



निविदा पूछताछ  
TENDER ENQUIRY

[सीमित निविदा]  
[LIMITED TENDER]

माझगांव डॉक शिपबिल्डर्स लिमिटेड  
(भारत सरकार का उपक्रम)  
MAZAGON DOCK SHIPBUILDERS LIMITED  
(Formerly known as Mazagon Dock Limited)  
(A Govt. of India Undertaking)  
CIN: L35100MH1934GOI002079  
Dockyard Road, Mumbai 400 010  
Website- [www.mazagondock.in](http://www.mazagondock.in)  
Certified - ISO 9001: 2008 for Shipbuilding Division  
GST ID : 27AAACM8029J1ZA

निविदा सं./Tender No	1700000770	विभाग/Department	MPV COMMERCIAL
क्रय अधिकारी/Purchase Exec.	MANISH SORTE	क्रय अधिकारी/Purchase Exec.	MANISH SORTE
सेवा में/To		दूरभाष सं./Telephone No	23762740
		फैक्स सं./Fax No	23744709
		ई-मेल/E-Mail	MBSORTE@MAZDOCK.COM
दूरभाष सं./Telephone		निविदा सं./Tender No	1700000770
फैक्स सं./Fax		निविदा तिथि/ Tender Date	24.06.2026
ई-मेल/E-Mail		निविदा बंद की तिथि/Tender Closing Date	15.07.2026
		निविदा बंद होने का समय/Tender Closing Time	12:00:00
		आरएफक्यू सं./RFQ No	2230000121

निविदा शुल्क/Tender Fee	रु/Rs	0.00
बयाना राशि/EMD Amount	रु/Rs	0.00
पुर्व बिड बैठक तिथि और समय/Pre Bid Meeting Date & Time		,00:00:00
निविदा खोलने की तिथि और समय/Tender Opening Date & Time		17.07.2026,15:00:00
प्रस्ताव वैधता तिथि है/Offer should be valid up to		
सुरक्षा जमा/Security Deposit		0.00 %आदेश मूल्य का/PO value
वरीय बैंक जमानत /Perf. Bank Guarantee		5.00 %आदेश मूल्य का/PO value

( आगे के विवरण हेतु कृपया सम्बंधित नियम शर्तों को पढ़ें। सुनिश्चित करें कि कोटेशन और संबंधित पत्राचार के लिए विभाग का नाम, क्रय अधिकारी का नाम, निविदा संख्या, बंद होने का समय एवं तिथि एवं आरएफक्यू सं. अपने कोटेशनमें लिखें। )

Kindly read and refer relevant terms & conditions for further details. Do ensure to Quote Department Name, Purchase Executive & Name, Tender Number, closing date & time and RFQ Number in your Quotation & related correspondence )

प्रिय महोदय/महोदया  
Dear Sir / Madam ,

विषय /SUB:- PROCUREMENT OF ADDITIONAL LINE AND HIGH-PRESSURE VALVES FOR MPV PROJECT

माझगाँव डॉक शिपबिल्डर्स लिमिटेड प्रतिष्ठित/संभावित आपूर्तिकर्ताओं से निम्न हेतु, प्रतियोगितात्मक दो बोली प्रणाली में ( भाग -I तकनीकी - वाणिज्य बोली एवं भाग II मूल्य बोली ) बोली आमंत्रित करती है।  
Mazagon Dock Shipbuilders Limited (MDL) invites Competitive – Bid from reputed Supplier for the following in TWO BID system ( Part - I Techno - Commercial Bid & Part - II Price Bid ).

