



**INDRADHANUSH GAS GRID LIMITED (IGGL)**  
(Joint Venture of IOCL, ONGC, GAIL, OIL and NRL)  
GUWAHATI, ASSAM

**NORTH -EAST GAS GRID PIPELINE PROJECT (PHASE-1)**  
**PIPELINE SECTION 1, 2,3, 5 & 9**

**CORRIGENDUM # 1 FOR PROCUREMENT**  
**OF**

**BALL VALVES**

**OPEN DOMESTIC COMPETITIVE BIDDING**

**Tender No.: 05/51/23UU/IGGL/002**

**Visit:** [www.tenderwizard.com/MECON](http://www.tenderwizard.com/MECON)  
**(Tenderwizard helpdesk: 011-49424365)**



**PREPARED AND ISSUED BY**

**MECON LIMITED**  
(A Govt. of India Undertaking)  
Delhi, India



**CORRIGENDUM # 1**  
**FOR PROCUREMENT OF BALL VALVES FOR NORTH -EAST GAS GRID PIPELINE PROJECT (PHASE-1) PIPELINE SECTION 1, 2,3, 5 & 9**  
**OF M/S INDRADHANUSH GAS GRID LIMITED**  
**Tender no. : 05/51/23UU/IGGL/002**



**MECON LIMITED**

Date: 29.10.2020

Sl. No.	Description	Volume	Page No.	Clause / Para / Section	Amendment / Addition / Modification / Deletion	
1	AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S)	I of II	7 of 173	2.0 (F) of IFB	Amendment	The clause no. 2.0 (F) of IFB, shall be read as  AVAILABILITY OF TENDER DOCUMENT ON WEBSITE(S) : From 13.10.2020 to <b>10.11.2020</b> (1400 Hrs, IST) on following websites:  (i) Tender Wizard's e-Procurement Portal (e-Portal): <a href="http://www.tenderwizard.com/MECON">www.tenderwizard.com/MECON</a> Contact person:- Mr. Mandeep Kumar Mobile:- 9599653865/ 01149424365 (The same may also be referred as IGGL's E-Portal in this tender document) (ii) IGGL Website – <a href="https://iggl.co.in/">https://iggl.co.in/</a> (iii) Govt. CPP Portal - <a href="https://etenders.gov.in">https://etenders.gov.in</a> (iv) MECON's Tender Website:- <a href="http://www.meconlimited.co.in">www.meconlimited.co.in</a>
2	BID DUE DATE & TIME	I of II	7 of 173	2.0 (H) of IFB	Amendment	The clause no. 2.0 (H) of IFB , shall be read as  BID DUE DATE AND TIME : Upto 1400 hrs. (IST) on <b>10.11.2020</b>
3	DATE , TIME & VENUE OF UN-PRICED BID OPENING	I of II	7 of 173	2.0 (I) of IFB	Amendment	The clause no. 2.0 (I) of IFB , shall be read as DATE AND TIME OF UN-PRICED BID OPENING - Date : <b>10.11.2020</b> Time : 15:00 Hrs.(IST) Venue : Shall be conducted through Video Conferencing Details of VC Zoom Meeting Meeting ID: 771 3744 3529 Passcode: 23UU
4	Quantity table of MR	II of II	Pages 4-7	Valve Body Type	Modification	The revised Material Requisition is enclosed as Annexure-I to this Corrigendum
5	Data Sheets (DS- 07 & 08)	II of II	Pages 86-87	Valve Body Type	Modification	The revised Data Sheet (DS-07 & 08) is enclosed as Annexure-II to this Corrigendum
6	Cut Out Slip	I of II	10 of 173	-	Amendment	The revised cut out slip is enclosed as Annexure-III to this Corrigendum.

