DATA SHEET FOR CHECK VALVE

1.0 Valve Manufacturer :

2.0 Service :

3.0 Valve Size (NB), mm (inch) : ANSI Rating : **300#** Design Standard : **API 6D**

4.0 MECON's Technical Specification No. : **MEC/TS/05/62/004,Rev-2**

5.0 Connecting Pipeline Design Pressure, kg/cm^2(g) : **49** Design Temperature, °C : **-29°C to + 65°C**

6.0 **Connecting Pipe Specification** :
6.1 Material :
6.2 Diameter (OD), mm (inch) :
6.3 Thickness, mm :

7.0 **Valve Construction Design**
7.1 Type :

7.2 End Connections :
- **Flanged both ends** ☐
- **Butt Weld both ends** ☐
- **Flanged one end, butt weld other end** ☐
- **Socket Weld as per ASME B 16.11** ☐

7.3 Flanges (wherever applicable) : a) RF ☐ FF ☐ RTJ ☐ NA ☐
b) Serrated ☐ Smooth (125 to 200 microinches AARH) ☐ NA ☐

8.0 **Valve Material Specification**

	Part	Specified Material	Material Offered (Equivalent or Superior
8.1	Body	**ASTM A 216 Gr.WCB**	
8.2	Cover	**ASTM A 216 Gr.WCB**	
8.3	Disc/ Plates	**(ASTM A 216 Gr. WCB + 13% Cr Steel Facing) / 13% Cr Steel (Stellited)**	
8.4	Body Seat Rings (See Note-3)	**ASTM A 216 Gr. WCB+13% Cr Steel Facing (Stellited)**	
8.5	Disc Hinge	**ASTM A 216 Gr. WCB/ A 515 Gr. 70/ 13% Cr Steel**	
8.6	Hinge Pin	**13% Cr Steel (No Casting)**	
8.7	Cover Stud Bolts	**ASTM A 193 Gr. B7**	
8.8	Nuts	**ASTM A 194 Gr. 2H**	
8.9	Cover Gasket	**SS 304/316 Spiral Wound with Grafoil**	
8.1	Spring	**Inconel X-750**	

9.0 Corrosion Allowance : **1.5 mm**

10.0 Location : Above Ground ☐ Buried ☐

11.0 Stem Extension Requirement : Yes ☐ No ☐

12.0 Gear Operator Requirement : Yes ☐ No ☐

13.0 Gas Powered Actuator Requirement : Yes ☐ No ☐

14.0 Fire Resistant Design Requirement :

15.0 **Valve Testing Requirement**

			Test Pressure (min.), kg/cm2(g)	Minimum Duration, minutes
15.1	Hydrostatic Test	Body	**76**	**API 6D**
		Seat	**57**	**API 6D**

16.0 **Valve Painting Specification**
i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

17.0 Lock Open/ Lock Close Requirement : **N.A.**

Notes:
1. This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2.
2. Inspection and Testing shall be as per attached QAP, this Data Sheet, MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2, API 6D, BS EN 12266 and other relevant standards. Min. Valve Body Wall Thickness as per ASME B16.34 .
3. Seats shall be non-renewable integral type. Drain Plug shall be provided to drain valve cavity .
4. 5% of valves shall undergo radiographic examination.
5. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
6. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing & controlling parts such as body, bonnet, stem, disc, body seat, end flange, welding ends as well as the bolting material as per ASTM A370. The test shall be conducted at 0°C.The minimum average absorbed energy per set of three specimen shall be 27 J with an individual minimum per specimen of 22 J.
7. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV10 based on minimum four measurements representing the entire thickness.
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.		ZONE	DESCRIPTIONS	BY	APPRD
REVISIONS				REFERENCES	DRG. NO.