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
00100	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve	12 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED		
00200	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	30.11.2026
00300	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	4 Number	30.11.2026
00400	सामग्री सं./ Material Number :- 150000000000093133 BALL VALVE, OD25 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	30.11.2026
00500	सामग्री सं./ Material Number :- 150000000000093134 BALL VALVE, OD28 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS	3 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED		
00600	सामग्री सं./ Material Number :- 150000000000081443 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN15 PRESSURE RATING : PN10 END CONNECTION : SCREWED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	15 Number	30.11.2026
00700	सामग्री सं./ Material Number :- 150000000000087526 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN15 END CONNECTION-SCREWED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE MOC- BODY - CARBON STEEL INSPECTION AGENCY- DNV MOC-DISC/TRIM-BRONZE	2 Number	30.11.2026
00800	सामग्री सं./ Material Number :- 150000000000087520 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN20 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-DISC/TRIM-BRONZE INSPECTION AGENCY-IACS	7 Number	30.11.2026
00900	सामग्री सं./ Material Number :- 150000000000087536 BALL VALVE	1 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-FLANGED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE		
01000	सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE INSPECTION AGENCY-IACS	3 Number	30.11.2026
01100	सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	3 Number	30.11.2026
01200	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS	4 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG			
01300	सामग्री सं./ Material Number :- 150000000000081449 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE VALVE TYPE: LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	17 Number	30.11.2026
01400	सामग्री सं./ Material Number :- 150000000000081446 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN200 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	30.11.2026
01500	सामग्री सं./ Material Number :- 150000000000081460 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN25 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL VALVE TYPE: LINE VALVE DISC/TRIM : BRONZE INSPECTION AGENCY:IACS	2 Number	30.11.2026
01600	सामग्री सं./ Material Number :- 150000000000081459 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN32	7 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE		
01700	सामग्री सं./ Material Number :- 150000000000081458 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN40 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	30.11.2026
01800	सामग्री सं./ Material Number :- 150000000000093136 SDNR, DN50 सामग्री वर्णन/Material Description :Valve Name :-SDNR Valve Type :-HP Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN40 End Connection :-FLANGED	2 Number	30.11.2026
01900	सामग्री सं./ Material Number :- 150000000000093137 Self Closing Straight Valve, DN50 सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve Valve Type :-Line Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	30.11.2026
02000	सामग्री सं./ Material Number :- 150000000000093138 Swing Check Valve, OD28 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
02100	सामग्री सं./ Material Number :- 150000000000093139 Swing Check Valve, OD15 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	25 Number	30.11.2026
02200	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	30.11.2026
02300	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	4 Number	30.11.2026
02400	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	30.11.2026
02500	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred)) Valve Type :-Line Valve Valve Size :-DN150	5 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED		
02600	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	1 Number	30.11.2026
02700	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	30.11.2026
02800	सामग्री सं./ Material Number :- 150000000000093144 Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	24 Number	30.11.2026
02900	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE	2 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Pressure Rating :-PN10 End Connection :-SCREWED		
03000	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	12 Number	30.11.2026
03100	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	30.11.2026
03200	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	4 Number	30.11.2026
03300	सामग्री सं./ Material Number :- 150000000000093133 BALL VALVE, OD25 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
03400	<p>सामग्री सं./ Material Number :- 150000000000093134 BALL VALVE, OD28</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED</p>	3 Number	30.11.2026
03500	<p>सामग्री सं./ Material Number :- 150000000000081443 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN15 PRESSURE RATING : PN10 END CONNECTION : SCREWED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS</p>	15 Number	30.11.2026
03600	<p>सामग्री सं./ Material Number :- 150000000000087526 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN15 END CONNECTION-SCREWED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE MOC- BODY - CARBON STEEL INSPECTION AGENCY- DNV MOC-DISC/TRIM-BRONZE</p>	2 Number	30.11.2026
03700	<p>सामग्री सं./ Material Number :- 150000000000087520 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN20 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE</p>	7 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MOC- BODY - CARBON STEEL MOC-DISC/TRIM-BRONZE INSPECTION AGENCY-IACS		
03800	सामग्री सं./ Material Number :- 150000000000087536 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-FLANGED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE	1 Number	30.11.2026
03900	सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE INSPECTION AGENCY-IACS	3 Number	30.11.2026
04000	सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	3 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
04100	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG	4 Number	30.11.2026
04200	सामग्री सं./ Material Number :- 150000000000081449 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE VALVE TYPE: LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	17 Number	30.11.2026
04300	सामग्री सं./ Material Number :- 150000000000081446 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN200 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	30.11.2026
04400	सामग्री सं./ Material Number :- 150000000000081460 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN25 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL	2 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	VALVE TYPE: LINE VALVE DISC/TRIM : BRONZE INSPECTION AGENCY:IACS		
04500	सामग्री सं./ Material Number :- 150000000000081459 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	30.11.2026
04600	सामग्री सं./ Material Number :- 150000000000081458 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN40 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	30.11.2026
04700	सामग्री सं./ Material Number :- 150000000000093136 SDNR, DN50 सामग्री वर्णन/Material Description :Valve Name :-SDNR Valve Type :-HP Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN40 End Connection :-FLANGED	2 Number	30.11.2026
04800	सामग्री सं./ Material Number :- 150000000000093137 Self Closing Straight Valve, DN50 सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve Valve Type :-Line Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	30.11.2026
04900	सामग्री सं./ Material Number :- 150000000000093138	2 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Swing Check Valve, OD28 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-FLANGED		
05000	सामग्री सं./ Material Number :- 150000000000093139 Swing Check Valve, OD15 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	25 Number	30.11.2026
05100	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	30.11.2026
05200	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	4 Number	30.11.2026
05300	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10	3 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE			
05400	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred) Valve Type :-Line Valve Valve Size :-DN150 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	5 Number	30.11.2026
05500	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	1 Number	30.11.2026
05600	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	30.11.2026
05700	सामग्री सं./ Material Number :- 150000000000093144 Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10	24 Number	30.11.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
End Connection :-SCREWED			
05800	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	30.11.2026
05900	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	12 Number	31.12.2026
06000	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.12.2026
06100	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	4 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
06200	<p>सामग्री सं./ Material Number :- 15000000000093133 BALL VALVE, OD25</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED</p>	2 Number	31.12.2026
06300	<p>सामग्री सं./ Material Number :- 15000000000093134 BALL VALVE, OD28</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED</p>	3 Number	31.12.2026
06400	<p>सामग्री सं./ Material Number :- 15000000000081443 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN15 PRESSURE RATING : PN10 END CONNECTION : SCREWED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS</p>	15 Number	31.12.2026
06500	<p>सामग्री सं./ Material Number :- 15000000000087526 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN15 END CONNECTION-SCREWED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE MOC- BODY - CARBON STEEL INSPECTION AGENCY- DNV MOC-DISC/TRIM-BRONZE</p>	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
06600	<p>सामग्री सं./ Material Number :- 150000000000087520 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN20 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-DISC/TRIM-BRONZE INSPECTION AGENCY-IACS</p>	7 Number	31.12.2026
06700	<p>सामग्री सं./ Material Number :- 150000000000087536 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-FLANGED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE</p>	1 Number	31.12.2026
06800	<p>सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE INSPECTION AGENCY-IACS</p>	3 Number	31.12.2026
06900	<p>सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE</p>	3 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS		
07000	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG	4 Number	31.12.2026
07100	सामग्री सं./ Material Number :- 150000000000081449 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE VALVE TYPE: LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	17 Number	31.12.2026
07200	सामग्री सं./ Material Number :- 150000000000081446 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN200 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
07300	सामग्री सं./ Material Number :- 150000000000081460 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN25 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL VALVE TYPE: LINE VALVE DISC/TRIM : BRONZE INSPECTION AGENCY:IACS	2 Number	31.12.2026
07400	सामग्री सं./ Material Number :- 150000000000081459 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	31.12.2026
07500	सामग्री सं./ Material Number :- 150000000000081458 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN40 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.12.2026
07600	सामग्री सं./ Material Number :- 150000000000093136 SDNR, DN50 सामग्री वर्णन/Material Description :Valve Name :-SDNR Valve Type :-HP Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN40 End Connection :-FLANGED	2 Number	31.12.2026
07700	सामग्री सं./ Material Number :- 150000000000093137 Self Closing Straight Valve, DN50 सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve Valve Type :-Line Valve	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED		
07800	सामग्री सं./ Material Number :- 150000000000093138 Swing Check Valve, OD28 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.12.2026
07900	सामग्री सं./ Material Number :- 150000000000093139 Swing Check Valve, OD15 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	25 Number	31.12.2026
08000	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.12.2026
08100	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED	4 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE			
08200	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.12.2026
08300	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred) Valve Type :-Line Valve Valve Size :-DN150 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	5 Number	31.12.2026
08400	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	1 Number	31.12.2026
08500	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.12.2026
08600	सामग्री सं./ Material Number :- 150000000000093144	24 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED		
08700	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.12.2026
08800	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	12 Number	31.12.2026
08900	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.12.2026
09000	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve	4 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED		
09100	सामग्री सं./ Material Number :- 150000000000093133 BALL VALVE, OD25 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.12.2026
09200	सामग्री सं./ Material Number :- 150000000000093134 BALL VALVE, OD28 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.12.2026
09300	सामग्री सं./ Material Number :- 150000000000081443 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN15 PRESSURE RATING : PN10 END CONNECTION : SCREWED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	15 Number	31.12.2026
09400	सामग्री सं./ Material Number :- 150000000000087526 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	SIZE-DN15 END CONNECTION-SCREWED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE MOC- BODY - CARBON STEEL INSPECTION AGENCY- DNV MOC-DISC/TRIM-BRONZE		
09500	सामग्री सं./ Material Number :- 150000000000087520 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN20 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-DISC/TRIM-BRONZE INSPECTION AGENCY-IACS	7 Number	31.12.2026
09600	सामग्री सं./ Material Number :- 150000000000087536 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-FLANGED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE	1 Number	31.12.2026
09700	सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE	3 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
INSPECTION AGENCY-IACS			
09800	सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	3 Number	31.12.2026
09900	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG	4 Number	31.12.2026
10000	सामग्री सं./ Material Number :- 150000000000081449 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE VALVE TYPE: LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	17 Number	31.12.2026
10100	सामग्री सं./ Material Number :- 150000000000081446 BUTTERFLY MANUAL OPERATED_LUG TYPE	7 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN200 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE		
10200	सामग्री सं./ Material Number :- 150000000000081460 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN25 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL VALVE TYPE: LINE VALVE DISC/TRIM : BRONZE INSPECTION AGENCY:IACS	2 Number	31.12.2026
10300	सामग्री सं./ Material Number :- 150000000000081459 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	31.12.2026
10400	सामग्री सं./ Material Number :- 150000000000081458 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN40 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.12.2026
10500	सामग्री सं./ Material Number :- 150000000000093136 SDNR, DN50 सामग्री वर्णन/Material Description :Valve Name :-SDNR Valve Type :-HP Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Pressure Rating :-PN40 End Connection :-FLANGED		
10600	सामग्री सं./ Material Number :- 150000000000093137 Self Closing Straight Valve, DN50 सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve Valve Type :-Line Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.12.2026
10700	सामग्री सं./ Material Number :- 150000000000093138 Swing Check Valve, OD28 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.12.2026
10800	सामग्री सं./ Material Number :- 150000000000093139 Swing Check Valve, OD15 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	25 Number	31.12.2026
10900	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
11000	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	4 Number	31.12.2026
11100	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.12.2026
11200	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred)) Valve Type :-Line Valve Valve Size :-DN150 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	5 Number	31.12.2026
11300	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	1 Number	31.12.2026
11400	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve	2 Number	31.12.2026

