



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 : AR1			
Client Ref.	Rev. No.	Issue Date	Page
VALERO	3	03 Jun 02	1
Compared with:	2	28 Feb 02	

Appr. by: L.SMITH

Issued for : E
Issued by: T.WILLIAMSON

Checked by: T.WILLIAMSON

Service:
PROCESS FLUIDS, CHEMICAL INJECTION,
(FOR BRANCH CONNECTIONS SEE ATTACHMENT "A")

Gaskets : SPIRAL WOUND GRAPHITE / S.S.304	Rating/Facing : CL150 RF	Corrosion : 0.030" (0.75MM)	Facing Finish : ASME B16.5	Block Valve Trim : API TRIM No. 10	Weld Quality Insp : PER JOB SPEC -52A1	Stress Relief : NO (See Note 8)
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Materials : 304L SS PIPING; 316L SS SW/THDD VALVES; 316 SS FLGD. VALVES.(SEE GENERAL NOTES 1 THRU 23)	Temp/Press Limits : 230 PSIG AT -20F TO 100F ; 195 PSIG AT 200F ; 175 PSIG AT 300F ; 160 PSIG AT 400F ; 145 PSIG AT 500F ; 140 PSIG AT 600F ; 125 PSIG AT 650F ; 110 PSIG AT 700F ; 95 PSIG AT 750F ; 80 PSIG AT 800F MAX. TEMP. (See Note 9)
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Item Name	Range		Det	Rev
Unique/Client* Code	from	to		
GATE VALVE 516GQ0005	1/2"	2"	GAT	
Body Mat'l : ASTM A182 GR.F316L Codes : API 602 Body constr. : WELDED BONNET Rating : 800# Ends : S.W. Trim constr. : PLAIN SOLID WEDGE, O.S.& Y. Trim Mat'l : API TRIM N.10 (SS.316 TRIM) Bolt Mat'l : PER API STANDARD 602. Packing : GRAPHITE PACKING . Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9 Operator : HANDWHEEL				
GATE VALVE 515GA0001	3"	24"	GAT	
Body Mat'l : ASTM A351 GR.CF8M Codes : API 600 Body constr. : BOLTED BONNET Rating : 150# Ends : RF Face finish : ASME B16.5 Trim constr. : PLAIN OR FLEXIBLE SOLID WEDGE, O.S.& Y. Trim Mat'l : API TRIM N.10 (SS.316 TRIM) Bolt Mat'l : PER API STANDARD 600. Gasket Mat'l : PER API STANDARD 600. Packing : GRAPHITE PACKING . Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9 Operator : HANDWHEEL				

* Client codes only, not including sizes



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GATE VALVE N 14" 24"
515GA0002

GATN

Body Mat'l :ASTM A351 GR.CF8M
Codes : API 600
Body constr. :BOLTED BONNET
Rating : 150#
Ends : RF
Face finish :ASME B16.5
Trim constr. :PLAIN OR FLEXIBLE SOLID WEDGE, O.S.& Y.
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 600.
Gasket Mat'l :PER API STANDARD 600.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : GEAR OP (N) PINION SHAFT AT RIGHT ANGLE TO RUN OF VALVE.

GATE V.FP 1/2" 2"
516GA0001

GAFF

Body Mat'l :ASTM A182 GR.F316
Codes : API 602
Body constr. :BOLTED BONNET, FULL PORT.
Rating : 150#
Ends : RF
Face finish :ASME B16.5
Trim constr. :PLAIN SOLID WEDGE, FULL PORT, O.S. & Y.
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 602.
Gasket Mat'l :PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

GATE V.FP 1/2" 2"
516GB0002

GAFF1

Body Mat'l :ASTM A182 GR.F316
Codes : API 602
Body constr. :BOLTED BONNET, FULL PORT.
Rating : 300#
Ends : RF
Face finish :ASME B16.5
Trim constr. :PLAIN SOLID WEDGE, FULL PORT, O.S. & Y.
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 602.
Gasket Mat'l :PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

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GATE V.SWxTH 1/2" 2" **GATST**
516GQ0001

