



VALVE MATERIAL SPECIFICATION



DOC. NO. : 1019-PI-VMS-101

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019



PROJECT : BHASKAR FIELD



VALVE MATERIAL SPECIFICATION
A1A



CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 4
2	Specification for Ball Valve, 15-150 NB	2 of 4
3	Specification for Check Valve, 15-40 NB	3 of 4
4	Specification for Check Valve, 50-150 NB	4 of 4

REV	DATE	PURPOSE	PREPARED BY	CHECKED BY	APPROVED BY
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP

		BALL VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-101		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1A	Size Range	15 to 150 NB	Design Standard	ISO 17292
Rating	150#	Service	DR	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Pressure	6 kg/cm ² g/ FV
				Design Temperature	80 °C
		Specification		Vendor offer	
Construction	Type	Reduce Bore (2 piece), bidirectional			
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 μinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball			
	Operation	By lever/wrench (Gear Operated for size ≥ 100 NB)			
	Secondary Seat	Metal seat			
Material	Body	ASTM A 216 Gr. WCB			
	Stem	S3304			
	Ball	S3304			
	Seat	PTFE			
	Gland	SS304			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Lever/ Wrench	CS with PVC cover			
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES:					
<ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Vendor to offer ball valve with PTFE soft-seat which can with stand given test pressure. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. Gland shall be suitable for repacking under pressure when the valve is fully open. 					
LEGENDS:					
DR DRAIN					

		CHECK VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-101		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1A	Size Range	15 to 40 NB	Design Standard	Mnf. Std.
Rating	150#	Service	DR	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Pressure	6 kg/cm ² g/ FV
				Design Temperature	80 °C
		Specification		Vendor offer	
Construction	Type	Lift Type			
	Ends	Sand. Connection, RF, to suit flange of ASME B16.5, 125-250 µinch AARH, conc. Serration			
	Disc	Spring-loaded			
Material	Body	ASTM A 216 Gr. WCB			
	Disc	13% Cr Steel			
	Seat Ring	PTFE			
	Spring	SS316			
	Spring Lock	SS316			
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	NIL			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES:					
<ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS:					
DR DRAIN					

		CHECK VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-101		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1A	Size Range	50 to 150 NB	Design Standard	API 594
Rating	150#	Service	DR	Testing Standard	API 598
End to End Dimension	API 594			Design Pressure	6 kg/cm ² g/ FV
				Design Temperature	80 °C
		Specification		Vendor offer	
Construction	Type	Swing Disc			
	Ends	Sand. Connection, RF, to suit flange of ASME B16.5, 125-250 µinch AARH, conc. Serration			
	Body Seat Ring	Renewable			
	Disc Seat	Integral			
Material	Body	ASTM A 216 Gr. WCB			
	Plate	13% Cr. Steel			
	Hinge Pins/Stop Pins	SS 410			
	Trim	13% Cr. Steel			
	Spring	SS316			
	Seating Surfaces	ASTM A 216 Gr. WCB With 13% Cr. Overlay			
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	NIL			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
Seat Leakage Rate		As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES:					
<ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS:					
DR DRAIN					



VALVE MATERIAL SPECIFICATION



DOC. NO. : 1019-PI-VMS-102

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

VALVE MATERIAL SPECIFICATION A1L

CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 4
2	Specification for Ball Valve, 15-300 NB	2 of 4
3	Specification for Check Valve, 15-40 NB	3 of 4
4	Specification for Check Valve, 50-300 NB	4 of 4

REV	DATE	PURPOSE	PREPARED BY	CHECKED BY	APPROVED BY
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-102		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1L	Size Range	15 to 300 NB	Design Standard	ISO 17292
Rating	150#	Service	DC1	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Pressure	12 kg/cm ² g/ FV
				Design Temperature	80 °C

		Specification	Vendor offer
Construction	Type	Reduce Bore (2 piece), bidirectional	
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating ball (trunion mounted for 250NB & Above)	
	Operation	By lever/wrench (Gear Operated for size ≥ 100 NB) ☐	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
Material	Body	ASTM A 351 Gr. CF8M	
	Stem	SS316 (no casting)	
	Ball	SS316	
	Seat	PTFE	
	Gland	SS316	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API 607 (for services that require fire safe)	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with PTFE soft-seat which can with stand given test pressure.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.
- 6 Gland shall be suitable for repacking under pressure when the valve is fully open.

LEGENDS:

DC1 DOSING CHEMICALS 1



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-102		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1L	Size Range	15 to 40 NB	Design Standard	Mnf. Std.
Rating	150#	Service	DC1	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Pressure	12 kg/cm ² g/ FV
				Design Temperature	80 °C

		Specification	Vendor offer
Construction	Type	Lift Type	
	Ends	Sand. Connection, RF, to suit flange of ASME B16.5, 125-250 μinch AARH, conc. Serration	
	Disc	Spring-loaded	
Material	Body	ASTM A 351 Gr. CF8M	
	Disc	SS316	
	Seat Ring	PTFE	
	Spring	SS316	
	Spring Lock	SS316	
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	NIL	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

- NOTES:**
- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier.
 - 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
 DC1 DOSING CHEMICALS 1



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-102		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	A1L	Size Range	50 to 300 NB	Design Standard	API 594
Rating	150#	Service	DC1	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Pressure	12 kg/cm ² g/ FV
				Design Temperature	80 °C

		Specification	Vendor offer
Construction	Type	Swing Disc	
	Ends	Flanged, RF, to suit flange of ASME B16.5, 125-250 μinch AARH, conc. Serration	
	Body Seat Ring	Renewable	
	Disc Seat	Integral	
	Disc	Solid	
Material	Body	ASTM A 351 Gr. CF8M	
	Cover	ASTM A 351 Gr. CF8M	
	Disc	ASTM A 351 Gr. CF8M	
	Disc Facing	SS316	
	Seat Ring	SS316	
	Hinge	ASTM A 351 Gr. CF8M	
	Hinge Bracket	ASTM A 351 Gr. CF8M	
	Hinge Pin	SS316	
	Gasket	Spiral Wound, SS316+Grafoil	
	Bolts and Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Disc Nut & Lock Nut	AISI 410	
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	NIL	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V		

NOTES:

- Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 months from the supply or 12 Months from operation, whichever is earlier.
- Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