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED		
11500	सामग्री सं./ Material Number :- 150000000000093144 Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	24 Number	31.12.2026
11600	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.12.2026
11700	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	12 Number	31.01.2027
11800	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS	3 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED		
11900	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	4 Number	31.01.2027
12000	सामग्री सं./ Material Number :- 150000000000093133 BALL VALVE, OD25 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.01.2027
12100	सामग्री सं./ Material Number :- 150000000000093134 BALL VALVE, OD28 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.01.2027
12200	सामग्री सं./ Material Number :- 150000000000081443 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN15 PRESSURE RATING : PN10 END CONNECTION : SCREWED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL	15 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	DISC/TRIM : BRONZE INSPECTION AGENCY-IACS		
12300	सामग्री सं./ Material Number :- 150000000000087526 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN15 END CONNECTION-SCREWED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE MOC- BODY - CARBON STEEL INSPECTION AGENCY- DNV MOC-DISC/TRIM-BRONZE	2 Number	31.01.2027
12400	सामग्री सं./ Material Number :- 150000000000087520 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN20 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-DISC/TRIM-BRONZE INSPECTION AGENCY-IACS	7 Number	31.01.2027
12500	सामग्री सं./ Material Number :- 150000000000087536 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-FLANGED PRESSURE RATING-PN40 VALVE TYPE-HIGH PRESSURE LINE VALVE INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE	1 Number	31.01.2027
12600	सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE	3 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE INSPECTION AGENCY-IACS		
12700	सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	3 Number	31.01.2027
12800	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG	4 Number	31.01.2027
12900	सामग्री सं./ Material Number :- 150000000000081449 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE VALVE TYPE: LINE VALVE	17 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS		
13000	सामग्री सं./ Material Number :- 150000000000081446 BUTTERFLY MANUAL OPERATED_LUG TYPE सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE SIZE : DN200 PRESSURE RATING : PN10 END CONNECTION : LUG TYPE MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	31.01.2027
13100	सामग्री सं./ Material Number :- 150000000000081460 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN25 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL VALVE TYPE: LINE VALVE DISC/TRIM : BRONZE INSPECTION AGENCY:IACS	2 Number	31.01.2027
13200	सामग्री सं./ Material Number :- 150000000000081459 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	7 Number	31.01.2027
13300	सामग्री सं./ Material Number :- 150000000000081458 GLOBE VALVE सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE SIZE : DN40 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
13400	सामग्री सं./ Material Number :- 150000000000093136 SDNR, DN50 सामग्री वर्णन/Material Description :Valve Name :-SDNR Valve Type :-HP Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN40 End Connection :-FLANGED	2 Number	31.01.2027
13500	सामग्री सं./ Material Number :- 150000000000093137 Self Closing Straight Valve, DN50 सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve Valve Type :-Line Valve Valve Size :-DN50 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.01.2027
13600	सामग्री सं./ Material Number :- 150000000000093138 Swing Check Valve, OD28 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.01.2027
13700	सामग्री सं./ Material Number :- 150000000000093139 Swing Check Valve, OD15 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	25 Number	31.01.2027
13800	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20	2 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED		
13900	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	4 Number	31.01.2027
14000	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.01.2027
14100	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred)) Valve Type :-Line Valve Valve Size :-DN150 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	5 Number	31.01.2027
14200	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE	1 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	Pressure Rating :-PN10 End Connection :-FLANGED		
14300	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.01.2027
14400	सामग्री सं./ Material Number :- 150000000000093144 Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	24 Number	31.01.2027
14500	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.01.2027
14600	सामग्री सं./ Material Number :- 150000000000093130 BALL VALVE, OD10 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD10 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	12 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
14700	सामग्री सं./ Material Number :- 150000000000093131 BALL VALVE, OD12 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD12 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.01.2027
14800	सामग्री सं./ Material Number :- 150000000000093132 BALL VALVE, OD15 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD15 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	4 Number	31.01.2027
14900	सामग्री सं./ Material Number :- 150000000000093133 BALL VALVE, OD25 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD25 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.01.2027
15000	सामग्री सं./ Material Number :- 150000000000093134 BALL VALVE, OD28 सामग्री वर्णन/Material Description :Valve Name :-Ball Valve Valve Type :-Line Valve Valve Size :-OD28 MOC- Body :-SS MOC-Disc/Trim :-SS Pressure Rating :-PN10 End Connection :-SCREWED	3 Number	31.01.2027
15100	सामग्री सं./ Material Number :- 150000000000081443	15 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	<p>BALL VALVE</p> <p>सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE                      SIZE : DN15                      PRESSURE RATING : PN10                      END CONNECTION : SCREWED                      VALVE TYPE-LINE VALVE                      MATERIAL- BODY : CARBON STEEL                      DISC/TRIM : BRONZE                      INSPECTION AGENCY-IACS</p>		
15200	<p>सामग्री सं./ Material Number :- 15000000000087526                      BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE                      SIZE-DN15                      END CONNECTION-SCREWED                      PRESSURE RATING-PN40                      VALVE TYPE-HIGH PRESSURE LINE VALVE                      MOC- BODY - CARBON STEEL                      INSPECTION AGENCY- DNV                      MOC-DISC/TRIM-BRONZE</p>	2 Number	31.01.2027
15300	<p>सामग्री सं./ Material Number :- 15000000000087520                      BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE                      SIZE-DN20                      END CONNECTION-SCREWED                      PRESSURE RATING-PN10                      VALVE TYPE-LINE VALVE                      MOC- BODY - CARBON STEEL                      MOC-DISC/TRIM-BRONZE                      INSPECTION AGENCY-IACS</p>	7 Number	31.01.2027
15400	<p>सामग्री सं./ Material Number :- 15000000000087536                      BALL VALVE</p> <p>सामग्री वर्णन/Material Description :BALL VALVE                      SIZE-DN25                      END CONNECTION-FLANGED                      PRESSURE RATING-PN40                      VALVE TYPE-HIGH PRESSURE LINE VALVE</p>	1 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	INSPECTION AGENCY- DNV MOC- BODY - CARBON STEEL MOC-BRONZE		
15500	सामग्री सं./ Material Number :- 150000000000087534 BALL VALVE सामग्री वर्णन/Material Description :BALL VALVE SIZE-DN25 END CONNECTION-SCREWED PRESSURE RATING-PN10 VALVE TYPE-LINE VALVE MOC- BODY - CARBON STEEL MOC-BRONZE INSPECTION AGENCY-IACS	3 Number	31.01.2027
15600	सामग्री सं./ Material Number :- 150000000000081438 BALL VALVE सामग्री वर्णन/Material Description :DESCRIPTION : BALL VALVE SIZE : DN32 PRESSURE RATING : PN10 END CONNECTION : FLANGED VALVE TYPE-LINE VALVE MATERIAL- BODY : CARBON STEEL DISC/TRIM : BRONZE INSPECTION AGENCY-IACS	3 Number	31.01.2027
15700	सामग्री सं./ Material Number :- 150000000000093135 Butterfly Valve, DN32 सामग्री वर्णन/Material Description :Valve Name :-Butterfly Valve Valve Type :-Line Valve Valve Size :-DN32 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-LUG	4 Number	31.01.2027
15800	सामग्री सं./ Material Number :- 150000000000081449	17 Number	31.01.2027

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	<p>BUTTERFLY MANUAL OPERATED_LUG TYPE                      सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE                      SIZE : DN100                      PRESSURE RATING : PN10                      END CONNECTION : LUG TYPE                      VALVE TYPE: LINE VALVE                      MATERIAL- BODY : CARBON STEEL                      DISC/TRIM : BRONZE                      INSPECTION AGENCY-IACS</p>		
15900	<p>सामग्री सं./ Material Number :- 150000000000081446                      BUTTERFLY MANUAL OPERATED_LUG TYPE                      सामग्री वर्णन/Material Description :DESCRIPTION : BUTTERFLY MANUAL OPERATED_LUG TYPE                      SIZE : DN200                      PRESSURE RATING : PN10                      END CONNECTION : LUG TYPE                      MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE</p>	7 Number	31.01.2027
16000	<p>सामग्री सं./ Material Number :- 150000000000081460                      GLOBE VALVE                      सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE                      SIZE : DN25                      PRESSURE RATING : PN10                      END CONNECTION : FLANGED                      MATERIAL- BODY : CARBON STEEL                      VALVE TYPE: LINE VALVE                      DISC/TRIM : BRONZE                      INSPECTION AGENCY:IACS</p>	2 Number	31.01.2027
16100	<p>सामग्री सं./ Material Number :- 150000000000081459                      GLOBE VALVE                      सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE                      SIZE : DN32                      PRESSURE RATING : PN10                      END CONNECTION : FLANGED                      MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE</p>	7 Number	31.01.2027
16200	<p>सामग्री सं./ Material Number :- 150000000000081458</p>	3 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	<p>GLOBE VALVE</p> <p>सामग्री वर्णन/Material Description :DESCRIPTION : GLOBE VALVE                      SIZE : DN40                      PRESSURE RATING : PN10                      END CONNECTION : FLANGED                      MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE</p>		
16300	<p>सामग्री सं./ Material Number :- 150000000000093136                      SDNR, DN50</p> <p>सामग्री वर्णन/Material Description :Valve Name :-SDNR                      Valve Type :-HP Valve                      Valve Size :-DN50                      MOC- Body :-CS                      MOC-Disc/Trim :-BRONZE                      Pressure Rating :-PN40                      End Connection :-FLANGED</p>	2 Number	31.01.2027
16400	<p>सामग्री सं./ Material Number :- 150000000000093137                      Self Closing Straight Valve, DN50</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Self Closing Straight Valve                      Valve Type :-Line Valve                      Valve Size :-DN50                      MOC- Body :-CS                      MOC-Disc/Trim :-BRONZE                      Pressure Rating :-PN10                      End Connection :-FLANGED</p>	2 Number	31.01.2027
16500	<p>सामग्री सं./ Material Number :- 150000000000093138                      Swing Check Valve, OD28</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve                      Valve Type :-Line Valve                      Valve Size :-OD28                      MOC- Body :-SS                      MOC-Disc/Trim :-SS                      Pressure Rating :-PN10                      End Connection :-FLANGED</p>	2 Number	31.01.2027
16600	<p>सामग्री सं./ Material Number :- 150000000000093139                      Swing Check Valve, OD15</p> <p>सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve                      Valve Type :-Line Valve                      Valve Size :-DN15</p>	25 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
	MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED		
16700	सामग्री सं./ Material Number :- 150000000000093140 Swing Check Valve, OD20 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN20 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.01.2027
16800	सामग्री सं./ Material Number :- 150000000000081486 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN50 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	4 Number	31.01.2027
16900	सामग्री सं./ Material Number :- 150000000000081483 SWING CHECK VALVE सामग्री वर्णन/Material Description :DESCRIPTION : SWING CHECK VALVE SIZE : DN100 PRESSURE RATING : PN10 END CONNECTION : FLANGED MATERIAL- BODY : CARBON STEEL, DISC/TRIM : BRONZE	3 Number	31.01.2027
17000	सामग्री सं./ Material Number :- 150000000000093141 Swing Check Valve (19mm preferred) DN150 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve (wafer type , face to face 19 mm preferred) Valve Type :-Line Valve Valve Size :-DN150 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	5 Number	31.01.2027