Body Mat'l : ASTM A182 GR.F316L
Codes : API 602
Body constr. : WELDED BONNET
Rating : 800#
Ends : S.W. x THDD
Trim constr. : PLAIN SOLID WEDGE, O.S.& Y.
Trim Mat'l : API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l : PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

GATE V. FLG. 1/2" 2" **GAF**
516GA0002

Body Mat'l : ASTM A182 GR.F316
Codes : API 602
Body constr. : BOLTED BONNET
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Trim constr. : PLAIN SOLID WEDGE, O.S.& Y.
Trim Mat'l : API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l : PER API STANDARD 602.
Gasket Mat'l : PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

GATE V. FLG. 1/2" 2" **GAF1**
516GB0001

Body Mat'l : ASTM A182 GR.F316
Codes : API 602
Body constr. : BOLTED BONNET
Rating : 300#
Ends : RF
Face finish : ASME B16.5
Trim constr. : PLAIN SOLID WEDGE, O.S.& Y.
Trim Mat'l : API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l : PER API STANDARD 602.
Gasket Mat'l : PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

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GLOBE VALVE 1/2" 2"
516DQ0001

Body Mat'l :ASTM A182 GR.F316L
Codes : API 602
Body constr. :WELDED BONNET
Rating : 800#
Ends : S.W.
Trim constr. : PLUG DISC TYPE, O.S. & Y.
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 602.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

GLO

GLOBE VALVE 3" 8"
515DA0001

Body Mat'l :ASTM A351 GR.CF8M
Codes : API 600
Body constr. :BOLTED BONNET
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Trim constr. : PLUG DISC TYPE, O.S. & Y.
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 600.
Gasket Mat'l :PER API STANDARD 600.
Packing : GRAPHITE PACKING .
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9
Operator : HANDWHEEL

GLO

CHECK VALVE 1/2" 2"
516CQ0001

Body Mat'l :ASTM A182 GR.F316L
Codes : API 602 / ASME B16.34
Body constr. :BOLTED CAP
Rating : 800#
Ends : S.W.
Trim constr. : PISTON TYPE,T-BODY,HORIZONTAL INSTALLATION
Trim Mat'l :API TRIM N.10 (SS.316 TRIM)
Bolt Mat'l :PER API STANDARD 602.
Gasket Mat'l :PER API STANDARD 602.
Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9

CHE

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CHECK VALVE 3" 24" **CHE**
 515CA0001

Body Mat'l : ASTM A351 GR.CF8M
 Codes : API 600 / ASME B16.34
 Body constr. : BOLTED CAP
Rating : 150#
Ends : RF
 Face finish : ASME B16.5
 Trim constr. : SWING TYPE, HORIZONTAL & VERTICAL INSTALLATION
 Trim Mat'l : API TRIM N.10 (SS.316 TRIM)
 Bolt Mat'l : PER API STANDARD 600.
 Gasket Mat'l : PER API STANDARD 600.
 Note : GENERAL NOTES FOR VALVES: SEE JOB SPEC 59B9

PIPE A/G 1/2" 2" **SCH. 40S** **PIP**
 543SF0009

Material : S.S. ASTM A312 GR.TP304L
 Manufact. : SMLS
 Codes : ASME B36.19
 Note : PIPE SHALL COMPLY WITH JOB SPEC 52A2
Ends : P.E.

PIPE A/G 3" 24" **SCH. 10S** **PIP**
 543Sa0007

Material : S.S. ASTM A312 GR.TP304L OR EFW, ASTM A358 GR.TP304L CL.1
 Manufact. : SMLS
 Codes : ASME B36.19
 Note : PIPE SHALL COMPLY WITH JOB SPEC 52A2
Ends : P.E.

PIPE A/G 1/2" 2" **SCH. 80S** **PIPL**
 543SF0010

Material : S.S. ASTM A312 GR.TP304L
 Manufact. : SMLS
 Codes : ASME B36.19
 Note : PIPE SHALL COMPLY WITH JOB SPEC 52A2
Ends : P.E.