**All other terms & conditions of tender document remain unaltered.**

**ANNEXURE-I to Corrigendum # 1**

## 1.0 SCOPE OF SUPPLY

The scope of supply includes Ball Valves conforming to design standard API-6D and meeting other technical requirements as specified in bid document (i.e. as per MR, Data Sheets & Technical Specifications), getting approvals from Purchaser/ Consultant, procurement of raw material, manufacturing, testing & inspection, packing & forwarding, transportation, unloading & stacking at designated places in the states of Assam, Arunachal Pradesh & Tripura as per tender terms & conditions. The details of valves to be supplied are in Table 1 below:

**Table-1**

MR Sl. No.	Size DN (inches)	ANSI Pressure Rating	Opening	Ends	Body	Stem Extension	Valve operator	Data Sheet No.	Qty. (nos.)	Remarks
<b>Ball Valves as per Design Standard API 6D, MECON's specification no. MEC/TS/05/28/002, Rev-1, Ed.-1 and data sheets given below :</b>										
<b>Section – 1: Delivery Location in the state of Assam</b>										
A.1	600 (24'')	600 #	FB	BW	Fully Welded Body	YES	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/01	16	---
A.2	600 (24'')	600 #	FB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/02	08	---
A.3	600 (24'')	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	09	4 valves with Auto-closure Facility
A.4	600 (24'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	HOV	MEC/23UU/05/28/M/001/DS/BV/04	13	---
A.5	300 (12'')	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	21	---
A.6	300 (12'')	600 #	RB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/06	01	---
A.7	300 (12'')	600 #	FB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/08	01	---
A.8	200 (8'')	600 #	RB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/06	25	---
A.9	200 (8'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	16	---
A.10	200 (8'')	600 #	RB	BW	Fully Welded Body	YES	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/09	32	---
A.11	100 (4'')	600 #	RB	BW	Fully Welded Body	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/06	25	---
A.12	100 (4'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/07	29	---

MR Sl. No.	Size DN (inches)	ANSI Pressure Rating	Opening	Ends	Body	Stem Extension	Valve operator	Data Sheet No.	Qty. (nos.)	Remarks
<b>Ball Valves as per Design Standard API 6D, MECON's specification no. MEC/TS/05/28/002, Rev-1, Ed.-1 and data sheets given below :</b>										
<b>Section – 2: Delivery Location in the state of Assam/ Arunachal Pradesh</b>										
B.1	200 (8'')	600 #	FB	BW	Fully Welded Body	YES	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/01	01	---
B.2	200 (8'')	600 #	FB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/02	02	---
B.3	200 (8'')	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	02	1 valves with Auto-closure Facility
B.4	200 (8'')	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	02	---
B.5	200 (8'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	01	---
B.6	100 (4'')	600 #	RB	BW	Fully Welded Body	YES	Manual	MEC/23UU/05/28/M/001/DS/BV/09	02	---
B.7	100 (4'')	600 #	RB	BW	Fully Welded Body	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/06	03	---
B.8	100 (4'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/07	08	---
<b>Section – 3: Delivery Location in the state of Assam/ Tripura</b>										
C.1	450 (18'')	600 #	FB	BW	Fully Welded Body	YES	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/01	05	---
C.2	450 (18'')	600 #	FB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/02	02	---
C.3	450 (18'')	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	01	1 valves with Auto-closure Facility
C.4	450 (18'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	HOV	MEC/23UU/05/28/M/001/DS/BV/04	01	---
C.5	300 (12'')	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	01	---
C.6	300 (12'')	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	09	---
C.7	300 (12'')	600 #	RB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/06	01	---
C.8	300 (12'')	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	02	---
C.9	200 (8'')	600 #	RB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/06	01	---

MR Sl. No.	Size DN (inches)	ANSI Pressure Rating	Opening	Ends	Body	Stem Extension	Valve operator	Data Sheet No.	Qty. (nos.)	Remarks
<b>Ball Valves as per Design Standard API 6D, MECON's specification no. MEC/TS/05/28/002, Rev-1, Ed.-1 and data sheets given below :</b>										
C.10	150 (6")	600 #	RB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/06	07	---
C.11	150 (6")	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	04	---
C.12	150 (6")	600 #	RB	BW	Fully Welded Body	YES	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/09	10	---
C.13	100 (4")	600 #	RB	BW	Fully Welded Body	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/06	06	---
C.14	100 (4")	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/07	07	---