DC1 DOSING CHEMICALS 1



SPECIFICATION FOR VALVE



DOC. NO. :1019-PI-VMS-104

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
A3A**

CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 7
2	Specification for Ball Valve, 15-300 NB	2 of 7
3	Specification for Gate Valve, 15-40 NB	3 of 7
4	Specification for Gate Valve, 50-300 NB	4 of 7
5	Specification for Globe Valve, 50-300 NB	5 of 7
6	Specification for Check Valve, 15-40 NB	6 of 7
7	Specification for Check Valve, 50-300 NB	7 of 7

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. :1019-PI-VMS-104			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A3A	Size Range	15 to 300 NB	Design Standard	ISO 17292
Rating	150#	Service	DL,FG,HOD,HOR,SG	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C
			Specification		Vendor offer
Construction	Type	Reduce Bore , bidirectional			
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball (Trunion Mounted for size ≥ 250 NB)			
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Secondary Seat	Metal seat, for services that require fire safe			
	Fire Safe	Yes			
	Cavity Filled Body Seat	Yes			
Material	Body	ASTM A 216 Gr. WCB			
	Stem	SS304 (no casting)			
	Ball	SS304			
	Seat	PTFE			
	Gland	SS304			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Lever/ Wrench	CS with PVC cover			
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API 607 (for services that require fire safe)			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with PTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.
- 6 Gland shall be suitable for repacking under pressure when the valve is fully open.

LEGENDS:

- DL** DIESEL
FG FUEL GAS
HOS Hot Oil Supply
HOR Hot Oil Return
SG SERVO GAS



GATE VALVE SPECIFICATION



DOC. NO. :1019-PI-VMS-104			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A3A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	800#	Service	DL,FG,HOD,HOR,SG	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
	Operation	Hand Wheel (Non Rising)			
Material	Body & Bonnet	ASTM A 105			
	Stem	13% Cr Steel (no casting)			
	Wedge	SS304			
	Body Seat Ring	SS304			
	Yoke/Yoke Bush	ASTM A 105			
	Bonnet Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7 / A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Stem Packing	Grafoil Rings			
	Hand Wheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 207 bar (g) Seat: 152 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- DL DIESEL
 FG FUEL GAS
 HOS Hot Oil Supply
 HOR Hot Oil Return
 SG SERVO GAS



GATE VALVE SPECIFICATION



DOC. NO.:1019-PI-VMS-104			CLIENT: SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO.: 1019			PROJECT: BHASKAR FIELD		
Class	A3A	Size Range	50 to 300 NB	Design Code	API 600
Rating	150#	Service	DL,FG,HOD,HOR,SG	Testing Code	API 598
End to End Dimension	ASME B16.10		Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C	
			Specifications		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 150# as per ASME B16.5, 125-250 μAARH (Conc. Serration)			
	Stem	Rising			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Operation	Handwheel (Gear ope. for 300 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel			
	Wedge	ASTM A 216 Gr. WCB			
	Wedge Facing	13% Cr Steel			
	Back Seat Bush	13% Cr Steel			
	Body Seat Ring	13% Cr Steel			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS304 + PTFE			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland/ Flange	13 % Cr Steel/ ASTM A 105			
	Gland Packing	PTFE			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure Test (Hydro)	Body: 30 bar(g) Seat: 22 bar(g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	-			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As Per API-598 or ANSI/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- DL** DIESEL
FG FUEL GAS
HOS Hot Oil Supply
HOR Hot Oil Return
SG SERVO GAS



GLOBE VALVE SPECIFICATION



DOC. NO. :1019-PI-VMS-104			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A3A	Size Range	50 to 300 NB	Design Standard	BS 1873
Rating	150#	Service	DL,FG,HOD,HOR,SG	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Plug-type			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Disc Seat	Integral			
	Operation	Handwheel (Gear operated for 250 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr steel (no casting)			
	Disc	ASTM A 216 Gr. WCB			
	Disc Facing	13% Cr Steel			
	Back Seat & Shoulder	13% Cr Steel			
	Body Seat Ring	ASTM A 216 Gr. WCB +13% Cr steel facing			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 30 bar (g) Seat: 22 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

DL	DIESEL
FG	FUEL GAS
HOS	Hot Oil Supply
HOR	Hot Oil Return
SG	SERVO GAS



CHECK VALVE SPECIFICATION



DOC. NO. :1019-PI-VMS-104 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	A3A	Size Range	15 to 40 NB	Design Standard	ISO 15761
Rating	150#	Service	DL,FG,HOD,HOR,SG	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C

		Specification	Vendor offer
Construction	Type	Lift type	
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Cover	Bolted	
	Piston/ Ball	Spring-loaded	
	Body Seat Ring	Renewable	
	Port	Standard	
Material	Body	ASTM A 216 Gr. WCB	
	Cover	ASTM A 216 Gr. WCB	
	Piston/ Ball	13% Cr Steel/ Stellite	
	Seat Ring	13% Cr Steel/ Stellite	
	Spring	SS316	
	Gasket	Spiral wound, SS316 + Grafoil	
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
Tests	Pressure Test (Hydro)	Body: 30 bar (g) Seat: 22 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 Class V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- DL DIESEL
 FG FUEL GAS
 HOS Hot Oil Supply
 HOR Hot Oil Return
 SG SERVO GAS



CHECK VALVE SPECIFICATION



DOC. NO. :1019-PI-VMS-104			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A3A	Size Range	50 to 300 NB	Design Standard	API 594
Rating	150#	Service	DL,FG,HOD,HOR,SG	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 10 kg/cm ² g/ FV Temperature: 150 °C
			Specification		Vendor offer
Construction	Type	Swing Disc			
	Ends	Flanged, RF, 150#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Cover	Bolted			
	Disc	Solid			
	Body Seat	Renewable			
	Disc Seat	Renewable			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB			
	Disc Facing	13% Cr steel			
	Seat Ring	13% Cr steel			
	Disc Hinge	13% Cr steel			
	Hinge Pin	13% Cr steel (no casting)			
	Gasket	Spiral wound, SS316 + Grafoil			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Disc Nut & Lock Nut	AISI 410			
Tests	Pressure test (hydro)	Body: 30 bar (g)		Seat: 22 bar (g)	
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- DL DIESEL
 FG FUEL GAS
 HOS Hot Oil Supply
 HOR Hot Oil Return
 SG SERVO GAS