SECTION PROCESS & PIPING					CLIENT :		
	NAME	DATE	CHKD	DATE			
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :		MECON LIMITED
DRWN							
APPROVED			O.P. Jain		DATA SHEET FOR CHECK VALVES (NB ≥ 2")	SCALE :	REV
						DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/CV/78	0

DATA SHEET FOR CHECK VALVE

1.0 Valve Manufacturer :

2.0 Service :

3.0 Valve Size (NB), mm (inch) : ANSI Rating : **300#** Design Standard : **API 6D**

4.0 MECON's Technical Specification No. : **MEC/TS/05/62/004,Rev-2**

5.0 Connecting Pipeline Design Pressure, bar : **49 kg/cm2** Design Temperature, °C : **-45°C to + 65°C**

6.0 **Connecting Pipe Specification** :
6.1 Material :
6.2 Diameter (OD), mm (inch) :
6.3 Thickness, mm :

7.0 **Valve Construction Design**
7.1 Type :

7.2 End Connections :
- **Flanged both ends** ☐
- **Butt Weld both ends** ☐
- **Flanged one end, butt weld other end** ☐
- **Socket Weld as per ASME B 16.11** ☐

7.3 Flanges (wherever applicable) : a) RF ☐ FF ☐ RTJ ☐ NA ☐
b) Serrated ☐ Smooth (125 to 200 microinches AARH) ☐ NA ☐

8.0 **Valve Material Specification**

	Part	Specified Material	Material Offered (Equivalent or Superior
8.1	Body	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
8.2	Cover	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
8.3	Disc/ Plates	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
8.4	Body Seat Rings (See Note-3)	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
8.5	Disc Hinge	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2	
8.6	Hinge Pin	**SS 316 (No casting) / A 350 Gr. LF2**	
8.7	Cover Stud Bolts	**ASTM A320 Gr.L7**	
8.8	Nuts	**ASTM A194 Gr.4**	
8.9	Cover Gasket	**SS 304/316 Spiral Wound with Grafoil**	
8.1	Spring	**Inconel X-750**	

9.0 Corrosion Allowance : **1.5 mm**

10.0 Location : Above Ground ☐ Buried ☐

11.0 Stem Extension Requirement : Yes ☐ No ☐

12.0 Gear Operator Requirement : Yes ☐ No ☐

13.0 Gas Powered Actuator Requirement : Yes ☐ No ☐

14.0 Fire Resistant Design Requirement :

15.0 **Valve Testing Requirement**

			Test Pressure (min.), kg/cm2(g)	Minimum Duration, minutes
15.1	Hydrostatic Test	Body	**76**	**As per API 6D**
		Seat	**57**	**As per API 6D**

16.0 **Valve Painting Specification**
i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

17.0 Lock Open/ Lock Close Requirement : **N.A.**

Notes:
1. This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2.
2. Inspection and Testing shall be as per approved QAP, this Data Sheet, MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2, API 6D, BS EN 12266 and other relevant standards. Min. Valve Body Wall Thickness as per ASME B16.34 .
3. Seats shall be non-renewable integral type. Drain Plug shall be provided to drain valve cavity .
4. 5% of valves shall undergo radiographic examination.
5. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
6. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing & controlling parts such as body, bonnet, stem, disc, body seat, end flange, welding ends as well as the bolting material as per relevant material code.
7. Hardness test shall be carried out as per relevant material code
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

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REVISIONS					

	NAME	DATE	CHKD	DATE
SECTION PROCESS & PIPING				
DSGN	PM	25.04.12	AKJ	25.04.12
DRWN				

CLIENT :

PROJECT :

REFERENCES | DRG. NO.