NIPPLES 1/2" 2" **SCH. 80S** **NIP**
 553NM0006

Material : ASTM A312 GR.TP304L
 Codes : ASME B36.19
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
Ends : T.O.E.

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ORIFICE FLG 2" 2" SCH. 40S 563CC0001 FTR

Material : ASTM A182 GR.F304L
Component : ORIFICE FLANGE SET, WELD NECK TYPE
Codes : ASME B16.36
Rating : 300#
Ends : RF
Hole Tape : N.2 HOLES 180 DEGREES 1/2" S.W.
Note : WITHOUT BOLTS AND GASKETS. FLANGES SHALL COMPLY WITH JOB SPECS 50A2, 52A2, AND 57B12 (JACK SCREWS).

ORIFICE FLG 3" 16" SCH. 10S 563CC0002 FTR

Material : ASTM A182 GR.F304L
Component : ORIFICE FLANGE SET, WELD NECK TYPE
Codes : ASME B16.36
Rating : 300#
Ends : RF
Hole Tape : N.2 HOLES 180 DEGREES 1/2" S.W.
Note : WITHOUT BOLTS AND GASKETS. FLANGES SHALL COMPLY WITH JOB SPECS 50A2, 52A2, AND 57B12 (JACK SCREWS).

ORIFICE FLG 2" 2" SCH. 40S 563CC0003 FTR

Material : ASTM A182 GR.F304L
Component : ORIFICE FLANGE SET, WELD NECK TYPE
Codes : ASME B16.36
Rating : 300#
Ends : RF
Hole Tape : N.4 HOLES 90 DEGREES 1/2" S.W.
Note : WITHOUT BOLTS AND GASKETS. FLANGES SHALL COMPLY WITH JOB SPECS 50A2, 52A2, AND 57B12 (JACK SCREWS).

ORIFICE FLG 3" 16" SCH. 10S 563CC0004 FTR

Material : ASTM A182 GR.F304L
Component : ORIFICE FLANGE SET, WELD NECK TYPE
Codes : ASME B16.36
Rating : 300#
Ends : RF
Hole Tape : N.4 HOLES 90 DEGREES 1/2" S.W.
Note : WITHOUT BOLTS AND GASKETS. FLANGES SHALL COMPLY WITH JOB SPECS 50A2, 52A2, AND 57B12 (JACK SCREWS).

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ECC.SWAGE 1/2" 2" **SCH. 40S** **ESA**
553SM0003

Material : ASTM A312 GR.TP304L
Component : ECCENTRIC SWAGE
Codes : MANUFACTURING PER ASTM A403
Manufact. : SMLS
Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
Ends : **P.E.**

ECC.SWAGE 1/2" 4" **SCH. 40S** **ESC**
553SM0004

Material : ASTM A312 GR.TP304L
Component : ECCENTRIC SWAGE
Codes : MANUFACTURING PER ASTM A403
Manufact. : SMLS
Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
Ends : **LEB-SEP**

ELBOLET BW 3" 24" **SCH. 10S** **ELBBW**
553WC0001

Material : ASTM A182 GR.F304L
Component : ELBOLET
Codes : MSS SP97
Ends : **B.W.**
Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2

ELBOLET SW 1/2" 24" **SCH. 10S** **ELBS**
553LC0001

Material : ASTM A182 GR.F304L
Component : ELBOLET
Codes : MSS SP97
Ends : **S.W.**
Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
Rating : **3000#**

SOCKOLET 1/2" 24" **SCH. 10S** **SOL**
553LC0003

Material : ASTM A182 GR.F304L
Component : SOCKOLET
Codes : MSS SP97
Ends : **S.W.**
Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
Rating : **3000#**

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WELDOLET 3" 24" **SCH. 10S** **WOL**
 553WC0002

Material : ASTM A182 GR.F304L
 Component : WELDOLET
 Codes : MSS SP97
 Ends : **B.W.**
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2

LATROLET BW 3" 24" **SCH. 10S** **LATBW**
 553WC0003

Material : ASTM A182 GR.F304L
 Component : LATROLET
 Codes : MSS SP97
 Ends : **B.W.**
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2