SPECIFICATION FOR VALVE



DOC. NO. : 1019-PI-VMS-106

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
A7A**

CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 8
2	Specification For Ball Valve (150#) (15 TO 150NB)	2 of 8
3	Specification For Gate Valve (800#)	3 of 8
4	Specification For Gate Valve (150#) (50 TO 150NB)	4 of 8
5	Specification For Globe Valve (800#) (15 TO 40NB)	5 of 8
6	Specification For Globe Valve (150#) (50 TO 150NB)	6 of 8
7	Specification For Check Valve (Lift-type) (800#) (15 TO 40NB)	7 of 8
8	Specification For Check Valve (Swing Disc) (150#) (50 TO 150NB)	8 of 8

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-106 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	A7A	Size Range	15 to 200 NB	Design Code	BS EN ISO 17292
Rating	150#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C



		Specifications	Vendor offer
Construction	Type	Reduce Bore (Body 2-Piece)	
	Ends	Flanged ,150#, B16.5,RF, 125-250 μAARH	
	Anti static device	Yes	
	Blow out proof stem	Yes	
	Ball mounting	Floating (Trunion mounted 150 NB and above)	
	Fire safe	Yes	
	Operation	By Wrench/Lever (Gear Operated for 150 NB and above)	
Material	Body	ASTM A 216 Gr. WCB	
	Stem	13% Cr Steel	
	Ball	13% Cr Steel	
	Stem Seal	PTFE	
	Seat	PTFE	
	Gland	13% Cr Steel	
	Gland Packing	Graphoil	
	Body Stud nut	A 193 Gr. B7/194 GR. 2H	
	Lever/Wrench	MS with PVC Cover	
Tests	Pressure Test (Hydro)	Body: 30 bar(g) Seat: 22 bar(g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Intergranular Corrosion Test	-	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As Per API-598 or ANSI/FCI 70-2 CLASS V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with PTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EW	EFFLUENT WATER	VG	VENT
EO1	EXPORT OIL		
FW	FIRE WATER		
XX	FLARE VENT		
RW	RAW WATER		

			GATE VALVE SPECIFICATION																							
DOC. NO. : 1019-PI-VMS-106			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT																							
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD																							
Class	A7A	Size Range	15 to 40 NB	Design Code	API 602																					
Rating	800#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598																					
End to End Dimension	MNF STD			Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C																					
			Specifications		Vendor offer																					
Construction	Type	OS & Y																								
	Ends	Socket weld, B16.11, 3000#																								
	Stem	Rising																								
	Bonnet	Bolted																								
	Wedge	Solid																								
	Body Seat Ring	Welded																								
	Backseat	Integral																								
	Bypass	-																								
	Wedge seat	Integral																								
Material	Operation	Hand wheel																								
	Body & Bonnet	ASTM A 105																								
	Stem	13% Cr Steel																								
	Wedge																									
	Wedge seat	Stellite																								
	Body Seat ring	Stellite																								
	Yoke/Yoke bush	A-105 / A-439 Gr. D2C																								
	Bonnet Gasket	Spiral wound SS-304 + Graphite																								
	Bolts & Nuts	A-193 Gr B7 / 2H																								
	Gland / Flange	13% Cr / A-105																								
Tests	Gland packing	Grafoil rings																								
	Hand wheel	Malleable Iron or steel																								
	Pre. Test (Hydro)	Body: 207 bar(g) Seat: 152 bar(g)																								
	Pneumatic test (Seat)	6 bar (g)																								
	Radiography	Nil																								
	Inter granular corrosion test	-																								
Inspection by	Third Party (Final Inspection)																									
Seat leakage rate:	As Per API-598 or ANSI/FCI 70-2 CLASS V																									
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 																										
LEGENDS: <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">EW</td> <td style="width: 40%;">EFFLUENT WATER</td> <td style="width: 15%;">VG</td> <td style="width: 30%;">VENT</td> </tr> <tr> <td>EO1</td> <td>EXPORT OIL</td> <td></td> <td></td> </tr> <tr> <td>FW</td> <td>FIRE WATER</td> <td></td> <td></td> </tr> <tr> <td>XX</td> <td>FLARE VENT</td> <td></td> <td></td> </tr> <tr> <td>RW</td> <td>RAW WATER</td> <td></td> <td></td> </tr> </table>							EW	EFFLUENT WATER	VG	VENT	EO1	EXPORT OIL			FW	FIRE WATER			XX	FLARE VENT			RW	RAW WATER		
EW	EFFLUENT WATER	VG	VENT																							
EO1	EXPORT OIL																									
FW	FIRE WATER																									
XX	FLARE VENT																									
RW	RAW WATER																									



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-106			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A7A	Size Range	50 to 150 NB	Design Code	API 600
Rating	150#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	ASME B16.10		Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C	
			Specifications		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 150# as per ASME B16.5, 125-250 μAARH (Conc. Serration)			
	Stem	Rising			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Operation	Handwheel (Gear ope. for 300 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel			
	Wedge	ASTM A 216 Gr. WCB			
	Wedge Facing	13% Cr Steel			
	Back Seat Bush	13% Cr Steel			
	Body Seat Ring	13% Cr Steel			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS304 + PTFE			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland/ Flange	13 % Cr Steel/ ASTM A 105			
	Gland Packing	PTFE			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure Test (Hydro)	Body: 30 bar(g) Seat: 22 bar(g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	-			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As Per API-598 or ANSI/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EW	EFFLUENT WATER	VG	VENT
EO1	EXPORT OIL		
FW	FIRE WATER		
XX	FLARE VENT		
RW	RAW WATER		



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-106			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A7A	Size Range	15 to 40 NB	Design Code	BS EN ISO 15761
Rating	800#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	MNF STD		Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C	
			Specifications		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, as per ASME B16.11 (3000#)			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Regulating			
	Body Seat	Welded			
	Backseat	Integral			
	Bypass	-			
	Type of Port	Standard Port			
Operation	Hand Wheel				
Material	Body & Bonnet	ASTM A 105			
	Stem	13% Cr Steel			
	Disc	Stellite			
	Disc Seat	Stellite			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105 / A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS-304 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr B7 / A 194 Gr. 2H			
	Gland / Flange	13% Cr / ASTM A 105			
	Gland Packing	Premoulded graphite rings			
Hand Wheel	Malleable Iron or Steel				
Tests	Pre. Test (Hydro)	Body: 207 bar(g) Seat: 152 bar(g)			
	Pneumatic test (Seat)	6 bar (g)			
	Radiography	Nil			
	Inter granular corrosion test	-			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate:	As Per API-598 or ANSI/FCI 70-2 CLASS V			

NOTES:

- Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- Gland shall be suitable for re-packing under pressure when valve is fully open.
- Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EW	EFFLUENT WATER	VG	VENT
EO1	EXPORT OIL		
FW	FIRE WATER		
XX	FLARE VENT		
RW	RAW WATER		