MECON LIMITED

APPROVED O. P. JAIN

DATA SHEET FOR CHECK VALVES (NB ≥ 2")

SCALE :

DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/CV/79

REV 0

DATA SHEET FOR CHECK VALVE

1.0 Valve Manufacturer :

2.0 Service :

3.0 Valve Size (NB), mm (inch) : ANSI Rating : **600#** Design Standard : **API 6D**

4.0 MECON's Technical Specification No. : **MEC/TS/05/62/004,Rev-2**

5.0 Connecting Pipeline Design Pressure, bar : **92 kg/cm2** Design Temperature, °C : **-29°C to + 65°C**

6.0 **Connecting Pipe Specification** :
6.1 Material :
6.2 Diameter (OD), mm (inch) :
6.3 Thickness, mm :

7.0 **Valve Construction Design**
7.1 Type :

7.2 End Connections :
- **Flanged both ends** ☐
- **Butt Weld both ends** ☐
- **Flanged one end, butt weld other end** ☐
- **Socket Weld as per ASME B 16.11** ☐

7.3 Flanges (wherever applicable) : a) RF ☐ FF ☐ RTJ ☐ NA ☐
b) Serrated ☐ Smooth (125 to 200 microinches AARH) ☐ NA ☐

8.0 **Valve Material Specification**

	Part	Specified Material	Material Offered (Equivalent or Superior
8.1	Body	**ASTM A 216 Gr.WCB**	
8.2	Cover	**ASTM A 216 Gr.WCB**	
8.3	Disc/ Plates	**(ASTM A 216 Gr. WCB + 13% Cr Steel Facing) / 13% Cr Steel (Stellited)**	
8.4	Body Seat Rings (See Note-3)	**ASTM A 216 Gr. WCB+13% Cr Steel Facing (Stellited)**	
8.5	Disc Hinge	**ASTM A 216 Gr. WCB/ A 515 Gr. 70/ 13% Cr Steel**	
8.6	Hinge Pin	**13% Cr Steel (No Casting)**	
8.7	Cover Stud Bolts	**ASTM A 193 Gr. B7**	
8.8	Nuts	**ASTM A 194 Gr. 2H**	
8.9	Cover Gasket	**SS 304/316 Spiral Wound with Grafoil**	
8.1	Spring	**Inconel X-750**	

9.0 Corrosion Allowance : **1.5 mm**

10.0 Location : Above Ground ☐ Buried ☐

11.0 Stem Extension Requirement : Yes ☐ No ☐

12.0 Gear Operator Requirement : Yes ☐ No ☐

13.0 Gas Powered Actuator Requirement : Yes ☐ No ☐

14.0 Fire Resistant Design Requirement :

15.0 **Valve Testing Requirement**

			Test Pressure (min.), kg/cm2(g)	Minimum Duration, minutes
15.1	Hydrostatic Test	Body	**157**	**As per API 6D**
		Seat	**114**	**As per API 6D**

16.0 **Valve Painting Specification**
i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

17.0 Lock Open/ Lock Close Requirement : **N.A.**

Notes:
1. This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2.
2. Inspection and Testing shall be as per attached QAP ,this Data Sheet, MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2, API 6D, BS EN 12266 and other relevant standards.Min. Valve Body Wall Thickness as per ASME B16.34 .
3. Seats shall be non-renewable integral type.Drain Plug shall be provided to drain valve cavity .
4. 5% of valves shall undergo radiographic examination.
5. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
6. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing & controlling parts such as body, bonnet, stem, disc, body seat, end flange, welding ends as well as the bolting material as per ASTM A370. The test shall be conducted at 0°C.The minimum average absorbed energy per set of three specimen shall be 27 J with an individual minimum per specimen of 22 J.
7. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV10 based on minimum four measurements representing the entire thickness.
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

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SECTION PROCESS & PIPING					CLIENT :		
	NAME	DATE	CHKD	DATE			
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :		MECON LIMITED
DRWN							
APPROVED					DATA SHEET FOR CHECK VALVES (NB ≥ 2")	SCALE :	REV
						DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/CV/80	0

DATA SHEET FOR CHECK VALVE

1.0 Valve Manufacturer :

2.0 Service :

3.0 Valve Size (NB), mm (inch) : ANSI Rating : **600#** Design Standard : **API 6D**

4.0 MECON's Technical Specification No. : **MEC/TS/05/62/004,Rev-2**

5.0 Connecting Pipeline Design Pressure, kg/cm^2(g) : **92** Design Temperature, °C : **-45°C to + 65°C**

6.0 **Connecting Pipe Specification** :
6.1 Material :
6.2 Diameter (OD), mm (inch) :
6.3 Thickness, mm :

