars Petrochemical Company, Iran. EPCC Contractor for PDH plant: Bina EPC Contractor-Panah Sanat Part Company. Main product is 600 KTY Propylene.						
5		The plant is to produce Propylene comprises of several main process units, including Feed preparation, Reaction Trains, Gas Compression, CO2 Removal, Separation and Fractionation.						
6								
7		Injection Package Description						
8		This document defines the process basic requirement for the design and supply of Corrosion Inhibitor Dosing Package for PDH. The Corrosion Inhibitor Dosing Package has to be utilized in cooling water basin to reduce corrosion to an acceptable level.						
9		Chemical media will be stored in storage tank. The chemical storage tank shall have a minimum working capacity of 3 days based on the normal flow rate.						
10		Injection is ensured by metering pumps, which is stopped/protected by tank low low level (to be finalized by package vendor.)						
11		Package Requirements						
12		Scope of supply and work shall include the complete system consisting of mainly the equipment, machinery, piping, electrical, instrument etc. but not limited to following items. (see details in next pages)						
13		- One Storage /Dilution Vessel (with mechanical agitator in case chemicals are supplied as solid or dilution is required): included in package unit 81-W 503.						
14		- Two Sets of Dosing Pumps: included in package unit 81-W-503 with discharge pulsation dampeners.						
15		- Each pump shall operate at all flow rates between 10 and 100% of design capacity.						
16		- The injection pumps shall be design for 200% of the normal flow.						
17		- Connecting piping valves and accessories.						
18		- Required instrumentation and control for safe operation.						
19		-Discharge pulsation dampener for each pump individually.						
20		- One set of calibration pot (common for both pumps).						
21		- The vendor shall provide a skid mounted injection package Including above mentioned items to make sure package operates safety						
22		and efficiently.						
23		- This skid shall have proper facilities for maintenance, operation and easy transportation.						
24		NOTE: one common plant air driven portable loading pump shall be provided to transfer chemicals from barrels to tank.						
25		Package type A: Package type A is considered standalone package unit with no (or very limited) interface with DCS, ESD and F&G systems. (4)						
26								



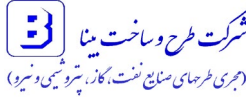

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MC:		<div>  <div> شرکت مهندسی پارس Pars Petrochemical Co. </div> </div>						<div>  <div> پناه صنعت پارت Parah Sanat Part </div> </div> <div>  <div> شرکت طرح و ساخت پناه پناه صنعت پارت </div> </div>	
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1	Note									Rev		
2	Item No.	81-W-503				Service of Unit				Corrosion Inhibitor Injection Package		
3	No. Required	Working	1	Standby	0	Total	1	Operation		Continuous		
4	Injection System for	Cooling Tower Package										
5	Liquid Injected	Corrosion Inhibitor										
6												
7		INJECTION LIQUID										
8	Liquid	NALCO 3DT179 (1)				Temperature				Ambient C		
9	Injection Flow	l/h	Nor.	14 (1)	Rated	28 (1)	Specific Gravity				Kg/Lit 1 ± 0.1 (1), (14)	
10	Cooling Water Flow Rate to be Treated	30000				m3/h		Dosage	(1)	Viscosity	0.9 (1) centipoise	
11	Make Up Solvent	N/A				m3/h		Vapour Pressure				(1)
12	Pressure Required at Injection Point	0				Bar(g)		Corrosive/Erosive Fluid				No / No (1)
13								Hazardous/Flammable/Toxic				No / No / No (1)
14		INJECTION PUMP				SOLUTION TANK						
15	Item No.					Item No.				No. Required 1		
16	Service	Corrosion Inhibitor Injection Pump				Service				Corrosion Inhibitor Tank		
17	No. Required	Working	1	Standby	1							
18	Flow Nor.	14 (1)				l/h		Storage Time	Day	3 (28)		
19	Flow Rated	28 (1)				l/h		Capacity	m3	1.5 (1) (28)		
20	Press. At Discharge	3				Bar(g)		Design Pressure	Bar(g)	ATM+Full of Liquid		
21	Press. At Suction	ATM				Bar(g)		Design Temp.	C	65 (12)		
22	Type	Metering Pump				Operating Press.				Bar(g) Atm.		
23	Cylinder/Case	Plastic Material (7)				Operating Temp.				C Amb.		
24	Plunger/Int					Type				(3)		
25	Diaphragm					Size				mm (3)		
26	BHP	(3)				kW		Thickness	mm	(3)		
27						Buffer Tank Volume				m3 N/A		
28	Capacity Control Mode	Manual				Material				PP/PE/HDPE		
29	Capacity Control range %	10-100				Accessories				<input checked="" type="checkbox"/> Level Gauge <input type="checkbox"/> Measuring Cup		
30	Capacity Control Type/Signal	Local /				<input type="checkbox"/> Baffles <input type="checkbox"/> Level Switch <input type="checkbox"/> Inner Basket						
31	Capacity Control	Stroke Adjustment				<input type="checkbox"/> Floating Cover <input type="checkbox"/> Steam Bubbling <input checked="" type="checkbox"/> Level Transmitter						
32	Relief Valve Set.	barg 4.5				<input type="checkbox"/> Steam Heater <input type="checkbox"/> Electrical Heater						
33	Design Temp.	C 65 (12)				Design Pressure				Bar(g) 4.5		
34		AGITATOR										
35	Agitator Required	No (1)				Item No.				Service		
36	No. Req'd.					Mat.						
37	Type											
38		ACCESSORIES (See sheet 5/6)										
39	<input checked="" type="checkbox"/> Strainers	<input checked="" type="checkbox"/> Relief Valves	<input checked="" type="checkbox"/> Pulsation Dampener	<input checked="" type="checkbox"/> Calibration Pot	<input checked="" type="checkbox"/> Pump Pressure Gauge							
40	<input type="checkbox"/> Sample Connection											
41		INSTALLATION										
42	Location	Under Shelter (1)				Insulation Required		NO (1)		Steam / Electrical Tracing	No / No (1)	
43	Heating Cond.	(1)				Winterization Required		No		Tropicalization Required	Yes	
44						NACE Requirement		NO				
45	Site AMB. Temp.	Min. 5				Max. 48		C				
46												