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-106

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

Class	A7A	Size Range	50 to 150 NB	Design Code	BS 1873
Rating	150#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C
			Specifications		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 150# as per ASME B16.5, 125-250 μAARH			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Regulating			
	Body Seat	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Disc seat	Integral			
	Operation	Handwheel (Gear ope. for 300 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel			
	Disc	ASTM A 216 Gr. WCB			
	Disc Facing	13% Cr Steel			
	Back Seat	13% Cr Steel			
	Body Seat	ASTM A 216 Gr. WCB + 13% Cr Steel			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB / A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS304 + PTFE			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland/ Flange	13 % Cr Steel/ A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure Test (Hydro)	Body: 30 bar(g)		Seat: 22 bar(g)	
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As Per API-598 or ANSI/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EW	EFFLUENT WATER	VG	VENT
EO1	EXPORT OIL		
FW	FIRE WATER		
XX	FLARE VENT		
RW	RAW WATER		



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-106

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

Class	A7A	Size Range	15 to 40 NB	Design Code	BS EN ISO 15761
Rating	800#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C
			Specifications		Vendor offer
Construction	Type	Lift Type			
	Ends	Socket-weld, 3000# as per ASME B16.11			
	Cover	Bolted			
	Ball	Spring-loaded			
	Body Seat	Integral weld overlay			
	Port	Standard			
Material	Body	ASTM A 105			
	Cover	ASTM A 105			
	Ball	Stellited			
	Body Seat Facing	Stellited			
	Spring	AISI 316			
	Gasket	Spiral wound, SS304 + Grafoil			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure Test (Hydro)	Body: 207 bar(g) Seat: 152 bar(g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Nil			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate				

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EW	EFFLUENT WATER	VG	VENT
EO1	EXPORT OIL		
FW	FIRE WATER		
XX	FLARE VENT		
RW	RAW WATER		

			CHECK VALVE SPECIFICATION		
DOC. NO. : 1019-PI-VMS-106			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	A7A	Size Range	50 to 600 NB	Design Code	API 594
Rating	150#	Service	EW,EO1,FW,RW,VG	Testing Code	API 598
End to End Dimension	ASME B16.10		Design Conditions	Pressure : 12 kg/cm ² (g) Temp.: 120 °C	
			Specifications	Vendor offer	
Construction	Type	Swing Disc			
	Ends	Flanged, RF, 150#, as per ASME B 16.5, 125-250			
	Cover	μAARH			
	Disc	Bolted			
	Body Seat	Renewable			
	Disc Seat	Integral			
	Flow Indication	To be shown on the valve			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB			
	Disc Facing	13% Cr Steel			
	Seat Ring	ASTM A 216 Gr. WCB + 13% Cr steel facing			
	Hinge	ASTM A 216 Gr. WCB			
	Hinge Bracket	ASTM A 216 Gr. WCB			
	Hinge Pin	13% Cr Steel			
	Gasket	Spiral wound, SS304 + Grafoil			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Disc Nut & Lock Nut	AISI 410				
Tests	Pressure Test (Hydro)	Body: 30 bar(g) Seat: 22 bar(g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	-			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As Per API-598 or ANSI/FCI 70-2 CLASS V			
NOTES:					
<ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS:					
EW	EFFLUENT WATER	VG	VENT		
EO1	EXPORT OIL				
FW	FIRE WATER				
XX	FLARE VENT				
RW	RAW WATER				



SPECIFICATION FOR VALVE



DOC. NO. : 1019-PI-VMS-107

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
B7A**

CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 12
2	Specification for Ball Valve (Reduce Bore/Full Bore), 15-40 NB	2-5 of 12
3	Specification for Ball Valve (Reduce Bore/Full Bore), 50-300 NB	
4	Specification for Gate Valve, 15-40 NB, Socket Weld	6 of 12
5	Specification for Gate Valve, 15-40 NB	7 of 12
6	Specification for Gate Valve, 50-300 NB	8 of 12
7	Specification for Globe Valve, 15-40 NB, Socket Weld	9 of 12
8	Specification for Globe Valve, 15-300 NB	10 of 12
9	Specification for Check Valve, 15-40 NB	11 of 12
10	Specification for Check Valve, 50-300 NB	12 of 12

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR REVIEW	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB/A 105			
	Stem	SS316			
	Ball	SS316			
	Seat	RPTFE			
	Gland	SS316			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 72 bar (g)		Seat: 53 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2** EXPORT OIL
HO HEAVY OIL
PL PROCESS LIQUID
PV PROCESS VAPOUR
WF1 WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB/A 105			
	Stem	SS316			
	Ball	SS316			
	Seat	RPTFE			
	Gland	SS316			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 72 bar (g)		Seat: 53 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2** EXPORT OIL
HO HEAVY OIL
PL PROCESS LIQUID
PV PROCESS VAPOUR
WF1 WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	B7A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C

		Specification	Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating Ball (Trunnion mounted ≥ 150NB)	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
Material	Body	ASTM A 216 Gr. WCB	
	Stem	AISI 410/SS316	
	Ball	A182/SS316	
	Seat	RPTFE	
	Spring	Inconel	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EO2 EXPORT OIL
 HO HEAVY OIL
 PL PROCESS LIQUID
 PV PROCESS VAPOUR
 WF1 WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	B7A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C

		Specification	Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating Ball (Trunnion mounted ≥ 150NB)	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
Material	Body	ASTM A 216 Gr. WCB	
	Stem	AISI 410/SS316	
	Ball	A105/SS316	
	Seat	RPTFE	
	Spring	Inconel	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2** EXPORT OIL
- HO** HEAVY OIL
- PL** PROCESS LIQUID
- PV** PROCESS VAPOUR
- WF1** WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	800#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	Mnf. Std.		Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C	
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 105			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
Handwheel	Malleable iron or steel				
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
 HO HEAVY OIL
 PL PROCESS LIQUID
 PV PROCESS VAPOUR
 WF1 WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
	Operation	Handwheel (Non-Rising)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
	Handwheel	Malleable iron or steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
HO HEAVY OIL
PL PROCESS LIQUID
PV PROCESS VAPOUR
WF1 WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	50 to 300 NB	Design Standard	API 600
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
	Operation	Handwheel (Gear operated for 250 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Back Seat	ASTM A276 TP410			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
HO HEAVY OIL
PL PROCESS LIQUID
PV PROCESS VAPOUR
WF1 WELL FLUID