**Section – 5: Delivery Location in the state of Tripura**

D.1	300 (12")	600 #	FB	BW	Fully Welded Body	YES	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/01	06	---
D.2	300 (12")	600 #	FB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/02	02	---
D.3	300 (12")	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	02	1 valves with Auto-closure Facility
D.4	300 (12")	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	04	---
D.5	300 (12")	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	03	---
D.6	200 (8")	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	06	---
D.7	150 (6")	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/07	02	---
D.8	100 (4")	600 #	RB	BW	Fully Welded Body	YES	Manual	MEC/23UU/05/28/M/001/DS/BV/09	12	---
D.9	100 (4")	600 #	RB	BW	Fully Welded Body	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/06	14	---
D.10	100 (4")	600 #	RB	Flanged (RF)	Either Welded Body or 2/3 Piece Bolted	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/07	07	---

MR Sl. No.	Size DN (inches)	ANSI Pressure Rating	Opening	Ends	Body	Stem Extension	Valve operator	Data Sheet No.	Qty. (nos.)	Remarks
<b>Ball Valves as per Design Standard API 6D, MECON's specification no. MEC/TS/05/28/002, Rev-1, Ed.-1 and data sheets given below :</b>										
<b>Section – 9: Delivery Location in the state of Tripura</b>										
E.1	300 (12'')	600 #	RB	BW	Fully Welded Body	NO	Remote Operated AV	MEC/23UU/05/28/M/001/DS/BV/03	02	1 valves with Auto-closure Facility
E.2	300 (12'')	600 #	FB	BW	Fully Welded Body	NO	Manual Gear Operated	MEC/23UU/05/28/M/001/DS/BV/05	02	---
E.3	100 (4'')	600 #	RB	BW	Fully Welded Body	NO	Manual	MEC/23UU/05/28/M/001/DS/BV/06	06	---

### **LEGEND**

- FB** = Full Bore  
**RB** = Reduced Bore  
**BW** = Butt Welded  
**RF** = Raised Face (Flanged)  
**HOV** = Hydraulic Operated Valve  
**AV** = Gas Powered Actuated Valve

### **2.0 DOCUMENTS & DATA REQUIREMENTS**

- 2.1 The table hereunder specifies the quantities and the nature of the documents to be submitted by the Package Contractor to Purchaser.
- 2.1.1 The documents required at the inquiry stage and to be included in the bid are listed under column A of clause 2.6 below.
- 2.1.2 The documents required after award of the Contract and subject to the written approval of the Purchaser are listed under column B of clause 2.6 below.
- 2.1.3 The final and certified documents are listed under column C of clause 2.6 below.
- 2.2 Any document, even when preliminary, shall be binding and therefore duly identified and signed by the Vendor. It shall bear the Purchaser's Project reference, the Material Requisition number and the identification number.
- 2.3 The drawings/documents shall be reviewed, checked, approved and duly signed/stamped by successful Bidder/supplier before submission. Revision number shall be changed during submission of the revised successful Bidder/supplier documents and all revisions shall be highlighted by clouds. Whenever the successful Bidder/supplier require any sub-supplier drawings to be reviewed by MECON, the same shall be submitted by the supplier after duly reviewed, approved and stamped by

the successful Bidder/supplier. Direct submission of the sub-supplier's drawings without contractor's approval shall not be entertained.

- 2.4 Review/Approval of the successful Bidder/supplier drawings by MECON would be only to review the compatibility with basic designs and concepts and in no way absolve the successful Bidder/supplier of his responsibility/contractual obligation to comply with tender requirements, applicable codes, specifications and statutory rules/regulations. Any error/deficiency noticed during any stage of manufacturing/execution/installation shall be promptly corrected by the successful Bidder/supplier without any extra cost or time, whether or not comments on the same were received from MECON during the drawing review stage.
- 2.5 The successful Bidder/ Supplier shall submit a prerecorded Training CDs/DVDs and it shall comprise the basic theories and fundamentals, related standards, design parameters, scanned copies of approved drgs./docs., manufacturing & inspection methods, operating & maintenance instructions and other relevant details. The CDs/DVDs shall have to be self-contained, user-friendly using animation/videos and other multimedia techniques.
- 2.6 **THE DOCUMENTS ARE FULLY PART OF THE SUPPLY WHICH SHALL BE COMPLETE ONLY IF AND WHEN THE DOCUMENTS COMPLYING FULLY WITH THE TENDER REQUIREMENTS ARE RECEIVED BY THE PURCHASER.**