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
17100	सामग्री सं./ Material Number :- 150000000000093142 Swing Check Valve , DN250 सामग्री वर्णन/Material Description :Valve Name :-Swing Check Valve Valve Type :-Line Valve Valve Size :-DN250 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	1 Number	31.01.2027
17200	सामग्री सं./ Material Number :- 150000000000093143 Three Way Valve, DN100 सामग्री वर्णन/Material Description :Valve Name :-Three Way Valve Valve Type :-Line Valve Valve Size :-DN100 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-FLANGED	2 Number	31.01.2027
17300	सामग्री सं./ Material Number :- 150000000000093144 Needle Valve, DN15 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN15 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	24 Number	31.01.2027
17400	सामग्री सं./ Material Number :- 150000000000093145 Needle Valve, DN25 सामग्री वर्णन/Material Description :Valve Name :-Needle Valve Valve Type :-Line Valve Valve Size :-DN25 MOC- Body :-CS MOC-Disc/Trim :-BRONZE Pressure Rating :-PN10 End Connection :-SCREWED	2 Number	31.01.2027

नियम और शर्तें : भाग ए मे लिखी हुई और इतर संलग्नपत्रे इस निविदा एक अभिन्न अंग हैं। हमें आशा है की, हमें प्रतियोगित्मिक और उचित प्रस्ताव इस निविदा के लिए प्राप्त होगा।  
Terms & Conditions as indicated in Part A of this tender and other enclosures / annexures form an integral part of this tender document. We look forward to receive your most competitive and reasonable offer against this Tender.

माझगाँव डॉक शिपबिल्डर्स लिमिटेड के लिए /For Mazagon Dock Shipbuilders Ltd


क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
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नियम और शर्तें : भाग ए में लिखी हुई और इतर संलग्नपत्रे इस निविदा एक अभिन्न अंग हैं। हमें आशा है की, हमें प्रतियोगित्मिक और उचित प्रस्ताव इस निविदा के लिए प्राप्त होगा।

Terms & Conditions as indicated in Part A of this tender and other enclosures / annexures form an integral part of this tender document. We look forward to receive your most competitive and reasonable offer against this Tender.

माझगाँव डॉक शिपबिल्डर्स लिमिटेड के लिए /For Mazagon Dock Shipbuilders Ltd

## **Tender No. 1700000770 (Nominated Limited Global Tender Enquiry)**

	<p style="text-align: center;"><b>Tender Enquiry</b></p> <p>Enclosure to Tender Enquiry: Terms and Conditions (Section I &amp; II) Item: Procurement of additional Line and High-Pressure Valves for MPV Project through Limited tender. Project: Multi-Purpose Dry Cargo Vessel (MPV)</p>
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### **Section I - Notice Inviting Tender (NIT)**

- (i) Notice Inviting Tender (NIT): Mazagon Dock Shipbuilders Limited (MDL), Mumbai is India's leading Shipbuilding Company with ISO 9001:2015 accreditation. Mazagon Dock Shipbuilders Limited, invites offer in two bid system i.e. Part-I (Techno Commercial Bid) and Part-II (Price Bid) from Indian/Foreign nominated bidders through online bidding via MDL e-procurement portal (<https://eprocuremdl.nic.in>) for Item/Services.
- (ii) **The Tender Document:**
- (i) **Bidders must read the complete 'Tender Document'**. Kindly visit MDL website Link: <https://mazagondock.in/English/pages/Tenders> under tab Ship-Building (SB)/ MPV Project for formats as detailed in enclosure.
- (ii) Bids must be uploaded till the deadline for submission of bids. Request for extension, if at all to be made, shall be forwarded at least 3 working days in advance to the tender closing date / time (excluding tender closing date) with proper reasoning. **However, the extension would be granted by MDL on merit of the case at MDL discretion and would be binding on all bidders.**
- (iii) **Eligibility Criteria for Participation in this Tender:** Subject to provisions in the Tender Document, participation in this Tender Process is limited to Limited nominated bidders who fulfil the 'Eligibility' criteria. Bidder shall be required to declare fulfilment of Eligibility Criteria.
- (iv) **Submission of Bids:** No manual Bids shall be made available or accepted for submission (except for originals of scanned copies as mentioned in tender). Bidder must comply with the conditions of the eProcurement portal, including registration, compatible Digital Signature Certificate (DSC) etc. In the case of downloaded documents, Bidder must not make any changes to the contents of the documents while uploading, except for filling in the required information.
- (v) **Disclaimers and Rights of MDL:** The issue of the Tender Document does not imply that MDL is bound to select bid(s), and it reserves the right without assigning any reason to
- reject any or all of the Bids, or
  - cancel the tender process; or
  - abandon the procurement of the Goods/Services in partial or full; or
  - issue another tender for identical or similar Goods/Services.
  - Placement of order is subject to Customer (ship's owner) confirmation.

*Note: Please refer to appended complete Tender Document for further details.*

**Tender Inviting Authority**

# **Tender No. 1700000770 (Nominated Limited Global Tender Enquiry)**

## **Section II - Tender Enquiry Form (TEF)**

**1. Description & Scope of Supply / Work:** Procurement of additional Line and High-Pressure Valves for 6 (Six) Ship Sets of Project 7500 DWT Multipurpose Dry Cargo Vessel as per Tender & TSP No. DR/E/MPV/101/04 Rev. '0' Dtd. 30.04.2025, TSP no. DR/E/MPV/101/01 Rev. '2' Dtd. 12.06.2026.

**2. Validity Period of Offer:**

- (a) Bid / Offer shall have the validity period of **180 days** from the tender closing date.
- (b) MDL may request the bidders to extend the validity period for a specified additional period. A bidder may agree to or reject the request. A bidder who has agreed to MDL's request for extension of bid validity, in no case, he shall be permitted to modify his bid. In case techno-commercially accepted bidder/s does not agree to extend the offer validity, the offers of all techno commercially accepted bidder/s including the bidder who has not agreed to extend their offer validity shall be opened and proceed further with valid bids. However, offer of the bidder(s) who have not agreed to extend their offer validity shall not be considered for L1 evaluation purpose.

**3. Delivery Period:** The delivery dates shall be as mentioned below:

<b>Yard No.</b>	<b>Equipment delivery date</b>
21001	30 Nov 2026 or 04 months from the PO Placement, whichever is later
21002	30 Nov 2026 or 04 months from the PO Placement, whichever is later
21003	31 Dec 2026 or 05 months from the PO Placement, whichever is later
21004	31 Dec 2026 or 05 months from the PO Placement, whichever is later
21005	31 Jan 2027 or 06 months from the PO Placement, whichever is later
21006	31 Jan 2027 or 06 months from the PO Placement, whichever is later

**4. Submission of Offer in Two Bid System:** Offer must be submitted in two parts as follows:

- (a) **Part I (Techno Commercial Bid):** The bidder shall ensure submission of techno-commercial offer as per tender terms.

