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Petroleum

01.01	SPECIFICATION FOR PRODUCT PIPES BELOW 400MM	Doc No. E&P/MAT/01	Rev 0
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Size	User to Specify
Wall Thickness	Note-1
Base Material	Carbon Steel
Manufacturing process	Electric Resistance Welding
Standard	API 5L
Grade	A / B
Surface Conditions	Black
Random Length	5-7meters
Ends	Bevel Ends
Protection of Ends	Steel Bevel protectors with plastic caps
Marking	Details like Heat No Pipe No Length shall be marked.

Note-1 Recommended Wall Thickness

Dia(mm)	Thickness (mm)
75	5.49
100	6.02
150	6.40
200	6.40
250	6.40
300	6.40
350	7.90



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04.02	SPECIFICATION FOR CS GATE VALVE	Doc No. E&P/MAT/05	Rev 0
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General	
1	Type Carbon Steel Gate valve double flanged, solid gate wedge, outside screw, yoke type, rising stem, bolted bonnet conforming to. YOKE: Integral for sizes up to 8", separate for size above 8"
Design	
6	Valve design API 600
9	Pressure rating ANSI B 16.5. class 150
10	End connection Flanged Raised Face 125 AARH
11	Face to Face dimensions ANSI B 16.5. class 150
12	Flange dimensions and drilling ANSI B 16.5. class 150
	Inspection & Testing As per API 598
Material of Construction	
13	Body, Bonnet, Yoke Carbon steel conforming to ASTM A 216 Gr. WCB Radiographic quality
14	Stem Conforming to ASTM A 182 Gr.FG/AISI 410
15	Body Seat Rings Chrome SS with minimum BHN 250 min
16	Wedge WCB 216 Grade with 13% chrome facing BHN 300 min
17	Gasket Compressed Asbestos Fiber
18	Stuffing Box Braided Asbestos
19	Studs / Bolts and Nuts Stud ASTM A 193-Gr.B7 Nut ASTM A 194-Gr.2H
20	Hand Wheels Malleable cast iron or cast carbon steel
	End Flanges ANSI B 16.5 raised face
	Handle Operation For sizes 10" dia and above bevel gear operated. Below 10" Hand Wheel operated.
Service conditions & Site conditions	
20	Design Temp Min 10 deg & max 55 deg
21	Altitude Above MSL
22	Atmosphere Coastal/outdoor
23	Size, Qty & Location As per SOR
24	Normal working pressure User to specify
25	Max. Working pressure User to specify

STANDARD MATERIAL SPECIFICATION FOR DEPOTS/INSTALLATIONS / AES / LUBE OIL BLENDING PLANTS

Engg & Projects -Noida

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(FOR INTERNAL USE ONLY)

BASKET TYPE STRAINER

Sr No	Description	BPCL Specifications	Bidder's Confirmations / Deviations
1	General	Carbon Steel Fabricated	
2	Type	Basket Type	
3	Service	Liquid Hydrocarbons /water	
4	Size	As per price bid	
5	Pressure Rating	Class # 150	
6	Ends Connection	ANSI B 16.5 Flanged RF 125 AARH 150#	
7	Design Temperature	5-55 Deg C	
8	Working Temperature	Ambient	
9	Filter	Wire Mesh Screen 40/60/80 mesh (During placement of order against this ARC, actual mesh size will be indicated)	
10	Body Material	A 106 Gr B	
11	End Flanges	WNRF / SORF A 105	
12	Mesh Material	SS316	
13	Studs / Nuts	A 193 Gr B7	
14	Bolts	A 194 Gr 2H	
15	Cover Gasket	SPWD SS316 + CAF	
16	Hydrostatic test Pressure	20Kg/cm2	
17	Pressure Drop Across the strainer	Vendor to specify	
18	Additional Requirement	Cover with ¾" Drain with Cap	
19	Scope of Inspection by BPCL approved Third Party Inspection Agencies	1. Review of Material Test Certificates 2. Visual and Dimensional Check (100% Witness) 3. Hydrostatic Test (100% Witness)	
20	Dispatch	Material to be dispatched to specified locations along with Test Certificates, Drawings and Data Sheets, Inspection Release Note from TPIA.	
21	GA Drawing of all offered sizes	Bidder to submit	