Item	Documents & Data	A	B		C	
		No. of Copies	No. of Copies	Required Date (from FOI)	No. of Copies	Required Date (before Dispatch)
1.	Completed Data Sheets	3	3	2 Weeks	3	2 Weeks (with final technical file)
2.	Drawing / Data Submittal list / schedule	-	3	2 Weeks + monthly	3	2 Weeks
3.	Fabrication, test and delivery schedule (per item)	3	3	2 Weeks + monthly	3	2 Weeks
4.	Fire Safe certificate as per API 6FA & API 607	3	-	-	-	-
5.	Progress Report	-	3	2 Weeks + monthly	3	2 Weeks
6.	Catalogues / References	3	-	-	3	With final technical file
7.	GA drawings + Sectional drawings + Material specification + Unit weight. + Unit volume + Package dimensions per unit (all above per valve and actuator)	3	3	2 Weeks	3	With final technical file
8.	"Way of Shipping" as per Notes to Material Requisition	-	3	7 days	-	-
9.	Packing / shipping list with weights and dimensions	-	3	2 Weeks before shipping	3	2 Weeks (with final technical file)
10.	Design calculations for pressure containing parts	-	3	2 Weeks	3	2 Weeks (with final technical file)
11.	Welding details for the pups	-	3	2 Weeks	3	2 Weeks (with final technical file)
12.	Torque curves + Torque calculations	3	3	2 Weeks	3	2 Weeks (with final technical file)
13.	Bill of materials (on drawings)	-	3	2 Weeks	3	2 Weeks (with final technical file)
14.	Recommended spare parts list (for erection and commissioning)	3	-	-	3	2 Weeks (with final technical file)
15.	Recommended spares parts list (for 2 years operation)	3	-	-	3	2 Weeks (with final technical file)

16.	Welding procedure specification and records WPS / PQR	-	3	2 Weeks	3	2 Weeks (with final technical file)
17.	QA / QC program	3	3	2 Weeks	3	2 Weeks (with final technical file)
18.	Inspection and Test Procedures along with Quality Assurance Plan	3	3	2 Weeks	3	2 Weeks (with final technical file)
19.	Test Reports	-	-	-	3	2 Weeks (with final technical file)
20.	NDE / NDT Reports	-	-	-	3	2 Weeks (with final technical file)
21.	Heat Treatment Reports	-	-	-	3	2 Weeks (with final technical file)
22.	Hydrotest and air test report	-	-	-	3	2 Weeks (with final technical file)
23.	Maintenance and operating manuals	-	-	-	3	2 Weeks (with final technical file)
24.	Installation instructions & Site inspection procedure	-	-	-	3	2 Weeks (with final technical file)
25.	Material certificate as per EN 10204 - 3.2	-	-	-	3	2 Weeks (with final technical file)
26.	Painting system description & procedure	3	3	2 weeks	3	2 Weeks (with final technical file)
27.	List of sub-vendors with their scope	3	3	2 weeks		
28.	Training CDs/DVDs covering design, operation & maintenance	-	-	-	3	2 Weeks (with final technical file)
29.	Final technical file, preliminary copy for approval (in soft & hardcopy)	-	3	2 weeks before dispatch/ shipping	-	-
30.	Final technical file (hardcopy)	-	-	-	3	Before shipping
31.	Final technical file (softcopy – .pdf - Acrobat files in CD ROM / DVD & Hard Drive)	-	-	-	6	

## **NOTES**

- 1) In case of e-bids, only single copy of documents / drawings / data under column A need be uploaded.
- 2) Durations in column B (required date) are weeks after FOI or as indicated in Table.
- 3) Durations in column C (required date) are weeks after document approval or as indicated in Table. Due date of each document may be proposed.
- 4) The above documents & data requirements shall also be supplemented by all requirements of clause 10.0 of MECON's T.S. No. MEC/TS/05/28/002.
- 5) For documents & data requirements of gas powered valve actuators refer clause no. 9.0 of specification no. MEC/TS/05/E5/002A (Technical specification for gas powered valve actuators).