**Note: In any case, prices are not to be mentioned in Part-I bid.**

- (b) **Part-II (Price Bid):** Prices for each of the listed items has to be uploaded strictly in the prescribed format provided in the e-procurement portal. Bids received other than this given format will be **rejected**.

**Note:**

- If, in the price structure quoted for the required goods, there is discrepancy between the unit price and total price (which is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly;
- If there is a discrepancy between words and figures, the amount in words shall prevail.
- Bidder must quote for all line items being inseparable line items.

**5. Bid Rejection Criteria:**

- (a) **Categorical rejection criteria:** Any Bids received other than through e-portal (in case of e-tender) shall be summarily rejected.
- (b) **Liable rejection criteria:** Non-compliance/non-acceptance to any of the terms and conditions of the tender shall render the bid liable for rejection.

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

### **6. Performance Security Bank Guarantee(PSBG):**

- (i) Separate Performance Security(PS) for an amount equal to 5% of each order value (excluding taxes, duties) payable in currency of purchase order shall be submitted within 25 days after notification of the award of contract and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.
- (ii) Performance security may be furnished in the form of NEFT /Online (MDL website) Demand Draft / Pay order / Bank Guarantee / Insurance Security Bond / e-Bank Guarantee in favour of Mazagon Dock Shipbuilders Limited, Mumbai from the list of Banks approved by SBI / Canara Bank published on MDL website.
- (iii) Non submission of PS with in stipulated time period may lead to cancellation of order by MDL at risk and cost of seller. In case cancellation of order is not opted by the buyer and seller has already commenced supply / services, MDL shall withhold 5% of order value from his bills in lieu of PS. In such case, interest is to be recovered for the period starting from 26<sup>th</sup> day of transmission / notification of order/contract by any mode and amount involved at the relevant rate of interest. For foreign supplier, the interest will be EUROBOR/LIBOR plus 2%. For Indian suppliers, the interest will be SBI BPLR plus 2%.
- (iv) In case of foreign bidders, the performance security must conform to Uniform Rules for Demand Guarantees (URDG 758) - an international convention regulating international securities.
- (v) The performance security will be forfeited and credited to MDL's account in the event of a breach of contract by the contractor. It will be refunded to the contractor without interest, after he duly performs and completes the contract in all respects including the warranty under the contract.
- (vi) Where the duration of contract is very long and banks are unwilling to issue BGs for long duration, rolling bank guarantee towards performance security can be submitted where it will be valid for at least one year with claim period of three months within which the same can be extended for further period by amendment.
- (vii) Performance security on reducing balance can be accepted when the contract period extends beyond one year. This will be effective on completion of one year and thereafter on six monthly / yearly basis.
- (viii) In the event of defects due to poor workmanship leading to non-performance of the Equipment/Item and bidder failure to attend the defects within a reasonable period of time, the PSBG will be encashed by MDL. MDL's decision in this regard shall be final and binding on the supplier / contractor.
- (ix) In the event of postponing of delivery of deliverables/services or extension of guarantee desired & sought by MDL, the Performance Security (for 5% of order value) has to be extended and its amendment charges shall be borne by supplier.

**7. Warranty/Guarantee:** Warranty/Guarantee shall be as per TSP.

### **8. Currency of Bidding:**

Foreign Bidders are allowed to quote price (and get paid) in RBI's notified basket of foreign currencies - US Dollar or Euro or GBP etc. Indian bidder can quote in INR.

### **9. Pricing:**

- (a) **For Foreign Bidders:** Bidder shall quote the prices for the delivery on **Incoterm CIF, Mumbai/JNPT port basis** for delivery at MDL. Order will be placed on **CIF basis** only.
- (b) The prices quoted shall remain firm and fixed during the currency of the order / contract unless agreed otherwise by MDL.

### **10. Taxes & Duties:**

- (i) Bidders must clearly mention the applicable Taxes in the rate sheet enclosed in the tender. The item-wise rates (i.e. Basic + Duties & Cess + Packing, Forwarding, inspection charges,

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

Freight & Insurance) quoted in the Rate sheet should exclude Taxes. Bidder should indicate GST rates as applicable separately under each of the head in the same rate sheet, which will be paid extra based on tax invoice to the extent applicable.

- (ii) Foreign bidder shall submit Tax Residency Certificate (TRC) in Part-I offer. In case of remittances to Foreign Companies for services, as per the Income tax act and DTAA provisions, TDS shall be carried out from the amount payable towards services. As per the extant applicability and existing rates, following cases pertaining to TDS are presented for clarity:
- a) Case 1 (TRC is made available by foreign bidders): Tax Deduction at Source (TDS) @ 15% of total service payment is applicable or as per applicable TDS rate stipulated by Government of India. If this is not agreed to by the bidder in the bid or during TNC / CNC, then this shall be appropriately loaded as per applicable rates on the price for the purpose of ranking. However, bidders to note that TDS rates / DTAA rates differ from country to country. It varies from 10% to 25%.
- b) Case 2 (TRC is not made available by foreign bidders): Tax Deduction at Source (TDS) at the rates as mentioned in the table below is applicable. If this is not agreed to by the bidder in the bid or during TNC / CNC, then this shall be appropriately loaded as per applicable rates stipulated by Government of India on the price for the purpose of ranking. These rates are tentatively as under:

Service Payment slabs (converted in INR )	Rate of TDS applicable on total service payment
Up to Value of INR 1 Cr.	25.75%
Above INR 1 Cr upto INR 10 Cr.	26.26%
Above INR 10 Cr.	27.0375%

- (iii) Foreign Bidders shall quote their price on **Incoterm CIF, Mumbai** Basis. Taxes & duties as applicable to be borne by buyer & seller in their own country i.e MDL will bear the taxes & duties applicable within India and for outside India same will be borne by seller/bidder.
- (iv) End User Certificate if applicable. Format to be provided by vendor immediately after placement of order.

### **11. Payment Terms:**

**For Foreign Bidders:** 100 % Payment made through LC for CIF Mumbai/JNPT port delivery against receipt of documents mentioned in payment mode. If PSBG is not submitted, then the equivalent amount shall be retained from the payment.

- (i) **Part Payment:** Part Supply, Part Payment shall be applicable.

### **12. Payment Mode & Documents:**

- (a) All the payments to foreign bidders shall be through Letter of Credit. Balance payment/Hold payment or part payment may be made through direct payment if MDL required.
- (b) MDL may opt to make due payment for items having shelf life, services or any miscellaneous payment required as per contract through Direct Remittance from Bank post-delivery & acceptance or completion of services.

#### **Note:**

- i. Invoices should be submitted at "Receipt Section" adjacent to the ARS Punching Section, South Yard MDL.
- ii. Bidder must submit packing list in detail immediately after readiness of material stating PO line-item number/ additional material.

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

### **(c) Documents for LC Payments for Goods (Foreign Bidders):**

**Note: LC will be opened 60 days before latest date of shipment. However, Bidders need to inform at least 75 days in advance for readiness of the equipment for shipment for processing the opening of LC.**

- (i) Set of Original + 2 Copies of signed Invoice showing item-wise prices as per the order.
  - (ii) Set of Original + 2 Copies of signed packing List clearly showing list of items packed.
  - (iii) Set of Original + 2 Copies Clean on Board Bill of Lading OR Air Way Bill Made in the name of MDL's Bank and Marked as freight paid.
  - (iv) Set of Original + 2 Copies Certificate of approval OR Release Note from Inspection agency.
  - (v) Certificate of country of origin in Original + 2 Copies.
  - (vi) Original + 2 Copies of Warranty/Guarantee Certificate as per contract/order.
  - (vii) Original + 2 Copies of all Manufacturer's Test Certificates (MTCs) / Reports, Drawings, Manuals, Procedures etc. as relevant to the ordered item.
  - (viii) Certificate Confirming that supplier has couriered / dispatched 4 set of Non-Negotiable Documents comprising of all Test reports / MTCs, Technical Documents, Drawings, Manuals, Procedures etc. and of Signed Invoices, Packing Lists, Bill of Lading/AWB marked as Freight Paid, Insurance Policy/Document, Freight Paid Certificate, MDL nominated Inspection Agency's Certificate of approval, Country of Origin Certificate, Guarantee/Warranty Certificate, directly to MDL.
  - (ix) Original + 2 Copies of the Certificate issued by the classified society confirming seaworthiness of the vessel and that the shipment is made on vessels of not more than 15 years' vintage. (Applicable in case of CIF contracts / orders)
  - (x) Certificate issued by MDL confirming that the delivery is made in time and no liquidated damages / penalty is applicable OR in case of delays, admissible amount of liquidated damages/ penalty will be specified by MDL in this certificate for reduction of equal amount from supplier's invoice and/or deduction of interest applicable towards non submission/delayed submission of PSBG and/or withholding the PSBG amount till guarantee/warranty period as applicable. (MDL will issue this certificate generally by Email/FAX immediately on arrival of consignment at port of destination, receipt of signed copy of invoice, packing list, approval certificate of the nominated inspection agency, copies of B/L or AWB marked as Freight Paid, Insurance Policy/Document, Freight Paid Certificate or any other acceptable documents confirming dispatch on CIF basis).
  - (xi) Certificate confirming that the shipping instructions (inclusive of packing)/Sea/Air worthiness packing have been followed while packing / shipment and forwarding of details for Freight and insurance to MDL.
  - (xii) All the documents should clearly indicate the Purchaser's Order number, Import License Number, Airway Bill / Bill of Lading Number, Insurance Policy number/ Insurance Document reference number.
- (d) If the LC is not opened, payment can also be made to the seller through a direct bank transfer for which the buyer has to ensure that payment is released only after the receipt of prescribed documents.