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	15 to 40 NB	Design Standard	BS 1873
Rating	800#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Loose Plug Type			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Type of Port	Standard Port			
	Operation	Hand Wheel (Non Rising)			
Material	Body & Bonnet	ASTM A 105			
	Stem	ASTM A276 TP410			
	Disc	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7 / A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil Rings			
	Hand Wheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
 HO HEAVY OIL
 PL PROCESS LIQUID
 PV PROCESS VAPOUR
 WF1 WELL FLUID



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	50 to 300 NB	Design Standard	BS 1873
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Plug-type			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Disc Seat	Integral			
	Operation	Handwheel (Gear operated for 300 NB)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Disc	Stellited			
	Back Seat & Shoulder	ASTM A276 TP410			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
 HO HEAVY OIL
 PL PROCESS LIQUID
 PV PROCESS VAPOUR
 WF1 WELL FLUID



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	B7A	Size Range	15 to 40 NB	Design Standard	BS 5352
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C

		Specification	Vendor offer
Construction	Type	Lift type (suitable for vertical & horizontal installation)	
	Ends	Socket-weld, 3000# as per ASME B16.11	
	Cover	Bolted	
	Piston/ Ball	Spring-loaded	
	Seat Ring	Renewable	
	Port	Standard	
Material	Body	ASTM A105	
	Cover	ASTM A105	
	Piston/ Ball	Stellited	
	Seat Ring	Stellited	
	Spring	SS316	
	Gasket	Spiral wound, SS316 + Graphite	
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
Tests	Pressure Test (Hydro)	Body: 205 bar (g) Seat: 150 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 Class V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2 EXPORT OIL
 HO HEAVY OIL
 PL PROCESS LIQUID
 PV PROCESS VAPOUR
 WF1 WELL FLUID



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-107			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B7A	Size Range	50 to 300 NB	Design Standard	API 594
Rating	300#	Service	EO2,HO,PL,PV,WF1	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 120 °C
			Specification		Vendor offer
Construction	Type	Swing Disc Check			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Cover	Bolted			
	Disc	Solid			
	Body Seat	Renewable			
	Disc Seat	Renewable			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB + 13% CR FACING			
	Disc Facing	13% Cr Steel			
	Seat Ring	13% Cr Steel			
	Disc Hinge	13% Cr Steel			
	Hinge Pin	AISI 410			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

- EO2** EXPORT OIL
HO HEAVY OIL
PL PROCESS LIQUID
PV PROCESS VAPOUR
WF1 WELL FLUID



SPECIFICATION FOR VALVE



DOC. NO. : 1019-PI-VMS-108

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
B8A**

CONTENTS:-

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 12
2	Specification for Ball Valve (Reduce Bore/Full Bore), 15-40 NB	2-5 of 12
3	Specification for Ball Valve (Reduce Bore/Full Bore), 50-300 NB	
4	Specification for Gate Valve, 15-40 NB, Socket Weld	6 of 12
5	Specification for Gate Valve, 15-40 NB	7 of 12
6	Specification for Gate Valve, 50-300 NB	8 of 12
7	Specification for Globe Valve, 15-40 NB, Socket Weld	9 of 12
8	Specification for Globe Valve, 15-300 NB	10 of 12
9	Specification for Check Valve, 15-40 NB	11 of 12
10	Specification for Check Valve, 50-300 NB	12 of 12

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR REVIEW	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	300#	Service	WF	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB/A 105			
	Stem	SS316			
	Ball	SS316			
	Seat	RPTFE			
	Gland	SS316			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	300#	Service	WF	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating ball			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB/A 105			
	Stem	SS316			
	Ball	SS316			
	Seat	RPTFE			
	Gland	SS316			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	B8A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	300#	Service	WF	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C

		Specification	Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating Ball (Trunnion mounted ≥ 150NB)	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
Material	Body	ASTM A 216 Gr. WCB	
	Stem	AISI 410/SS316	
	Ball	A182/SS316	
	Seat	RPTFE	
	Spring	Inconel	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
WF WELL FLUID



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	300#	Service	WF	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Floating Ball (Trunnion mounted ≥ 150NB)			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
Material	Body	ASTM A 216 Gr. WCB			
	Stem	AISI 410/SS316			
	Ball	A105/SS316			
	Seat	RPTFE			
	Spring	Inconel			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Lever/ Wrench	CS with PVC cover			
Tests	Pressure Test (Hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	800#	Service	WF	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 105			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
Handwheel	Malleable iron or steel				
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	300#	Service	WF	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
	Operation	Handwheel (Non-Rising)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
	Handwheel	Malleable iron or steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	50 to 300 NB	Design Standard	API 600
Rating	300#	Service	WF	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
	Operation	Handwheel (Gear operated for 250 NB & above)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Wedge	Stellited			
	Back Seat	ASTM A276 TP410			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	BS 1873
Rating	800#	Service	WF	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Loose Plug Type			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Type of Port	Standard Port			
	Operation	Hand Wheel (Non Rising)			
Material	Body & Bonnet	ASTM A 105			
	Stem	ASTM A276 TP410			
	Disc	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7 / A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil Rings			
	Hand Wheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



GLOBE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	50 to 300 NB	Design Standard	BS 1873
Rating	300#	Service	WF	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Plug-type			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Disc Seat	Integral			
	Operation	Handwheel (Gear operated for 300 NB)			
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	ASTM A276 TP410			
	Disc	Stellited			
	Back Seat & Shoulder	ASTM A276 TP410			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	15 to 40 NB	Design Standard	BS 5352
Rating	300#	Service	WF	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Lift type (suitable for vertical & horizontal installation)			
	Ends	Socket-weld, 3000# as per ASME B16.11			
	Cover	Bolted			
	Piston/ Ball	Spring-loaded			
	Seat Ring	Renewable			
	Port	Standard			
Material	Body	ASTM A105			
	Cover	ASTM A105			
	Piston/ Ball	Stellited			
	Seat Ring	Stellited			
	Spring	SS316			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure Test (Hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 Class V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-108			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	B8A	Size Range	50 to 300 NB	Design Standard	API 594
Rating	300#	Service	WF	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 45 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Swing Disc Check			
	Ends	Flanged, RF, 300#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Cover	Bolted			
	Disc	Solid			
	Body Seat	Renewable			
	Disc Seat	Renewable			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB + 13% CR FACING			
	Disc Facing	13% Cr Steel			
	Seat Ring	13% Cr Steel			
	Disc Hinge	13% Cr Steel			
	Hinge Pin	AISI 410			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure test (hydro)	Body: 72 bar (g) Seat: 53 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