**ANNEXURE-II to Corrigendum # 1**

**Annexure-II**

**DATA SHEET FOR BALL VALVES**

**MR Item no. : A.9, A.12, B.5, B.8, C.8, C.11, C.14, D.5, D.7 & D.10**

- 1.0 Valve Manufacturer : ANSI RATING : 600#
- 2.0 Valve Size (NB) (inch): 300 (12"), 200 (8") 150 (6") & 100 (4") Design Standard : **API 6D**
- 3.0 MECON's Technical Specification No.: **MEC/TS/05/21/002, Rev-1, Ed-1**
- 4.0 Design Pressure : **92 kg/cm2 (g)** Design Temperature, °C : **-29°C to + 65°C**
- 5.0 Connecting Pipe Specification: **N.A.**
- 5.1 Material
- 5.2 Diameter (OD)
- 5.3 Thickness
- 6.0 **Valve Construction Design**
- 6.1 Configuration : Reduced Bore  Full Bore
- 6.2 End Connections : Flanged as per ASME B16.5  Butt Welded as per ASME B16.25
- 6.3 Flanges (wherever applicable) : a) RF  RT  NA
- b) Serrated  Smooth (125 to 200 microinches AARH)  NA
- 6.4 Ball Mounting : Trunnion mounted
- 6.5 Valve body type : Fully Welded  Two/Three Piece Bolted  Either
- 6.6 500 mm pup piece (integrally welded to the valve on each side) : Yes  No   
 (Material, Outer Diameter and Thickness of pup piece to be same as that of the connecting pipe mentioned above)

**7.0 Valve Material Specification**

Part	Specified Material	Material Offered (Equivalent or
7.1 Body	A 216 Gr. WCB/ A 105	
7.2 Ball	(A 216 Gr.WCB/ A 105)+75 µENP coating/AISI410	
7.3 Body Seat Rings	AISI 4140 + 75 micron ENP coating/AISI 410	
7.4 Seat Seal	VITON/DEVLON	
7.5 Stem (No casting)	AISI 4140 + 75 micron ENP coating/AISI 410	
7.6 Stem Seals	VITON/PTFE	
7.7 Trunnion	A 216 Gr. WCB/ A 105	
7.8 Stud Bolts/ Nuts	ASTM A 193 Gr. B7/ A194 Gr. 2H	

- 8.0 Corrosion Allowance : **1.5 mm** Service : **Natural Gas**
- 9.0 Location : Above Ground  Buried
- 10.0 Stem Extension Requirement : Yes  No
- 11.0 Gear Operator Requirement : Yes  No  (Upto 4")
- 12.0 Actuator Requirement : Yes  No
- 13.0 Fire Resistant Design Requirement : **Type test as per API 6 FA/607**

**14.0 Valve Testing Requirement**

		Test Pressure (min.),	Minimum Duration
		kg/cm <sup>2</sup> (g)	(minutes)
14.1 Hydrostatic Test	Body	<b>157</b>	<b>As per API 6D</b>
	Seat	<b>114</b>	<b>As per API 6D</b>
14.2 Air Test		<b>5.6 - 7</b>	<b>As per API 6D</b>


15.0 Anti-Static Testing Requirement : **As per Standard API 6D (Latest Ed.)**

**16.0 Valve Painting Specification**

- 16.1 Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
- 16.2 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). Colour of paint shade shall be RAL-7038, however any change in colour shall be finalized during drawing approval stage.
- 17.0 Lock Open Requirement : **N.A.**