**13. Consignee: For Foreign bidder:** Material shall be delivered on CIF Mumbai/JNPT Port basis.

**Note:** Bidder must submit packing list in detail immediately after readiness of material stating PO line-item number/ additional material.

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**14. Inspection & Testing:** It shall be as per TSP. **Inspection agency DNV/IACS. For High Pressure Line valves (Pressure Rating – PN40) inspection agency is DNV and for Line Valves (Pressure rating – PN10) inspection agency is IACS. Inspection charges to be borne by vendor/supplier.**

- (a) **Receipt Inspection:** MDL shall carry out necessary inspection of the items on receipt in the MDL on the basis of appropriate MDL Inspection system requirements & the Inspection documents submitted by suppliers. In case joint receipt inspection (JRI) is required to be carry out, same may be carried out along supplier's rep. Any objection raised by MDL inspection team against quality of material or workmanship shall be satisfactorily corrected by the supplier at his expenses including replacement as may be required within shortest possible time within 30 days. Items damaged during transit shall also be rectified or replaced by the supplier within shortest possible time.
- (b) **Rejection of the material:** Any portion of the equipment found defective/rejected, the supplier shall collect the same at his cost from the MDL Yard, all incidental charges being born by supplier, (inclusive of custom duty, if payable), within 30 days from the date of intimation to the supplier of such rejection. The MDL reserves the rights to dispose-off the rejected item at the end of a total period of 90 days in any manner, to the best advantage to the MDL & recover storage charges & any consequential damages, from sale proceeds of such disposal.

### **15. Loading Criteria:**

Deviations sought by the bidder shall be loaded on the bidder/s quoted prices during price evaluation by MDL for ranking of bids to judge L1, as under.

- (a) Varied payment terms quoted by indigenous bidders as compared to the terms stated in the Tender document shall be normalized by adopting the Benchmark Prime Lending Rate of State Bank of India plus 2% thereon on the amount (s) at variation and / or for the period (in no. of days) at variation. For foreign bidders, LIBOR / EURIBOR rates plus 2 % or 6% whichever is higher would be applicable.
- (b) In case of foreign bidders, L/C opening charges on CIF value, Interest for period of 20 days @ Benchmark Prime Lending Rate (BPLR) of SBI+2% on payment amount to be loaded if applicable for ranking purpose. In case of only foreign bidders quote this clause is not applicable.
- (c) If Service Component exists in an offer from a foreign vendor, then Tax Residency certificate (TRC) should be submitted with Part I offer. If no TRC is submitted, then the enhanced Income Tax rate and GST thereon will be considered while determining L-1.
- (d) For the additional delivery period sought by the bidder over the stipulated date of delivery as per Tender, 0.50% per completed week will be loaded to the quoted price.

**16. Book Examination Clause:** In case it is found to the satisfaction of the BUYER that the seller has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency commission and penalty for use of undue influence, the seller, on a specific request of the buyer shall provide necessary information/Break-up data/ inspection of the relevant financial documents/information.

**17. Integrity Pact (IP):** The Integrity pact essentially envisages the agreement between prospective vendors / bidders & buyers committing the person/officials of both the parties not to exercise any corrupt influence on any aspects of the contract. Only those vendors/bidders who enter into such an integrity pact with the buyer would be competent to participate in the bid. The format of integrity Pact is available on MDL's website; details are at enclosure. IP shall be submitted on plain paper.

The 'Integrity pact' dully filled as per enclosed format to be submitted along with the offer. Bidders to ensure that each page of Integrity pact shall be duly signed by the bidder. Non-submission of Integrity Pact by the bidders duly signed on each page along with Part-I bid is

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

under liable for rejection. Bidders shall send original IP immediately to MDL post submission of bid.

**18. Independent External Monitors (IEM):** The following Independent External Monitors (IEMs) will have the power to access the entire project document and examine any complaints received by him. In case of any change in IEMs it will be informed accordingly. For any administrative enquires and clarification on tender, bidders shall contact Commercial Dealing Executive. In case of issues related to Integrity Pact (IP) please contact Independent External Monitor (IEM) whose details are as below:

- i) Mr. M N Krishnamurthy IPS(Retd)  
E-mail ID - [krishnamurthymn19@gmail.com](mailto:krishnamurthymn19@gmail.com)
- ii) Mr. Deepak Kashyap, IRTS (Retd)  
E-mail ID - [deepakkashyapnd02@gmail.com](mailto:deepakkashyapnd02@gmail.com)

**19. Ranking of Bids:** Tender line items are inseparable and non-divisible in nature.

- (a) Ranking of bids shall be done on total value wise by considering following factors:
  - (i) The comparison of the responsive tenders shall be on total outgo on Least Cost Net of Credit Basis (LCNC), for the procurement to be paid to the supplier or service provider, including all elements of costs, duties, levies, freight, insurance etc. excluding GST (where ITC is available). Therefore, it should normally be on the basis of CIF/ FOR destination basis, duly delivered, commissioned, as the case may be.
  - (ii) The foreign bidders shall quote on Cost, Insurance & Freight (CIF) basis. They should also to indicate the custom tariff number and custom duty applicable in India. To arrive at the Free On Rail (FOR) destination cost over and above CIF cost the following charges to added / loaded:
    - a. Port Handling Charges: @ one per cent of consignment value excluding services.
    - b. Custom duty, cess and surcharges: @ Eleven per cent of consignment value excluding services
    - c. Clearing agency charges & Inland freight: @ one per cent of consignment value excluding services.
    - d. For bids with Letter of Credit (LC) payment, the likely LC charges (as ascertained from MDL's bankers) should also be added.
    - e. Interest for period of 30 days @ base rate of SBI BPLR plus 2% (As notified by HoD(F) of MDL on quarterly basis) on payment amount is to be considered while evaluating foreign bidders for ranking purpose. iii. In case both Indian and foreign bidders have quoted in the tender, the comparison of the offers would be done on the basis of FOR destination including all applicable taxes and duties (Where Input Tax Credit (ITC) cannot be availed by MDL) on the principle of the total outgo from MDL's pockets.
  - (iii) In case both Indian and foreign bidders have quoted in the tender, the comparison of the offers would be done on the basis of FOR destination including all applicable taxes and duties (Where Input Tax Credit (ITC) cannot be availed by MDL) on the principle of the total outgo from MDL's pockets.
  - (iv) In case there are no domestic bidders, a comparison of offers can be made on the basis of CIF/landed costs since the rest of costs would be same for all bidders.
  - (v) The applicable loading towards deviations shall be loaded for ranking purpose.
- (b) For financial evaluation(Ranking), all bids shall be converted to Indian Rupees based on the "Bill for Collection (BC) selling "exchange rate on the last deadline for bid submission (Techno-commercial offer). If the last deadline for bid submission happens to be holiday or non-transaction day, the exchange rate on immediate previous working day will be adopted. The rate could be obtained from RBI/SBI rates as available on Internet.