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	Propane Dehydrogenation (PDH) Project							
	Duty Specification for Corrosion Inhibitor Dosing Package (81-W-503)							
MC: <div> APG</div>	Project code	Sec.	Phase Code	Department	Doc Type	Serial No.	<div> شرکت طرح و ساخت مینا (مهری طراحی صنایع نفت، گاز، پتروشیمی و نیرو)</div>	
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- Notes:
- 1) Low point drain.
 - 2) Package is located in safe area.
 - 3) Drain and catch tub.
 - 4) Calibration device with scale.
 - 5) Filling.
 - 6) Dosing pump with manual stroke adjustment and membrane break indicator.
 - 7) Screwed connection.
 - 8) One common portable loading pump shall be provided by vendor.
 - 9) In case of plant shut down (If Required).

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1	Note							
2		Notes						
3								
4		1) To be finalized according to chemical Vendor's information.						
5		2) DELETED						
6		3) To be specified by package vendor.						
7		4) Package type A is considered standalone package unit with no (or very limited) interface with DCS, ESD and F&G systems. For more details refer to : General Specification for Package Unit Control System "3981-00-BA-IN-SPC-021".						
8		5) Injection point: Cooling Tower Basin. however its allowable to be recommended by the vendor.						
9		6) Vessel elevation to be specified by vendor based on pump NPSH and piping requirement.						
10		7) Minimum requirement.						
11		8) For site condition and available utilities, refer to Basic engineering design data and Site condition(3981-00-BA-PR-SPC-003)						
12		9) For package battery limit refer to: PID NO. 3981-50-DE-PR-PID-002~004.						
13		10) All equipments,line instruments shown within package limit are required as minimum and to be finalized By package vendor.						
14		11) Pulsation dampener for pump suction shall be considered based on vendor recommendation.						
15		12) In case of considering shelter for package.						
16		13) DELETED						
17		14) At amb. temp.						
18		15) The dosing will be adjusted by means of the variable stroke adjustment either manually or automatically by signal from DCS.						
19		16) The tank must be provided with inlets for filling of chemicals and water (if required).						
20		17) Stroke shall be capable of being changed manually even during operation.						
21		18) All the measures for seasonal condition changes shall be foreseen by vendor, taking into account the severe climatic conditions,						
22		19) All the requirements for start-up or shut down (if any), to be advised by vendor						
23		20) DELETED						
24		21) DELETED						
25		22) Equipment and machinery shall be provided so that the unit can operate for at least three years without major overhaul or inspection.						
26		23) Block and bypass valves shall be provided for all control valves unless limited and restricted by Process nature and safety requirements.						
27		24) Materials of construction and corrosion allowances shall be considered for a minimum of 25 years depreciation of the unit						
28		25) DELETED						
29		26) LT is required for solution tank.						
30		27) DELETED						
31		28)To be confirmed by vendor,considering that minimum working capacity of 3 days based on the normal flow rate.						
32		29) The injection point should be suggested by vendor and all necessary equipment (regulation valve, control loop) is in vendor scope.						
33								
34								