**Notes:**

- This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/21/002,Rev 1 ,Ed. 1
- Minimum thickness of valve body / adaptor shall not be less than that specified in ASME B16.34 plus corrosion allowance specified in this datasheet .
- Inspection and Testing shall be as per attached QAP, this Data Sheet, MECON's T.S., API 6D and other relevant standards.
- Stops shall be provided for positive alignment of ball with ports and ensure proper installation of handle.
- Short pattern valves (as per API 6D or otherwise) are not permitted. Only long pattern valves are to be supplied.
- Charpy V-notch & Hardness test for body, body adaptor, end flanges, ball, body seat rings, stem & studs / nuts shall be conducted as per Cl. 3.4 & 3.6 of TS respectively or as per relevant material code.
- Compressed asbestos fibre (CAF) shall not be used for body sealing / gasket materials.
- For welding end, the out of roundness (i.e. difference between maximum and minimum ID at pipe end) shall not be more than 0.5% of pipe OD.
- Valves shall be inspected and approved by Purchaser before despatch.
- Support foot & lifting lugs shall be provided as per Cl. 4.16 of the TS for Ball Valves.
- Bidder shall clearly write valves material (equivalent or superior) offered by them against each part/material of valve in the space provided for. Wherever bidder agrees with valves material as mentioned above in MECON's data sheet, bidder shall clearly indicate "AGREED".

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
REVISIONS							
SECTION PROCESS & PIPING							
NAME	SK	HK	I Sen			 <b>MECON LIMITED</b>	
DATE	28-Oct-20	28-Oct-20	28-Oct-20				
SIGN							
CLIENT : INDRADHANUSH GAS GRID LIMITED NORTH -EAST NATURAL GAS PIPELINE GRID (PHASE-1) PROJECT						SCALE :	REV 0
<b>DATA SHEET FOR BALL VALVES</b> (NB ≥ 2")						DATA SHEET NO.: MEC/23UU/05/21/M/001/DS/BV/07	

**Annexure-II**

**DATA SHEET FOR BALL VALVES**

**MR Item no. : A.7**

- 1.0 Valve Manufacturer :
- 2.0 Valve Size (NB) (inch): 300 (12") ANSI RATING : 600# Design Standard : **API 6D**
- 3.0 MECON's Technical Specification No.: **MEC/TS/05/21/002, Rev-1, Ed-1**
- 4.0 Design Pressure : **92 kg/cm2 (g)** Design Temperature, °C : **-29°C to + 65°C**
- 5.0 Connecting Pipe Specification: **N.A.**
- 5.1 Material
- 5.2 Diameter (OD)
- 5.3 Thickness
- 6.0 **Valve Construction Design**
- 6.1 Configuration : Reduced Bore  Full Bore
- 6.2 End Connections : Flanged as per ASME B16.5  Butt Welded as per ASME B16.25
- 6.3 Flanges (wherever applicable) : a) RF  RT  NA   
 b) Serrated  Smooth (125 to 200 microinches AARH)  NA
- 6.4 Ball Mounting : Trunnion mounted
- 6.5 Valve body type : Fully Welded  Two/Three Piece Bolted  Either
- 6.6 500 mm pup piece (integrally welded to the valve on each side) : Yes  No   
 (Material, Outer Diameter and Thickness of pup piece to be same as that of the connecting pipe mentioned above)

**7.0 Valve Material Specification**

Part	Specified Material	Material Offered (Equivalent or
7.1 Body	A 216 Gr. WCB/ A 105	
7.2 Ball	(A 216 Gr.WCB/ A 105)+75 µENP coating/AISI410	
7.3 Body Seat Rings	AISI 4140 + 75 micron ENP coating/AISI 410	
7.4 Seat Seal	VITON/DEVLON	
7.5 Stem (No casting)	AISI 4140 + 75 micron ENP coating/AISI 410	
7.6 Stem Seals	VITON/PTFE	
7.7 Trunnion	A 216 Gr. WCB/ A 105	
7.8 Stud Bolts/ Nuts	ASTM A 193 Gr. B7/ A194 Gr. 2H	

- 8.0 Corrosion Allowance : **1.5 mm** Service : **Natural Gas**
- 9.0 Location : Above Ground  Buried
- 10.0 Stem Extension Requirement : Yes  No
- 11.0 Gear Operator Requirement : Yes  No
- 12.0 Actuator Requirement : Yes  No
- 13.0 Fire Resistant Design Requirement : **Type test as per API 6 FA/607**