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04.04	SPECIFICATION FOR CS PLUG VALVE	Doc No. E&P/MAT/05	Rev 0
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General	
1	Type Carbon Steel Plug valve (Flanged) A1A with Position indicator.
2	Design Short Pattern up to 12" and Venturi pattern for 14" and above
Design	
6	Valve design API 6D Fire Safe API 6FA
9	Pressure rating ANSI B 16.5. class 150
10	End connection Flanged Raised Face
11	Face to Face dimensions ANSI B 16.5. class 150
12	Flange dimensions and drilling ANSI B 16.5. class 150
	Inspection & Testing As per API 6D
Material of Construction	
13	Body Cast steel as per ASTM A 216 Gr. WCB
14	Cover Bolted, ASTM A 216 Gr WCB
	Cover Gasket conforming to SS304
15	Plug Lubricated Taper PTFE impregnated (super lomu treated) ASTM A 216 AWCB (Hardened)
16	Gland Bolted, ASTM A216 AWCB
17	Gland packing Graphite, Lubricated
19	Studs / Bolts and Nuts Stud ASTM A 193-Gr.B7 Nut ASTM A 194-Gr.2H
	End Flanges ANSI B 16.5 Flat face
	Lubricant Screw With check valve SS 410
	Operation Up to 10" wrench, Above 10" gear operated
Service conditions & Site conditions	
20	Design Temp Min 10 deg & max 55 deg
21	Altitude Above MSL
22	Atmosphere Coastal/outdoor
23	Size, Qty & Location As per SOR
24	Normal working pressure User to specify
25	Max. Working pressure User to specify



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02.02	SPECIFICATION OF FLANGES / BLIND	Doc No. E&P/MAT/04	Rev 0
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	Description	User to Specify (Flange / Blind)
	Size	User to specify Flange type (Slip On / Weld Neck)
	Qty	User to Specify
	Wall Thickness (Schedule) (for weld Neck Flanges)	User to Specify
	Pressure Rating	User to Specify (150# / 300#)
	Flange Facing	Raised face (125 AARH Finish)
	Base Material	Carbon Steel (ASTM A105)
	Dimensions Standard	ANSI B 16.5
	Service	Petroleum Products (Hydrocarbon)
	Certification	EN 10204-3.1



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02.02	SPECIFICATION OF TEES	Doc No. E&P/MAT/04	Rev 0
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Description	CS Seamless Tee BW
Size	User to Specify
Qty	User to Specify
Wall Thickness (Schedule)	User to Specify
Base Material	Carbon Steel (ASTM A234 Gr WPB)
Manufacturing process	Forging
Dimensions Standard	ANSI B 16.9
Ends	Bevel Ends (Butt Weld)
Service	Petroleum Products (Hydrocarbon)
Certification	EN 10204-3.1



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02.01	SPECIFICATION OF ELBOWS	Doc No. E&P/MAT/03	Rev 0
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	Description	CS Seamless Elbow BW User to specify elbow degree (45 Deg / 90 deg) User to specify elbow type Long Radius / Short Radius
	Size	User to Specify
	Qty	User to Specify
	Wall Thickness (Schedule)	User to Specify
	Base Material	Carbon Steel (ASTM A234 Gr WPB)
	Manufacturing process	Forging
	Dimensions Standard	ANSI B 16.9 (For LR Elbows) ANSI B 16.28 (For SR Elbows)
	Ends	Bevel Ends (Butt Weld)
	Service	Petroleum Products (Hydrocarbon)
	Certification	EN 10204-3.1



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01.02	SPECIFICATION FOR TANK LORRY HOSES	Doc No. E&P/MAT/02	Rev 0
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General	Tank lorry Hose, smooth Bore with corrugated other cover, made of Rubber resistant to petroleum products, static bonded with high degree of flexibility, with fully embedded wire reinforcement.
Working pressure	3.6 Kg/cm ² (50 PSI)
Size	3" Dia
Design Standards	IS:10733-1973 Specification for electrically bonded road and rail tanker hose of rubber resistant to petroleum products. IS:433 Methods of sampling and test for rubber hoses. IS:3400 -1965 Methods of test for vulcanized rubbers. Part -IV Accelerated ageing. IS:3400-1965 Methods of test for vulcanized rubbers. Part -V Adhesion of rubber to textile fabrics. IS:3400-1983 Methods of test for vulcanized rubbers. Part -VI Resistant to liquids. IS:7503-1974 Part I Glossary of terms used in rubber industry.
Service	Tank Lorry Decantation /Filling of Petroleum Products (MS, Naphtha, SKO, Diesel)
End Connections	Half coupling Gun metal round lug type 11 TPI BSPPT Screwed Female threads clamped on both sides



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04.07	SPECIFICATION FOR CS NON RETURN VALVE	Doc No. E&P/MAT/05
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General	
1	Type
2	Design
Carbon Steel Non return valve (Flanged)	
Swing Check	
Design	
6	Valve design
9	Pressure rating
10	End connection
11	Face to Face dimensions
12	Flange dimensions and drilling
	Testing Standard
	Inspection & Testing
Material of Construction	
13	Body & Bonnet
14	Trim
	Body Stud
	Body Nut
	Body Bonnet connection
	Seats
	Back seating arrangement
	Whether Jacketed & connected Type
	Whether Bellow seal
Service conditions & Site conditions	
20	Design Temp
21	Altitude
22	Atmosphere
23	Size, Qty & Location
24	Normal working pressure
25	Max. Working pressure