WF WELL FLUID



SPECIFICATION FOR VALVE



DOC. NO. : 1019-PI-VMS-109

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
D3A****CONTENTS:-**

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 12
2	Specification for Ball Valve (Reduce Bore/Full Bore), 15-40 NB	2-5 of 12
3	Specification for Ball Valve (Reduce Bore/Full Bore), 50-300 NB	
4	Specification for Gate Valve, 15-40 NB, Socket Weld	6 of 12
5	Specification for Gate Valve, 15-40 NB	7 of 12
6	Specification for Gate Valve, 50-300 NB	8 of 12
7	Specification for Globe Valve, 15-40 NB, Socket Weld	9 of 12
8	Specification for Globe Valve, 15-300 NB	10 of 12
9	Specification for Check Valve, 15-40 NB	11 of 12
10	Specification for Check Valve, 50-300 NB	12 of 12

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	D3A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	600#	Service	EO	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C

		Specification	Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating ball	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
	Body	ASTM A 216 Gr. WCB/A 105	
	Stem	SS316	
	Ball	SS316	
	Seat	RPTFE	
	Gland	SS316	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

NOTES:

- Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
EO EXPORT OIL



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	D3A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	600#	Service	EO	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C

		Specification	Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating ball	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
	Body	ASTM A 216 Gr. WCB/A 105	
	Stem	SS316	
	Ball	SS316	
	Seat	RPTFE	
	Gland	SS316	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
Lever/ Wrench	CS with PVC cover		
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

- NOTES:**
- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
 - 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
 - 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
EO EXPORT OIL



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	D3A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	600#	Service	EO	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Trunnion mounted			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB			
	Stem	AISI 410			
	Ball	ASTM A182 GR F6A CL2			
	Seat	RPTFE/DEVLON			
	Spring	Inconel			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EO EXPORT OIL



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	D3A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	600#	Service	EO	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification	Vendor offer	
Construction	Type	Reduce Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Trunnion mounted			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB			
	Stem	AISI 410			
	Ball	ASTM A182 GR F6A CL2			
	Seat	RPTFE/DEVLON			
	Spring	Inconel			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Lever/ Wrench	CS with PVC cover			
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			
<p>NOTES:</p> <ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. <p>LEGENDS: EO EXPORT OIL</p>					



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	D3A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	800#	Service	EO	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 105			
	Stem	13% Cr Steel (No Casting)			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
Handwheel	Malleable iron or steel				
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			

- NOTES:**
- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
 - 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
 - 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
EO EXPORT OIL



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	D3A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	600#	Service	EO	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification	Vendor offer	
Construction	Type	OS & Y			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 1/4 inch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel (No Casting)			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
Handwheel	Malleable iron or steel				
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
<p>NOTES:</p> <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. <p>LEGENDS: EO EXPORT OIL</p>					



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD



Class	D3A	Size Range	50 to 300 NB	Design Standard	API 600
Rating	600#	Service	EO	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Gear operated for 250 NB & above)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel (No Casting)			
	Wedge	13% Cr Steel			
	Back Seat	13% Cr Steel			
	Body Seat Ring	13% Cr Steel			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			


NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EO EXPORT OIL

			GLOBE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-109			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD			
Class	D3A	Size Range	15 to 40 NB	Design Standard	BS 1873	
Rating	800#	Service	EO	Testing Standard	API 598	
End to End Dimension	MNF STD			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C	
			Specification		Vendor offer	
Construction	Type	OS & Y				
	Ends	Socket weld, 3000# as per ASME B16.11				
	Stem	Rising				
	Bonnet	Bolted				
	Disc	Loose Plug Type				
	Body Seat Ring	Renewable				
	Back Seat	Integral				
	Bypass	-				
	Type of Port	Standard Port				
	Operation	Hand Wheel (Non Rising)				
Material	Body & Bonnet	ASTM A 105				
	Stem	13% Cr Steel (No Casting)				
	Disc	Stellited				
	Body Seat Ring	Stellited				
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C				
	Bonnet Gasket	Spiral wound, SS316 + Graphite				
	Bolts & Nuts	ASTM A 193 Gr. B7 / A 194 Gr. 2H				
	Gland Flange	ASTM A 105				
	Gland Packing	Grafoil Rings				
	Hand Wheel	Malleable Iron or Steel				
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)				
	Pneumatic test (seat)	6 bar (g)				
	Radiography	-				
	Intergranular corrosion test	Not applicable				
	Inspection by	Third Party (Final Inspection)				
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V				
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 						
LEGENDS: EO EXPORT OIL						

			GLOBE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-109			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD			
Class	D3A	Size Range	50 to 300 NB	Design Standard	BS 1873	
Rating	600#	Service	EO	Testing Standard	API 598	
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C	
			Specification		Vendor offer	
Construction	Type	OS & Y				
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration				
	Stem	Rising				
	Bonnet	Bolted				
	Disc	Plug-type				
	Body Seat Ring	Renewable				
	Back Seat	Yes				
	Bypass	-				
	Disc Seat	Integral				
	Operation	Handwheel (Gear operated for 300 NB)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB				
	Stem	AISI 410				
	Disc	Stellited				
	Back Seat & Shoulder	13% Cr Steel/AISI 410				
	Body Seat Ring	Stellited				
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C				
	Bonnet Gasket	Spiral wound gasket, SS316 + graphite				
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H				
	Gland Flange	ASTM A 105				
	Gland Packing	Grafoil				
Handwheel	Malleable Iron or Steel					
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)				
	Pneumatic test (seat)	6 bar (g)				
	Radiography	Yes				
	Intergranular corrosion test	Not applicable				
	Inspection by	Third Party (Final Inspection)				
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V				
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 						
LEGENDS: EO EXPORT OIL						



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-109 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD



Class	D3A	Size Range	15 to 40 NB	Design Standard	BS 5352
Rating	600#	Service	EO	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Lift type (suitable for vertical & horizontal installation)			
	Ends	Socket-weld, 3000# as per ASME B16.11			
	Cover	Bolted			
	Piston/ Ball	Spring-loaded			
	Seat Ring	Renewable			
	Port	Standard			
Material	Body	ASTM A105			
	Cover	ASTM A105			
	Piston/ Ball	Stellited			
	Seat Ring	Stellited			
	Spring	SS316			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure Test (Hydro)	Body: 154 bar (g)		Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 Class V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