7.0 **Valve Construction Design**
7.1 Type :

7.2 End Connections :
- **Flanged both ends** ☐
- **Butt Weld both ends** ☐
- **Flanged one end, butt weld other end** ☐
- **Socket Weld as per ASME B 16.11** ☐

7.3 Flanges (wherever applicable) : a) RF ☐ FF ☐ RTJ ☐ NA ☐
b) Serrated ☐ Smooth (125 to 200 microinches AARH) ☐ NA ☐

8.0 **Valve Material Specification**

	Part	Specified Material	Material Offered (Equivalent or Superior
8.1	Body	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
8.2	Cover	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
8.3	Disc/ Plates	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
8.4	Body Seat Rings (See Note-3)	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
8.5	Disc Hinge	**SS316/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2	
8.6	Hinge Pin	**SS 316 (No casting) / A 350 Gr. LF2**	
8.7	Cover Stud Bolts	**ASTM A320 Gr.L7**	
8.8	Nuts	**ASTM A194 Gr.4**	
8.9	Cover Gasket	**SS 304/316 Spiral Wound with Grafoil**	
8.1	Spring	**Inconel X-750**	

9.0 Corrosion Allowance : **1.5 mm**

10.0 Location : Above Ground ☐ Buried ☐

11.0 Stem Extension Requirement : Yes ☐ No ☐

12.0 Gear Operator Requirement : Yes ☐ No ☐

13.0 Gas Powered Actuator Requirement : Yes ☐ No ☐

14.0 Fire Resistant Design Requirement :

15.0 **Valve Testing Requirement**

			Test Pressure (min.), kg/cm2(g)	Minimum Duration, minutes
15.1	Hydrostatic Test	Body	**157**	**As per API 6D**
		Seat	**114**	**As per API 6D**

16.0 **Valve Painting Specification**
i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

17.0 Lock Open/ Lock Close Requirement : **N.A.**

Notes:
1. This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2.
2. Inspection and Testing shall be as per attached QAP,this Data Sheet, MECON's Technical Specification No. MEC/TS/05/62/004,Rev-2, API 6D, BS EN 12266 and other relevant standards. Min. Valve Body Wall Thickness as per ASME B16.34 .
3. Seats shall be non-renewable integral type. Drain Plug shall be provided to drain valve cavity .
4. 5% of valves shall undergo radiographic examination.
5. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
6. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing & controlling parts such as body, bonnet, stem, disc, body seat, end flange, welding ends as well as the bolting material as per relevant material code.
7. Hardness test shall be carried out as per relevant material code
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

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DRWN				

CLIENT :

PROJECT :

REFERENCES DRG. NO.

MECON LIMITED

APPROVED O. P. JAIN

DATA SHEET FOR CHECK VALVES (NB ≥ 2")

SCALE :

DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/CV/81

REV 0

DATA SHEET FOR GLOBE VALVES

1. Valve Manufacturer :
2. Size : Rating : ANSI **150#** Design Standard : **BS:1873**
3. Purchaser's Specification : **Refer Technical notes for Gate & Globe Valves**
4. Design Pressure : **19kg/cm^2(g)** Design Temperature : **-29°C to + 65°C**
5. Corrosion Allowance : **1.5mm** Service :
6. End Connections :
   - Flanged both ends as per ASME B 16.5 ☐
   - Butt Weld both ends as A-16.25 ☐
   - Flanged one end butt weld other end ☐
   - Socket weld both ends as per ASME B16.11 ☐
7. Flanges (where applicable) : a) RF ☐ FF ☐ RTJ ☐
   b) Serrated ☐ Smooth (125 to 200 AARH) ☐
8. Connecting Pipe Specification :
9. Valve Material Specification :