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

- (c) Discount given, if any, by the bidders, after the last date for submission of the bids but before opening of the price bids, will not be considered for determining the ranking of bids but will be considered after the said bidder is adjudged as L1.
- (d) On-line ranking visible to the bidders after opening Part-II price bid is without loading parameters. However, the L1 bidder will be evaluated offline by applying all applicable loading parameters as per tender and clarifications during techno-commercial scrutiny / TNC meeting.
- (e) Loading/Ranking will be done on original submitted bid at the time of closing of tender. However, in case MDL invites supplementary price bid from technically qualified bidders, then same will also be considered while ranking of bids.

**20. Public Procurement Policy (MII Order 2017 and MSE Order 2012):** This is applicable for this tender and details are available on MDL Website. Kindly visit MDL website Link: <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project.

**Note: All nominated vendors (Class I, Class-II and Non-Local) are eligible to bid for this tender.**

**21. Public Grievance Cell:** A public grievance cell headed by Shri R. R. Kumar, ED (EY) has been set up in the company. Members of public having complaints or grievances are advised to contact above Authorities on Wednesday between 10.00 hours and 12.30 hours in his office at 3rd Floor, West Block, Mazagon Dock Shipbuilders Ltd or send their complaints / grievances to him in writing for redressal. Telephone No. is 23762106(MDL).

**22. Breach of Obligation:** In case of breach of any obligation mentioned under, the bidder shall be disqualified / debarred from the bidding process for a period of one year from the date of notification;

- i) Bidder has withdrawn / modified / amended / impaired / derogated from the tender during the period of bid validity.
- ii) Bidder fails or refuses to execute the contract upon notification of acceptance of bid by MDL during the period of bid validity.

**23. Land Border:** This is applicable for this tender and details are available on MDL Website. Kindly visit MDL website Link: <https://mazagondock.in/English/pages/Tenders> under tab Ship Building(SB)/MPV Project.

**Note: In case, Bidder is submitting bid for finished goods procured directly/indirectly from the vendors from the countries sharing land border with India, such vendor shall mandatorily require to be registered with Department for Promotion of Industry and Internal Trade (DPIIT) before bidding for this tender. Else, Bidder shall submit bid which are meeting the Land Border clause.**

**24. Right to Reject any or all Bids:** MDL reserves its right to accept or reject any or all Bids, abandon/ cancel the Tender process, and issue another tender for the same or similar Goods/Services at any time before the award of the contract. It would have no liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for such action(s).

### **25. Additional Instructions:**

- (a) Bidder shall abide to all tender terms & conditions including General Conditions of Contract (GCC).
- (b) In case of improper on-line filling or non-submission of Acceptance formats for Tender Enquiry Form (TEF), GCC, it shall be presumed that all our tender terms & conditions are

## **Tender No. 1700000770 (Nominated Limited Global Tender Enquiry)**

acceptable to the bidder. For GCC, kindly visit MDL website Link: <https://mazagondock.in/English/pages/Tenders> under tab Ship Building (SB) /MPV Project.

### **26. E-Portal and E-Tender Guidance:**

- (a) **Submission of bids against e-Tenders:** The bidder is required to quote online on the *e-Procurement* website [www.eprocuremdl.nic.in](http://www.eprocuremdl.nic.in) by the deadline, by submitting the Techno-commercial Bid & Price Bid in Electronic format only. The prices/quotes & a few declarations shall have to be entered/uploaded by the bidder online in the Tender's entry forms & other bid documents' scanned/soft copies shall have to be uploaded as part of the bid. All bids should be digitally signed using DSC (as explained below).
- (b) To participate in e-Tender (s), every bidder must register themselves on the ASP's website (*registration is free of cost*) & must possess a legally valid Class-IIB or above Digital Signature Certificate (DSC) as per IT Act-2000, using which they can sign their electronic bids. The DSC can be procured from any Certifying Authority (CA) authorized by Controller of Certifying Authorities (CCA) of Govt. of India.
- (c) National Informatics Centre (NIC) have been appointed by MDL as the Application Service Provider (ASP).
- (d) Online User Manual is available on the website for the guidance of users & for participating in the e-Procurement/ e-Tendering, the bidder must ensure having the requisite (IT) infrastructure at their office premises.
- (e) For any further details of e tendering & digital signatures, please contact 0120- 4200462, 0120-4001002, 8826246593, [eproc-support@gov.in](mailto:eproc-support@gov.in).
- (f) Problems in hardware/software, internet connectivity, system configurations, Browser setting etc., for whatsoever reason shall not be considered for extension of tender closing date and time.
- (g) MDL will not be responsible for an error in downloading of tender documents from web by the bidders. The version appearing on MDL website will be considered final and authentic.

**27. Contact Details for Queries: All bidders are requested to get their queries, if any, clarified in advance (i.e. 7 days in advance to tender closing date) to avoid last minute delay.** In case of any clarifications regarding tender, bidders are requested to contact the following executives.

<b>Department</b>	<b>Name of Executives</b>	<b>Contact No</b>	<b>Email</b>
Technical	Mr. Santosh Sitaraman DGM (SB-Design)	022 2376 3025	ssitaram@mazdock.com
	Mr. Shivmohan Meena M (SB-Design)	022 2376 3041	smeena@mazdock.com
Commercial	Mr. Sitaram Nandoskar CM (Project-Commercial)	022 2376 2744	srnandoskar@mazdock.com
	Mr. Manish Sorte M (Project-Commercial)	022 2376 2740	mbsorte@mazdock.com

**28.** We look forward to receive your most competitive and reasonable offer against this tender.

Yours faithfully,

**For MAZAGON DOCK SHIPBUILDERS LIMITED**

## **Tender No. 170000770 (Nominated Limited Global Tender Enquiry)**

### **Enclosure:**

Enclosure-1	General Conditions of Contract (GCC) for Goods and Services
Enclosure-2	Performance Security (PS) Bank Guarantee Format
Enclosure-3	RTGS format
Enclosure-4	Details for remittance towards Performance Security (PS) Bank Guarantee Format
Enclosure-5	Contact Details of the bidder
Enclosure-7	Format for Compliance Certificate w.r.t. Land Border Clause
Enclosure-13-A	Format for declaration of Local Content & Purchase Preference as per PPP Order 2017. (Applicable for procurement below Rs 10 Cr)
Enclosure-14-A	Format for declaration of Actual Local Content (Applicable for procurement below Rs 10 Cr)

**Note: All above enclosures are available on MDL Website. Kindly visit MDL website**

**Link:** <https://mazagondock.in/English/pages/Tenders> under tab Ship

Building(SB)/MPV Project.



**MAZAGON DOCK SHIPBUILDERS LIMITED**

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**SHIPBUILDING DESIGN ENGINEERING  
DOCKYARD ROAD, MUMBAI - 400 010**

**TECHNICAL SPECIFICATION FOR PROCUREMENT  
OF  
LINE VALVES**

**(QUANTITY: AS PER P.R)**

<b>PROJECT</b>	<b>:</b>	<b>7500 DWT Multi-Purpose Dry Cargo Vessel</b>
<b>YARD NO</b>	<b>:</b>	<b>MDL YD No.21001, 21002, 21003, 21004, 21005 &amp; 21006</b>
<b>CLIENT</b>	<b>:</b>	<b>NAVI MERCHANTS</b>
<b>DOCUMENT NO</b>	<b>:</b>	<b>DR/E/MPV/101/01</b>

<b>REV</b>	<b>DESCRIPTION</b>	<b>DATE</b>	<b>AUTHORISED BY</b>
02	Needle Valve added at Annexure-10A	12-06-2026	
01	Material of Construction as SS 316L for Ball Valves is added at Annexure-1	30.04.2025	-
00	FIRST ISSUE	09.09.2024	-
<b>SHIVMOHAN M (D-E)</b>	<b>ABHIJIT KORE CM (D-E)</b>	<b>SANTOSH SITARAMAN DGM (D-E)</b>	
<b>Prepared By</b>	<b>Checked By</b>	<b>Approved By</b>	



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## SECTION - I

### 1. GENERAL REQUIREMENT

#### 1.1 APPLICATION

The items projected in this specification are for use on 7500 DWT Multi-Purpose Dry Cargo Vessel for Navi Merchants being built by Mazagon Dock Shipbuilders Ltd.

#### 1.2 CLASSIFICATION

The Vessel will be registered under Danish flag and built under survey and in accordance with the rules of Classification Society of DNV.