EO EXPORT OIL

			CHECK VALVE SPECIFICATION		
DOC. NO. : 1019-PI-VMS-109			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	D3A	Size Range	50 to 300 NB	Design Standard	API 594
Rating	600#	Service	EO	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 93 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Swing Disc Check			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 1/4 inch AARH, conc. serration			
	Cover	Bolted			
	Disc	Solid			
	Body Seat	Renewable			
	Disc Seat	Renewable			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB + 13% CR FACING			
	Disc Facing	13% Cr Steel			
	Seat Ring	13% Cr Steel			
	Disc Hinge	13% Cr Steel			
	Hinge Pin	AISI 410			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
<p>NOTES:</p> <ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. <p>LEGENDS: EO EXPORT OIL</p>					



SPECIFICATION FOR VALVE



DOC. NO. : 1019-PI-VMS-110

CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019

PROJECT : BHASKAR FIELD

**VALVE MATERIAL SPECIFICATION
D7A****CONTENTS:-**

Sr. No.	Description	Sheet No.
1	Cover Sheet	1 of 12
2	Specification for Ball Valve (Reduce Bore/Full Bore), 15-40 NB	2-5 of 12
3	Specification for Ball Valve (Reduce Bore/Full Bore), 50-300 NB	
4	Specification for Gate Valve, 15-40 NB, Socket Weld	6 of 12
5	Specification for Gate Valve, 15-40 NB	7 of 12
6	Specification for Gate Valve, 50-300 NB	8 of 12
7	Specification for Globe Valve, 15-40 NB, Socket Weld	9 of 12
8	Specification for Globe Valve, 15-300 NB	10 of 12
9	Specification for Check Valve, 15-40 NB	11 of 12
10	Specification for Check Valve, 50-300 NB	12 of 12

REV	DATE	PURPOSE	BY	CHK.	APPR.
0	08.02.2020	ISSUED FOR ENGINEERING	RZ	RZ	BDP



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	D7A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	600#	Service	PW	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C

		Specification	Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating ball	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
	Body	ASTM A 216 Gr. WCB/A 105	
	Stem	SS316	
	Ball	SS316	
	Seat	RPTFE	
	Gland	SS316	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

- NOTES:**
- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
 - 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
 - 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
PW PRODUCED WATER



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 **CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT**

PROJECT NO. : 1019 **PROJECT : BHASKAR FIELD**

Class	D7A	Size Range	15 to 40 NB	Design Standard	ISO 17292
Rating	600#	Service	PW	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C

		Specification	Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional	
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration	
	Antistatic Device	Yes	
	Blowout-Proof Stem	Yes	
	Ball Mounting	Floating ball	
	Cavity Filled Body Seat	Yes	
	Secondary Seat	Metal seat	
	Fire Safe	Yes	
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)	
	Body	ASTM A 216 Gr. WCB/A 105	
	Stem	SS316	
	Ball	SS316	
	Seat	RPTFE	
	Gland	SS316	
	Gland Packing	Grafoil	
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H	
	Lever/ Wrench	CS with PVC cover	
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)	
	Radiography	Yes	
	Fire Test	As per API-607	
	Intergranular Corrosion Test	Not applicable	
	Inspection By	Third Party (Final Inspection)	
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V	

- NOTES:**
- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
 - 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
 - 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
PW PRODUCED WATER



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD

Class	D7A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	600#	Service	PW	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Full Bore (2 piece), Bidirectional			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Trunnion mounted			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
Material	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
	Body	ASTM A 216 Gr. WCB			
	Stem	AISI 410			
	Ball	ASTM A182 GR F6A CL2			
	Seat	RPTFE/DEVLON			
	Spring	Inconel			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Lever/ Wrench	CS with PVC cover				
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

- NOTES:**
- Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
 - Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
 - Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
 - Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
 - Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:
PW PRODUCED WATER



BALL VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD



Class	D7A	Size Range	50 to 300 NB	Design Standard	API 608
Rating	600#	Service	PW	Testing Standard	API 598; API 607
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Reduce Bore (2 piece), Bidirectional Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Antistatic Device	Yes			
	Blowout-Proof Stem	Yes			
	Ball Mounting	Trunnion mounted			
	Cavity Filled Body Seat	Yes			
	Secondary Seat	Metal seat			
	Fire Safe	Yes			
	Operation	By lever/wrench (Gear Operated for size ≥ 150 NB)			
Material	Body	ASTM A 216 Gr. WCB			
	Stem	AISI 410			
	Ball	ASTM A182 GR F6A CL2			
	Seat	RPTFE/DEVLON			
	Spring	Inconel			
	Gland Packing	Grafoil			
	Body Stud-Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Lever/ Wrench	CS with PVC cover			
Tests	Pressure Test (Hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Fire Test	As per API-607			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 CLASS V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Vendor to offer ball valve with RPTFE soft-seat which can with stand given test pressure
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

PW PRODUCED WATER

		GATE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-110			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT		
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD		
Class	D7A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	800#	Service	PW	Testing Standard	API 598
End to End Dimension	Mnf. Std.			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 105			
	Stem	13% Cr Steel (No Casting)			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
Handwheel	Malleable iron or steel				
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS: PW PRODUCED WATER					



GATE VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD



Class	D7A	Size Range	15 to 40 NB	Design Standard	API 602
Rating	600#	Service	PW	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification	Vendor offer	
Construction	Type	OS & Y			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 1/4 inch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Solid			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Non-Rising)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel (No Casting)			
	Wedge	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound SS316 + graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Pre-moulded Grafoil rings			
	Handwheel	Malleable iron or steel			
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			



NOTES:


- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Gland shall be suitable for re-packing under pressure when valve is fully open.
- 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

PW PRODUCED WATER

		GATE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-110		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	D7A	Size Range	50 to 300 NB	Design Standard	API 600
Rating	600#	Service	PW	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 µinch AARH, conc. serration			
	Bonnet	Bolted			
	Wedge	Flexible			
	Body Seat Ring	Renewable			
	Back Seat	Yes			
	Bypass	-			
	Wedge Seat	Integral			
	Stem	Rising			
Operation	Handwheel (Gear operated for 250 NB & above)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB			
	Stem	13% Cr Steel (No Casting)			
	Wedge	13% Cr Steel			
	Back Seat	13% Cr Steel			
	Body Seat Ring	13% Cr Steel			
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound gasket, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil			
	Handwheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS: PW PRODUCED WATER					