	Part	Material	Material Offered (Equivalent or Superior)
9.1	Body	**ASTM A 216 Gr.WCB**	
9.2	Bonnet (Bolted)	**ASTM A 216 Gr.WCB**	
9.3	Stem (Rising)	**13% Cr. Steel (No Casting)**	
9.4	Disc(Loose Plug/Ball Type)	**(ASTM A 216 Gr. WCB + 13% Cr Steel Facing) /**	
		13% Cr Steel (Stellited)	
9.5	Body Seat Ring	**ASTM A 216 Gr. WCB+13% Cr Steel Facing (Stellited)**	
9.6	Stem Packing (Renewable	**Corrosion inhibited die formed flexible**	
	with valve open on stream)	**graphite with braided anti extrusion rings**	
9.7	Hand Wheel (Rising)	**Malleable Iron/ Cast Steel/ Fab. Steel**	
9.8	Bonnet Bolts	**A 193 Gr. B7**	
9.9	Bonnet Nuts	**A194 Gr. 2H**	
9.10	Bonnet Gasket	**Spiral Wound SS 316 + Grafoil**	

10. Hydrostatic Test Pressure
    a) Body : **32 kg/cm^2(g)**
    b) Seat : **23 kg/cm^2(g)**
11. PnuematicTest Pressure with Air : **5.6 - 7 kg/cm2 (g).**
12. Painting Specifications:

i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.

ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

Notes:

1. Valve specification sheet shall be read in conjunction with technical notes for Gate and Globe valves.
2. Valve shall be designed for intrinsically fire safe. Min. Body & Bonnet Thickness as per BS 1873 .
3. Testing shall be as per BS EN 12266-1,approved QAP,this specification and other relevant standards.
4. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
5. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing parts such as body, end flange, welding ends as well as the bolting material as per ASTM A370. The test shall be conducted at 0°C. The minimum average absorbed energy per set of three specimen shall be 27 J with an individual minimum per specimen of 22 J.
6. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV10 based on minimum four measurements representing the entire thickness.
7. Stem packing shall be renewable with valve open on stream .
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD

SECTION PROCESS & PIPING					CLIENT :	REFERENCES	DRG. NO.
	NAME	DATE	CHKD	DATE			
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :		MECON LIMITED
DRWN							
APPROVED			O. P. JAIN		**DATA SHEET FOR GLOBE VALVES (NB≥2")**	SCALE :	REV 0
						DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/GV/76	

DATA SHEET FOR GLOBE VALVES

1. Valve Manufacturer :
2. Size : Rating : ANSI **150#** Design Standard **: BS:1873**
3. Purchaser's Specification : **Refer Technical notes for Gate & Globe Valves**
4. Design Pressure : **19 kg/cm^2(g)** Design Temperature **: -45°C to + 65°C**
5. Corrosion Allowance : **1.5mm** Service :
6. End Connections : Flanged both ends as per ASME B 16.5 ☐
   Butt Weld both ends as A-16.25 ☐
   Flanged one end butt weld other end ☐
   Socket weld both ends as per ASME B16.11 ☐ with 100mm pup pieces of A106 Gr. B Sch160
7. Flanges (where applicable) : a) RF ☐ FF ☐ RTJ ☐
   b) Serrated ☐ Smooth (125 to 200 AARH) ☐
8. Connecting Pipe Specification :
9. Valve Material Specification :

	Part	Material	Material Offered (Equivalent or Superior)
9.1	Body	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
9.2	Bonnet (Bolted)	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
9.3	Stem (Rising)	**SS316 (No casting) / A 350 GR. LF2**	
9.4	Disc(Loose Plug/Ball Type)	**SS316 + Stellite/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 with 75 Micron ENP coating	
9.5	Body Seat Ring	**SS316 + Stellite/ ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 with 75 Micron ENP coating	
9.6	Stem Packing (Renewable	**Graphited Braided Asbestos with sacrifical**	
	with valve open on stream)	**inhibitor & Inconel wire reinforcement**	
9.7	Hand Wheel (Rising)	**Malleable Iron/ Cast Steel/ Fab. Steel**	
9.8	Bonnet Bolts	**ASTM A320 Gr.L7**	
9.9	Bonnet Nuts	**ASTM A194 Gr.4**	
9.10	Bonnet Gasket	**Spiral Wound SS 316 + Grafoil**	

10. Hydrostatic Test Pressure
    a) Body : **32 kg/cm^2(g)**
    b) Seat : **23 kg/cm^2(g)**
11. PnuematicTest Pressure with Air : **5.6-7 kg/cm2 (g).**
12. Painting Specifications:

i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.

ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

Notes:

1. Valve specification sheet shall be read in conjunction with technical notes for Gate and Globe valves.
2. Valve shall be designed for intrinsically fire safe.Min. Body & Bonnet Thickness as per BS 1873 .
3. Testing shall be as per BS EN 12266-1.
4. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
5. Charpy 'V' notch test on each heat of base material shall be conducted as per relevant material code.
6. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve as per relevant material code.
7. Stem packing shall be renewable with valve open on stream .
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD

SECTION PROCESS & PIPING					CLIENT :	REFERENCES	DRG. NO.
	NAME	DATE	CHKD	DATE			
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :		MECON LIMITED
DRWN							
APPROVED			O. P. JAIN		**DATA SHEET FOR GLOBE VALVES (NB≥ 2")**	SCALE :	REV
						DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/GV/77	0

DATA SHEET FOR GLOBE VALVES

1. Valve Manufacturer :

2. Size : Rating : ANSI **300#** Design Standard **: BS:1873**

3. Purchaser's Specification : **Refer Technical notes for Gate & Globe Valves**

4. Design Pressure : **49 kg/cm^2(g)** Design Temperature **: -29°C to + 65°C**

5. Corrosion Allowance : **1.5mm** Service :

6. End Connections :
   - Flanged both ends as per ASME B 16.5 ☐
   - Butt Weld both ends as A-16.25 ☐
   - Flanged one end butt weld other end ☐
   - Socket weld both ends as per ASME B16.11 ☐

7. Flanges (where applicable) : a) RF ☐ FF ☐ RTJ ☐

   b) Serrated ☐ Smooth (125 to 200 AARH) ☐

8. Connecting Pipe Specification :

9. Valve Material Specification :

	Part	Material	Material Offered (Equivalent or Superior)
9.1	Body	**ASTM A 216 Gr.WCB**	
9.2	Bonnet (Bolted)	**ASTM A 216 Gr.WCB**	
9.3	Stem (Rising)	**13% Cr. Steel (No Casting)**	
9.4	Disc(Loose Plug/Ball Type)	**(ASTM A 216 Gr. WCB + 13% Cr Steel Facing) /**	
		13% Cr Steel (Stellited)	
9.5	Body Seat Ring	**ASTM A 216 Gr. WCB+13% Cr Steel Facing (Stellited)**	
9.6	Stem Packing (Renewable	**Corrosion inhibited die formed flexible**	
	with valve open on stream)	**graphite with braided anti extrusion rings**	
9.7	Hand Wheel (Rising)	**Malleable Iron/ Cast Steel/ Fab. Steel**	
9.8	Bonnet Bolts	**A 193 Gr. B7**	
9.9	Bonnet Nuts	**A194 Gr. 2H**	
9.10	Bonnet Gasket	**Spiral Wound SS 316 + Grafoil**	

10. Hydrostatic Test Pressure
    - a) Body : **76 kg/cm^2(g)**
    - b) Seat : **57 kg/cm^2(g)**

11. PnuematicTest Pressure with Air : **5.6 - 7 kg/cm2 (g).**

12. Painting Specifications:

i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.

ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

Notes:

1. Valve specification sheet shall be read in conjunction with technical notes for Gate and Globe valves.
2. Valve shall be designed for intrinsically fire safe. Min. Body & Bonnet Thickness as per BS 1873 .
3. Testing shall be as per BS EN 12266-1,approved QAP,this specification and other relevant standards.
4. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
5. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing parts such as body, end flange, welding ends as well as the bolting material as per ASTM A370. The test shall be conducted at 0°C. The minimum average absorbed energy per set of three specimen shall be 27 J with an individual minimum per specimen of 22 J.
6. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV10 based on minimum four measurements representing the entire thickness.
7. Stem packing shall be renewable with valve open on stream .
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD

SECTION PROCESS & PIPING					CLIENT :	REFERENCES / DRG. NO.
	NAME	DATE	CHKD	DATE		
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :	MECON LIMITED
DRWN						
APPROVED			O. P. JAIN		**DATA SHEET FOR GLOBE VALVES (NB≥2")**	SCALE : / DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/GV/78 / REV 0

DATA SHEET FOR GLOBE VALVES

1. Valve Manufacturer :

2. Size : Rating : ANSI **300#** Design Standard **: BS:1873**

3. Purchaser's Specification : **Refer Technical notes for Gate & Globe Valves**

4. Design Pressure : **49 kg/cm^2(g)** Design Temperature **: -45°C to + 65°C**

5. Corrosion Allowance : **1.5mm** Service :

6. End Connections :
   - Flanged both ends as per ASME B 16.5 ☐
   - Butt Weld both ends as A-16.25 ☐
   - Flanged one end butt weld other end ☐
   - Socket weld both ends as per ASME B16.11 ☐ with 100mm pup pieces of A106 Gr. B Sch160

7. Flanges (where applicable) : a) RF ☐ FF ☐ RTJ ☐

   b) Serrated ☐ Smooth (125 to 200 AARH) ☐

8. Connecting Pipe Specification :

9. Valve Material Specification :

	Part	Material	Material Offered (Equivalent or Superior)
9.1	Body	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
9.2	Bonnet (Bolted)	**ASTM A352 Gr. LCB/ A 350 GR. LF2**	
9.3	Stem (Rising)	**SS316 (No casting) / A 350 GR. LF2**	
9.4	Disc(Loose Plug/Ball Type)	**SS316 / ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
9.5	Body Seat Ring	**SS316 / ASTM A352 Gr. LCB /**	
		A 350 GR. LF2 + Stellited	
9.6	Stem Packing (Renewable	**Corrosion inhibited die formed flexible**	
	with valve open on stream)	**graphite with braided anti extrusion rings**	
9.7	Hand Wheel (Rising)	**Malleable Iron/ Cast Steel/ Fab. Steel**	
9.8	Bonnet Bolts	**ASTM A320 Gr.L7**	
9.9	Bonnet Nuts	**ASTM A194 Gr.4**	
9.10	Bonnet Gasket	**Spiral Wound SS 316 + Grafoil**	

10. Hydrostatic Test Pressure
    - a) Body : **76 kg/cm^2(g)**
    - b) Seat : **57 kg/cm^2(g)**

11. PnuematicTest Pressure with Air : **5.6-7 kg/cm2 (g).**

12. Painting Specifications:

i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.

ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

Notes:

1. Valve specification sheet shall be read in conjunction with technical notes for Gate and Globe valves.
2. Valve shall be designed for intrinsically fire safe. Min. Body & Bonnet Thickness as per BS 1873 .
3. Testing shall be as per BS EN 12266-1,approved QAP,this specification and other relevant standards.
4. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
5. Charpy 'V' notch test on each heat of base material shall be conducted as per relevant material code.
6. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve as per relevant material code.
7. Stem packing shall be renewable with valve open on stream .
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD

SECTION PROCESS & PIPING				
	NAME	DATE	CHKD	DATE
DSGN	PM	25.04.12	AKJ	25.04.12
DRWN				

CLIENT :

PROJECT :

REFERENCES DRG. NO.

