



Foster Wheeler USA Corporation

Contract N.: 1310087902
 Client: Valero Refining Company - Texas
 Location: Texas City, Texas
 Project: Valero Refinery Reconfiguration (TCRR)

Piping Material Specification			
Spec. No. : 10087902-SP-50-03			
Class : LSPD			
Client Ref.	Rev. No.	Issue Date	Page
VALERO	1	03 Jun 02	1
Compared with:	0	28 Feb 02	

Appr. by: L.SMITH Issued for : E Checked by:T.WILLIAMSON
 Issued by: T.WILLIAMSON

Service:
 CHLORINATED WATER, CHEMICAL INJECTION (NX1100),
 (FOR BRANCH CONNECTIONS SEE ATTACHMENT "A")

Gaskets : FLAT RING TEFLON (TFE)	Rating/Facing : CL125 FF	Corrosion : 0.000"	Facing Finish : ASME B16.5
			Block Valve Trim : PVC
			Weld Quality Insp : PER JOB SPEC SP-90-02
			Stress Relief : NO

Materials : PVC PIPING AND VALVES (SEE GENERAL NOTES 1 THRU 4)	Temp/Press Limits : 150 PSIG AT 120F, 50 PSIG AT 140F MAX. TEMP.
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Item Name	Range			Det	Rev
Unique/Client* Code	from	to			
CHECK VALVE 519CA0001	1/2"	2"		CHE	
Body Mat'l : POLYVINYL CHLORIDE ASTM D1748 CL.12454-B Codes : ASME B31.3 Body constr. : DOUBLE UNION DESIGN Rating : 150# Ends : S.W. Trim constr. : BALL TYPE,HORIZONTAL/VERTICAL INSTALLATION Trim Mat'l : PVC BALL AND VITON O-RING SEALS.					
BALL VALVE 519BA0001	1/2"	2"		BAL	
Body Mat'l : POLYVINYL CHLORIDE ASTM D1748 CL.12454-B Codes : ASME B31.3 Body constr. : FULL BORE, TRUE UNION DESIGN, Rating : 150# Ends : S.W. Trim constr. : TRU-BLOC BALL Trim Mat'l : PVC BALL, TFE SEATS, AND VITON O-RING SEALS. Operator : LEVER					
PIPE A/G 548SD0001	1/2"	4"	SCH. 80	PIP	
Material : PVC 1120 PER ASTM D1785 Manufact. : NON-METALLIC PER B31.3 Codes : ASME B36.10 Ends : P.E.					

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Continue....



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FLANGE	1/2"	4"	SCH. 80	FLG
568NM0001				

Type : S.W.
Material : PVC PER ASTM D2467 CL.12454-B
Codes : ASME B16.5
Rating : **150#**
Ends : **FF**

BLIND FLANGE	1/2"	4"		FBL
568BM0001				

Material : PVC PER ASTM D2467 CL.12454-B
Codes : ASME B16.5
Rating : **150#**
Ends : **FF**

90 ELBOW	1/2"	4"	SCH. 80	90E
558HM0002				

Material : PVC PER ASTM D2467 CL. 12454-B
Component : 90 DEGREES ELBOWS
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

45 ELBOW	1/2"	4"	SCH. 80	45E
558HM0001				

Material : PVC PER ASTM D2467 CL. 12454-B
Component : 45 DEGREES ELBOWS
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

CAP	1/2"	4"	SCH. 80	CAP
558HM0003				

Material : PVC PER ASTM D2467 CL. 12454-B
Component : CAP
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

TEE	1/2"	4"	SCH. 80	TEE
558HM0005				

Material : PVC PER ASTM D2467 CL. 12454-B
Component : TEE
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

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RED.TEE 1/2" 4" **SCH. 80** TER
558FM0003

Material : PVC PER ASTM D2467 CL. 12454-B
Component : REDUCER TEE
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

FULL CPLG. 1/2" 4" **SCH. 80** CPL
558HM0004

Material : PVC PER ASTM D2467 CL. 12454-B
Component : FULL COUPLING
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

RED.COUPLING 1/2" 4" **SCH. 80** RCP
558FM0002

Material : PVC PER ASTM D2467 CL. 12454-B
Component : REDUCER COUPLING.
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

RED.BUSHING 1/2" 4" **SCH. 80** BUS
558FM0001

Material : PVC PER ASTM D2467 CL. 12454-B
Component : REDUCER BUSHING
Codes : AS PER MANUFACTURER STANDARD
Ends : **S.W.**

MACHINE BOLT 1/2" 4" STM
571BL0001

Material : ASTM A307 GR.B / WITH (1) HEAVY HEX NUT ASTM A563 GR.B
Thr'd Code : ANSI B18.2.1 & B18.2.2
Note : BOLTING SHALL COMPLY WITH JOB SPEC 52A3

GASKET FF 1/2" 4" GASFF
576GD0001

Material : FLAT RING GRAPHOIL
Codes : DIMENSIONS PER ASME B16.21
Rating : **150#**
Ends : **FF**

General Notes:

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- 1.) Use Union Or Coupling To Join Pipe. Flanged Joint To Be Used Only Where Indicated On EFD'S.
- 2.) Couplings Shall Not Be Used For Branch Connections Use Inline Only.
- 3.) Temperature Instrument Connection Shall Be NPS 1-1/2" Flanged.
- 4.) Pressure Instrument Connection Shall Be NPS 3/4" Socket-weld.

END OF DOCUMENT

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ATTACHMENT "A"

REINFORCEMENT CHART																				
APPLICABLE TO PIPE SPECIFICATION (S) : LSPD																				
MATERIAL (S) :															P/SE :		C.A. : NONE			
DESIGN LIMIT (S) : 150 PSIG AT 120 F, 50 PSIG AT 140F MAX. TEMP.																				
NOM. SIZE	NOM. THICK.	NOMINAL SIZE OF BRANCH CONNECTION (INCHES)																		
		1/2	3/4	1	1 1/2	2	3	4	6	8	10	12	14	16	18	20	24			
1/2	80	T																		
3/4	80	RT	T																	
1	80	RT	RT	T																
1 1/2	80	RT	RT	RT	T															
2	80	RT	RT	RT	RT	T														
3	80	RT	RT	RT	RT	RT	T													
4	80	RT	RT	RT	RT	RT	RT	T												
6																				
8																				
10																				
12																				
14																				
16																				
18																				
20																				
24																				

LEGEND :

- T = TEE
- RT = REDUCING TEE
- RE = TEE AND REDUCER OR REDUCING INSERT
- SK = SOCKOLET, SW ELBOLET OR LATROLET
- TH = THREDOLET, THD ELBOLET OR LATROLET
- W = WELDOLET, BW ELBOLET OR LATROLET
- LW = LONG WELD NECK FLANGE
- TB = TEE AND BUSHING
- CA = CALCULATE
- F1 = STUB IN WITH 3/8" FILLET WELD
- P2 = STUB IN WITH 2" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)
- P3 = STUB IN WITH 3" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)
- P4 = STUB IN WITH 4" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)
- P5 = STUB IN WITH 5" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)
- P6 = STUB IN WITH 6" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)
- P7 = STUB IN WITH 7" WIDE PAD (PAD TO BE SAME THICKNESS AS RUN SIZE)

NOTE : ANY SITUATION NOT COVERED BY THE ABOVE CHART SHOULD BE BROUGHT TO THE ATTENTION OF THE ASSIGNED PIPING ENGINEER.