		GLOBE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-110		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	D7A	Size Range	15 to 40 NB	Design Standard	BS 1873
Rating	800#	Service	PW	Testing Standard	API 598
End to End Dimension	MNF STD			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	OS & Y			
	Ends	Socket weld, 3000# as per ASME B16.11			
	Stem	Rising			
	Bonnet	Bolted			
	Disc	Loose Plug Type			
	Body Seat Ring	Renewable			
	Back Seat	Integral			
	Bypass	-			
	Type of Port	Standard Port			
	Operation	Hand Wheel (Non Rising)			
Material	Body & Bonnet	ASTM A 105			
	Stem	13% Cr Steel (No Casting)			
	Disc	Stellited			
	Body Seat Ring	Stellited			
	Yoke/Yoke Bush	ASTM A 105/ A 439 Gr. D2C			
	Bonnet Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7 / A 194 Gr. 2H			
	Gland Flange	ASTM A 105			
	Gland Packing	Grafoil Rings			
	Hand Wheel	Malleable Iron or Steel			
Tests	Pressure test (hydro)	Body: 205 bar (g) Seat: 150 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	-			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES: <ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Gland shall be suitable for re-packing under pressure when valve is fully open. 5 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS: PW PRODUCED WATER					

			GLOBE VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-110			CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019			PROJECT : BHASKAR FIELD			
Class	D7A	Size Range	50 to 300 NB	Design Standard	BS 1873	
Rating	600#	Service	PW	Testing Standard	API 598	
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C	
			Specification		Vendor offer	
Construction	Type	OS & Y				
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 1/4 inch AARH, conc. serration				
	Stem	Rising				
	Bonnet	Bolted				
	Disc	Plug-type				
	Body Seat Ring	Renewable				
	Back Seat	Yes				
	Bypass	-				
	Disc Seat	Integral				
	Operation	Handwheel (Gear operated for 300 NB)				
Material	Body & Bonnet	ASTM A 216 Gr. WCB				
	Stem	AISI 410				
	Disc	Stellited				
	Back Seat & Shoulder	13% Cr Steel/AISI 410				
	Body Seat Ring	Stellited				
	Yoke/Yoke Bush	ASTM A 216 Gr. WCB/ A 439 Gr. D2C				
	Bonnet Gasket	Spiral wound gasket, SS316 + graphite				
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H				
	Gland Flange	ASTM A 105				
	Gland Packing	Grafoil				
Handwheel	Malleable Iron or Steel					
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)				
	Pneumatic test (seat)	6 bar (g)				
	Radiography	Yes				
	Intergranular corrosion test	Not applicable				
	Inspection by	Third Party (Final Inspection)				
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V				
NOTES: <ol style="list-style-type: none"> Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. Gland shall be suitable for re-packing under pressure when valve is fully open. Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 						
LEGENDS: PW PRODUCED WATER						



CHECK VALVE SPECIFICATION



DOC. NO. : 1019-PI-VMS-110 CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT

PROJECT NO. : 1019 PROJECT : BHASKAR FIELD



Class	D7A	Size Range	15 to 40 NB	Design Standard	BS 5352
Rating	600#	Service	PW	Testing Standard	API 598
End to End Dimension	ISO 5752			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification		Vendor offer
Construction	Type	Lift type (suitable for vertical & horizontal installation)			
	Ends	Socket-weld, 3000# as per ASME B16.11			
	Cover	Bolted			
	Piston/ Ball	Spring-loaded			
	Seat Ring	Renewable			
	Port	Standard			
Material	Body	ASTM A105			
	Cover	ASTM A105			
	Piston/ Ball	Stellited			
	Seat Ring	Stellited			
	Spring	SS316			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure Test (Hydro)	Body: 154 bar (g)		Seat: 113 bar (g)	
	Pneumatic Test (Seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular Corrosion Test	Not applicable			
	Inspection By	Third Party (Final Inspection)			
	Seat Leakage Rate	As per API-598 or ASME/FCI 70-2 Class V			

NOTES:

- 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier.
- 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture.
- 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C.
- 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment.

LEGENDS:

PW PRODUCED WATER

		CHECK VALVE SPECIFICATION			
DOC. NO. : 1019-PI-VMS-110		CLIENT : SUN PETROCHEMICALS PVT LTD, KHAMBHAT			
PROJECT NO. : 1019		PROJECT : BHASKAR FIELD			
Class	D7A	Size Range	50 to 300 NB	Design Standard	API 594
Rating	600#	Service	PW	Testing Standard	API 598
End to End Dimension	ASME B16.10			Design Conditions	Pressure: 65 kg/cm ² g Temperature: 80 °C
			Specification	Vendor offer	
Construction	Type	Swing Disc Check			
	Ends	Flanged, RF, 600#, as per ASME B16.5, 125-250 1/4 inch AARH, conc. serration			
	Cover	Bolted			
	Disc	Solid			
	Body Seat	Renewable			
	Disc Seat	Renewable			
Material	Body	ASTM A 216 Gr. WCB			
	Cover	ASTM A 216 Gr. WCB			
	Disc	ASTM A 216 Gr. WCB + 13% CR FACING			
	Disc Facing	13% Cr Steel			
	Seat Ring	13% Cr Steel			
	Disc Hinge	13% Cr Steel			
	Hinge Pin	AISI 410			
	Gasket	Spiral wound, SS316 + Graphite			
	Bolts & Nuts	ASTM A 193 Gr. B7/ A 194 Gr. 2H			
Tests	Pressure test (hydro)	Body: 154 bar (g) Seat: 113 bar (g)			
	Pneumatic test (seat)	6 bar (g)			
	Radiography	Yes			
	Intergranular corrosion test	Not applicable			
	Inspection by	Third Party (Final Inspection)			
	Seat leakage rate	As per API-598 or ASME/FCI 70-2 CLASS V			
NOTES: <ol style="list-style-type: none"> 1 Vendor to give guarantee for satisfactory workmanship & operation of valve for 18 Months from the supply or 12 Months from operation, whichever is earlier. 2 Vendor to give the dimension & sectional drawing for valve & get it approved prior to manufacture. 3 Vendor to give 3 copies of Material T/C, Hydrostatic & Pneumatic Test Pressure T/C. 4 Surface Protection- Prime Coat: Chlorine free with modified alkyd resin unobjectionable in physiological & toxicological respect. Additional External Coating : Silver Streak Aluminium Paint suitable for corrosive environment. 					
LEGENDS: PW PRODUCED WATER					