MECON LIMITED

APPROVED O. P. JAIN

DATA SHEET FOR GLOBE VALVES (NB≥ 2")

SCALE :

DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/GV/79

REV 0

DATA SHEET FOR GLOBE VALVES

1. Valve Manufacturer :

2. Size : Rating : ANSI **600#** Design Standard **: BS:1873**

3. Purchaser's Specification : **Refer Technical notes for Gate & Globe Valves**

4. Design Pressure : **92 kg/cm^2(g)** Design Temperature **: -29°C to + 65°C**

5. Corrosion Allowance : **1.5mm** Service :

6. End Connections :
   - Flanged both ends as per ASME B 16.5 ☐
   - Butt Weld both ends as A-16.25 ☐
   - Flanged one end butt weld other end ☐
   - Socket weld both ends as per ASME B16.11 ☐

7. Flanges (where applicable) : a) RF ☐ FF ☐ RTJ ☐

   b) Serrated ☐ Smooth (125 to 200 AARH) ☐

8. Connecting Pipe Specification :

9. Valve Material Specification :

	Part	Material	Material Offered (Equivalent or Superior)
9.1	Body	**ASTM A 216 Gr.WCB**	
9.2	Bonnet (Bolted)	**ASTM A 216 Gr.WCB**	
9.3	Stem (Rising)	**13% Cr. Steel (No Casting)**	
9.4	Disc(Loose Plug/Ball Type)	**(ASTM A 216 Gr. WCB + 13% Cr Steel Facing) /**	
		13% Cr Steel (Stellited)	
9.5	Body Seat Ring	**ASTM A 216 Gr. WCB+13% Cr Steel Facing (Stellited)**	
9.6	Stem Packing (Renewable	**Corrosion inhibited die formed flexible**	
	with valve open on stream)	**graphite with braided anti extrusion rings**	
9.7	Hand Wheel (Rising)	**Malleable Iron/ Cast Steel/ Fab. Steel**	
9.8	Bonnet Bolts	**A 193 Gr. B7**	
9.9	Bonnet Nuts	**A194 Gr. 2H**	
9.10	Bonnet Gasket	**Spiral Wound SS 316 + Grafoil**	

10. Hydrostatic Test Pressure
    - a) Body : **157 kg/cm^2(g)**
    - b) Seat : **114 kg/cm^2(g)**

11. PnuematicTest Pressure with Air : **5.6 - 7 kg/cm2 (g).**

12. Painting Specifications:

i) Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.

ii) For above ground installation-Three coats of corrosion resistant paint shall be applied with minimum thickness of 300 micron (Permissible thickness in each coat shall be within 80 to 120 micron).

Notes:

1. Valve specification sheet shall be read in conjunction with technical notes for Gate and Globe valves.
2. Valve shall be designed for intrinsically fire safe. Min. Body & Bonnet Thickness as per BS 1873 .
3. Testing shall be as per BS EN 12266-1,approved QAP,this specification and other relevant standards.
4. Bidder shall clearly write all/ any deviation against each part/ material of valve in the space provided for . Wherever bidder agrees with MECON's data sheet, bidder shall clearly indicate "agreed".
5. Charpy 'V' notch test on each heat of base material shall be conducted for all pressure containing parts such as body, end flange, welding ends as well as the bolting material as per ASTM A370. The test shall be conducted at 0°C. The minimum average absorbed energy per set of three specimen shall be 27 J with an individual minimum per specimen of 22 J.
6. Hardness test shall be carried out on each heat of base material for all pressure containing parts of the valve. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV10 based on minimum four measurements representing the entire thickness.
7. Stem packing shall be renewable with valve open on stream .
8. Painting procedure of the valves shall be as per Manufacturer's Standard.
9. Material Test Certificates and Hydro Test Reports shall be furnished prior to dispatch.

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD

SECTION PROCESS & PIPING					CLIENT :	REFERENCES	DRG. NO.
	NAME	DATE	CHKD	DATE			
DSGN	PM	25.04.12	AKJ	25.04.12	PROJECT :		MECON LIMITED
DRWN							
APPROVED			O. P. JAIN		**DATA SHEET FOR GLOBE VALVES**	SCALE :	REV
						DATA SHEET NO.: MEC/WINO/05/28/M/001/DS/GV/80	0