**14.0 Valve Testing Requirement**

		Test Pressure (min.),	Minimum Duration
		kg/cm <sup>2</sup> (g)	(minutes)
14.1 Hydrostatic Test	Body	<b>157</b>	<b>As per API 6D</b>
	Seat	<b>114</b>	<b>As per API 6D</b>
14.2 Air Test		<b>5.6 - 7</b>	<b>As per API 6D</b>


15.0 Anti-Static Testing Requirement : **As per Standard API 6D (Latest Ed.)**

**16.0 Valve Painting Specification**

- 16.1 Surface preparation by Short Blasting as per grade SA 2 1/2, Swedish Standard SIS-055 909.
- 16.2 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). Colour of paint shade shall be RAL-7038, however any change in colour shall be finalized during drawing approval stage.
- 17.0 Lock Open Requirement : **N.A.**

Notes:

- This Valve Data Sheet shall be read in conjunction with MECON's Technical Specification No. MEC/TS/05/21/002, Rev 1 ,Ed. 1
- Minimum thickness of valve body / adapter shall not be less than that specified in ASME B16.34 plus corrosion allowance specified in this datasheet .
- Inspection and Testing shall be as per attached QAP, this Data Sheet, MECON's T.S., API 6D and other relevant standards.
- Stops shall be provided for positive alignment of ball with ports and ensure proper installation of handle.
- Short pattern valves (as per API 6D or otherwise) are not permitted. Only long pattern valves are to be supplied.
- Charpy V-notch & Hardness test for body, body adaptor, end flanges, ball, body seat rings, stem & studs / nuts shall be conducted as per Cl. 3.4 & 3.6 of TS respectively or as per relevant material code.
- Compressed asbestos fibre (CAF) shall not be used for body sealing / gasket materials.
- For welding end, the out of roundness (i.e. difference between maximum and minimum ID at pipe end) shall not be more than 0.5% of pipe OD.
- Valves shall be inspected and approved by Purchaser before despatch.
- Support foot & lifting lugs shall be provided as per Cl. 4.16 of the TS for Ball Valves.
- Bidder shall clearly write valves material (equivalent or superior) offered by them against each part/material of valve in the space provided for. Wherever bidder agrees with valves material as mentioned above in MECON's data sheet, bidder shall clearly indicate "AGREED".

REV. NO.	DATE	ZONE	DESCRIPTIONS	BY	APPRD	REFERENCES	DRG. NO.
REVISIONS							
SECTION PROCESS & PIPING							
	PREPARED	CHECKED	APPROVED			 <p align="center"><b>MECON LIMITED</b></p>	
NAME	SK	HK	I Sen				
DATE	28-Oct-20	28-Oct-20	28-Oct-20				
SIGN							
<b>DATA SHEET FOR BALL VALVES</b>						SCALE :	REV
<b>(NB ≥ 2")</b>						DATA SHEET NO.: MEC/23UU/05/21/M/001/DS/BV/08	0

**ANNEXURE-III to Corrigendum # 1**

**Cut-Out Slip**

**DO NOT OPEN - THIS IS A QUOTATION**

***Bid Document No.*** : **05/51/23UU/IGGL/002**

***Description*** : **PROCUREMENT OF BALL VALVES FOR  
PIPELINE SECTION 1, 2, 3, 5 & 9 OF NORTH  
EAST GAS GRID PROJECT (NEGG) (PHASE  
I) PROJECT of M/s IGGL**

***Due Date & Time*** : **10.11.2020 at 1400 Hrs (IST)**

***From:*** ***To:***

	<b><i>The Sr. General Manager ( Contracts) MECON LIMITED 15TH FLOOR, NORTH TOWER, SCOPE MINAR, LAXMI NAGAR, DELHI – 110092 Ph No.: 91-11-22401100/22401144 Fax No.: 91-11-22041214 Email : <a href="mailto:cont-delhi@mecon.co.in">cont-delhi@mecon.co.in</a></i></b>
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