LATROLET SW 1/2" 24" **SCH. 10S** **LATS**
 553LC0008

Material : ASTM A182 GR.F304L
 Component : LATROLET
 Codes : MSS SP97
 Ends : **S.W.**
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2
 Rating : **3000#**

FULL CPLG. 1/2" 2" **SCH. 10S** **CPL**
 553HC0007

Material : ASTM A182 GR.F304L
 Component : FULL COUPLING
 Codes : ASME B16.11
 Rating : **3000#**
 Ends : **S.W.**
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2

UNION 1/2" 2" **SCH. 10S** **GRO**
 553HC0001

Material : ASTM A182 GR.F304L
 Component : UNION, GROUND JOINT, INTEGRAL SS SEATS
 Codes : MSS SP83
 Rating : **3000#**
 Ends : **S.W.**
 Note : FITTINGS SHALL COMPLY WITH JOB SPEC 52A2

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PADDLE BLIND 14" 24" **PBL**
563PI0004

Material : ASTM A240 GR.TP304
Codes : ASME B16.48
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Note : FLANGES SHALL COMPLY WITH JOB SPECS 50A2 AND 52A2

DRIP RING 1" 12" **DRI**
563Dr0001

Material : ASTM A240 GR.TP304L
Codes : ASME B16.48
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Hole on body : HOLE 3/4" SOCKET WELD
Note : FLANGES SHALL COMPLY WITH JOB SPECS 50A2 AND 52A2

SPACER RING 1" 4" **SPA**
563RI0004

Material : ASTM A240 GR.TP304
Codes : ASME B16.48
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Note : FLANGES SHALL COMPLY WITH JOB SPECS 50A2 AND 52A2

SPACER RING 14" 24" **SPA**
563RI0004

Material : ASTM A240 GR.TP304
Codes : ASME B16.48
Rating : 150#
Ends : RF
Face finish : ASME B16.5
Note : FLANGES SHALL COMPLY WITH JOB SPECS 50A2 AND 52A2

STUD BOLTS 1/2" 4" **STU**
572SC0002

Material : ASTM A193 GR.B7 / WITH (2) HEAVY HEX NUTS ASTM A194 GR.2H
Thr'd Code : ANSI B18.2.1 & B18.2.2
Note : BOLTING SHALL COMPLY WITH JOB SPEC 52A3

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GASKET 1/2" 24" GAS
574SA0001

Material: SPIRAL WOUND SS.304/GRAPHITE
Codes: DIMENSIONS PER ASME B16.20
Thickness: 3.2 MM (1/8")
Rating: 150#
Ring Out/In: 3.2 MM (1/8") THK. OUTER C.S. RING
Note: GASKETS SHALL COMPLY WITH JOB SPEC 52A3. GASKETS TO BE SUPPLIED W/O TAPE, STRING OR OTHER WRAPPING AROUND SPIRAL WINDING.
Ends: RF

GASKET 1/2" 24" GAS1
574SA0002

Material: SPIRAL WOUND SS.304/GRAPHITE
Codes: DIMENSIONS PER ASME B16.20
Thickness: 3.2 MM (1/8")
Rating: 300#
Ring Out/In: 3.2 MM (1/8") THK. OUTER C.S. RING
Note: GASKETS SHALL COMPLY WITH JOB SPEC 52A3. GASKETS TO BE SUPPLIED W/O TAPE, STRING OR OTHER WRAPPING AROUND SPIRAL WINDING.
Ends: RF

General Notes:

- 1.) Use Extended Body Gate Valves, Threaded Outlet, For Branches Not In Process Flow (Such As Vent, Drain, PI, Orifice Taps, Etc. Connections). Piping Downstream, If Any, Shall Usually Be In Accord With The Applicable Instrument Piping Material Specification. If No Piping, Insert A Plug In The Threaded Outlet. Other Valves, Such As SW x T Should Be Used Only When Spaced Restrictions Are Encountered.
2.) Det 'GATST' To Be Use Only Where Extended Body Valves Do Not Fit The Design Situation.
3.) Dets 'GAF' And 'GAF1' Are To Be Used At Flanged Equipment Or When Required At Instrument.
4.) Globe Valves Shall Be Sized Such That Its Minimum % Open Is Not Less Than 20%. These Valves Shall Not Be Subject To Pressure Differential Greater Than 30% Of Its Cold Working Pressure.
5.) Check Valves When Installed In The Horizontal Position Shall Be Bonnet Cover Up & Those Install In The Vertical Position Shall Be Flow Up Only.
6.) Gear Operated Valves Shall Be Used When Indicated On The EFD'S.
7.) Delete
8.) Heat Treatment Noted Is For General Fabrication. Weld Size For Fillet And/Or Branch Connections Shall Govern Per ASME B31.3 Para. 331.1.3. Heat Treatment For Bends Shall Be Per ASME B31.3 Para. 332.4.1 & 332.4.2 And Specs 52A5 And 52A6 Accordingly.
9.) Typical Hydrotest Limiting Factor Is 1.5 x ASME Class Rating Cold Working Pressure Exception To This Include:
* 1.1 x CWP For Closed Valves (Test Against Seat. This Method Is Not Preferred.
* Check Manufactures Data For Ball Valves.

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10.) Pipe And Components > 1/2" Thickness May Require Impact Tested Materials When The Minimum Design Metal Temperature Is Below 100F Per ASME B31.3 Para. 323.2.2.

11.) All Fabrication Shall Comply With 52A1.

12.) Pipe Supports And Spring Hangers Shall Comply With 59A2 And 59A3 Respectively.

13.) 'BEP' Nipples Shall Be Cut From Pipe.

14.) Det 'PIPL' To Be Used With SW x T Valves Only.

15.) The Crotch Thickness Of The Branch Outlet Of Butt weld Tees Shall Be No Less Than 150% Of The Nominal Wall Thickness Of The Tee. The Crotch Radius Of The Branch Outlet Of Butt weld Tees Shall Be No Less Than 12.5% Of The Branch Outlet OD.

16.) Use Union Or Coupling To Join Pipe. Flanged Joint To Be Used Only Where Indicated On EFD'S.

17.) Couplings Shall Not Be Used For Branch Connections Use Inline Only.

18.) Flanges Shall Not Be Insulated.

19.) Temperature Instrument Connection Shall Be NPS 1-1/2" Flanged.

20.) Pressure Instrument Connection Shall Be NPS 3/4" Socket-weld.

21.) Branch Connections Should Follow The Guidelines Of Job Spec 52B2 And The Attachment Unless Specifically Overridden By The Pipe Stress Engineer.

22.) Concentric & Eccentric Reducers Are Limited To 2 Nominal Diameter Size Reductions Without Piping Engineer Approval.

23.) Remove Temporary Strainers After Flushing.

END OF DOCUMENT

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ATTACHMENT "A"

REINFORCEMENT CHART																			
APPLICABLE TO PIPE SPECIFICATION (S) : AR1																			
MATERIAL (S) : SS, SMLS, ASTM A312 GR TP 304L OR EFW, ASTM A358 GR TP304L CL1										P/SE :					C.A. : 0.030"				
DESIGN LIMIT (S) : 230 PSIG AT -20F TO 100F; 80 PSIG AT 800F 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	40S	T																	
3/4	40S	RT	T																
1	40S	RT	RT	T															
1 1/2	40S	RT	RT	RT	T														
2	40S	RT	RT	RT	RT	T													
3	10S	SK	SK	SK	SK	SK	T												
4	10S	SK	SK	SK	SK	SK	F1	T											
6	10S	SK	SK	SK	SK	SK	F1	F1	T										
8	10S	SK	SK	SK	SK	SK	F1	F1	F1	T									
10	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	T								
12	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	T							
14	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	F1	T						
16	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	F1	F1	T					
18	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	F1	F1	F1	T				
20	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	F1	F1	F1	F1	T			
24	10S	SK	SK	SK	SK	SK	F1	F1	F1	F1	F1	F1	F1	F1	F1	F1	T		

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.