#### 1.3 OPERATING CONDITION

Machinery/Equipment shall be able to achieve its specified output and operate satisfactorily under extreme tropical conditions as mentioned below:

- (a) Ambient air temperature : -25 °C to 35 °C  
(b) Sea water temperature : -2 °C (Winter) / 32 °C (Summer)

#### 1.4 SUPPLIER'S OFFER:

- a) The offer should be strictly conforming to the details indicated in technical requirements and in the relevant specifications / drawings / documents (All latest issues are to be followed).
- b) The offer should be complete with all relevant details such as technical specification, material specification, overall dimensions etc.
- c) No omission in the specifications shall relieve the supplier of his responsibility to ascertain these requirements to perform work and furnish material in accordance with codes specified.
- d) Any clarification required regarding Technical Specification should be sought before submission of the offer.
- e) Any incorrect / incomplete submission / non confirmation to any requirement shall lead to non-acceptance of offer.
- f) Vendor has to ensure complete awareness of the relevant International & Indian standards. Suppliers to note that no kind of correspondence as regards to non-awareness / ignorance on its part will be entertained, post order. Vendor to adhere strictly to all requirements mentioned in technical requirements.
- g) Clause wise compliance matrix for each para of this technical specification clearly indicating deviations if any as per Annexure-5 to be submitted along with offer. No deviation shall be granted after placement of order.
- h) General arrangement drawing with BOM/Catalogues along with class approval/type approval certificate for equipment to be supplied with offer. Weight details also to be submitted as per format enclosed as Annexure-6.

**1.5 Binding drawing & QAP approval:** Vendor shall submit the drawings & QAP for approval to MDL for approval within 2 weeks of placement of order. MDL shall submit the comments on



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drawings & QAP if any within 1 week. Vendor shall be completely responsible to get drawings & QAP approved within stipulated time.

**1.6 INSPECTION:** All equipment/items shall be inspected by TPI (IACS)). Cost for the inspection shall be borne by the supplier. All inspection report to be submitted along with main equipment.

Equipment should be manufactured to the highest quality.

Receipt inspection shall be done by MDL on receipt of material in stores to verify completeness of the scope of supply and intactness of the supplied equipment. Defective / damaged parts and deficiency, if any, in supply shall be made good by OEM free of cost. OEM shall be intimated the date of receipt inspection.

**1.7 TEST & TRIAL:** The performance requirement of equipment is to be confirmed during shop test at manufactures work & during the ships trial on board.

Test & Trial protocol shall be prepared by vendor in consultation with inspection agency and Test & Trial of the valves shall be offered to inspection agencies.

**1.8 DOCUMENTATION:** Following documentation in hard as well as in soft copy to be submitted by vendor along with equipment.

S. No	Type of Documents / Drawings	Quantity / Yard
(i)	As Fitted Drawings with part list /Catalogue (final GA & manufacturing Drgs)	4
(ii)	Inspection Certificates, inspection reports of inspection agency, certified test reports, FATS reports, material test reports, weight certificates etc	4
(iii)	Weight Certificates	4
(iv)	Soft copy of all above documents in CD or Pen drive	2

a) All documents must be in English language only.

b) All drawings & documents shall contain dimensions & other parameters in S.I. units only.

c) Documentation is to be forwarded to the consignee in a separate enclosure, along with supplies.

d) Material/Test/Inspection Certificate is to carry a reference number or any other details so as to relate the certificates with the relevant material.

**1.9 GUARANTEE/WARANTEE:**

The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twelve (12) months from the date of supply of equipment to MDL or twelve (12) months after planned delivery date (D) of the ship by MDL to the Owner, whichever is later.

During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, and non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expense on account of



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equipment malfunction, repair or supply of spares against guarantee defects is to be borne by the equipment supplier. In case, warranty extension is required the same is to be catered for by the equipment supplier. If any defective part to be taken back to OEM's factory (i.e. importing and re-exporting from Country of origin), for service purpose the liability of the same shall be borne by the supplier.

Planned Delivery dates (D) of the ship are as under:

Ship no.	Planned Delivery date
1	Mar 2027
2	Mar 2027
3	Mar 2027
4	Aug 2027
5	Sept 2027
6	Oct 2027



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## **SECTION - II**

### **1. SCOPE**

#### **Scope of Specification:**

- 1..1. Scope of supply will cover Design, Manufacture, Inspection, Testing, Preservation, Packaging, Forwarding and Satisfactory Operation on board ship for all the valves listed in this specification.
- 1..2. The supplied item shall be of standard design.
- 1..3. The Material, Construction & Testing requirement of valves shall conform to the Codes / Standards specified in the valve data sheet.  
(Refer Annexure – 1 to 12 as applicable).
- 1..4. Each type of valve is to conform to specifications acceptable to inspection agencies.
- 1..5. Types of valves covered by this specification are as follows:
  - a) Ball Valve
  - b) Butterfly Valve – Lug Type
  - c) NR Swing Check Valve
  - d) SDNR & Globe Valve (Angular & Straight)
  - e) Pressure Relief Valve
  - f) Pressure Reducing Valve
  - g) Self-Closing Valve
  - h) Quick Closing Valve
  - i) Fire Hydrant Valve
  - j) 3-Way Valve
  - k) Needle Valve

#### **Scope of Offer:**

- 1..6. The Vendor's offer shall contain minimum of the following documents/information:
- 1..7. Valve drawing with part list.
- 1..8. Clause wise conformation to all points (Compliance Matrix).
- 1..9. Approx. Weight of valve ( $\pm 5\%$ ) in weight certificate sheet duly filled.
- 1..10. Valve Type Approval certificate/proof of design of valve, if available.
- 1..11. Draft / Approved QAP of valve

#### **Important Notes:**

- 1..12. Drawings indicated in this specification are for understanding & reference purpose only.
- 1..13. Vendor has to design & offer the valves meeting the technical requirements indicated in the specification.
- 1..14. The offer received without the "compliance matrix" duly filled in, signed and stamped will not be considered.



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### SECTION III

## 2. TECHNICAL REQUIREMENTS

### DESIGN REQUIREMENTS

- 2..1. The valves are to be designed to offer minimum pressure drop during flow. Care is to be taken to avoid complications in operating or sudden change in section. The manufacturer is to submit Flow coefficient (Cv) for each type of valve. Flow coefficient (Cv) needs to be as low as possible.
- 2..2. Valve body thickness wherever not specified in the standard shall be as per ANSI B16.34
- 2..3. To arrive at the minimum valve body thickness, in accordance with ASME B 16.34, the valve designer should suitably incorporate applicable allowance based on corrosion / manufacturing allowance.
- 2..4. An arrow to be embossed on the body to indicate the direction of flow (As applicable)
- 2..5. Stops shall be provided to ensure positive alignment of valves with the ports
- 2..6. All valves shall be field serviceable.
- 2..7. In case of leakage through gland, the technicians/watch keeper on board the ship should be able to change the gland packing/seal even though the fluid is flowing through the valve under pressure (Back Seat provision)
- 2..8. The valve offered should operate smoothly under tropical marine conditions. It shall withstand contamination through air, oil, salt water & other contaminants associated with the marine environment.
- 2..9. The valves shall be designed suitably to withstand impact loading without any portion of the equipment coming adrift or creating a hazard to personnel or to any other equipment.
- 2..10. Rubber seats / seals used in to the valve body & penetrated by the valve spindle shall be adequately reinforced to prevent the seat from getting inflated by pressure behind the seat. Circumferential joints of the rubber seats shall be bonded together.
- 2..11. Rubber components of Valve shall be designed such that it permits removal & replacement at the site of the installation. Rubber seats shall be clamped mechanically secured or bonded to the body or disc. Method of bonding shall be tested in accordance with ASTM D429.
- 2..12. Spring used shall be helical type. Supplier to provide data sheet of spring with spring constant, material & spring life cycle.
- 2..13. Valves are to be provided with local indicators as Open & Closed for indicating the open/shut-off position of the assembly.
- 2..14. All fasteners/ pins etc are to have positive locking devices to ensure that they do not open while in use.
- 2..15. For allowable tolerances for face to face, center to face, end to end and center to end dimensions of valves refer BS EN 558
- 2..16. ASTM A105 is applicable for valves sizes upto 25 NB- All valve sizes 25 NB & below shall be manufactured by forging process only.  
ASTM A216 WCB is applicable for valves sizes above 25 NB : All valve of sizes above 25 NB shall be manufactured by casting/Forging process.

### 3. DESIGN PARAMETERS:

<b>DESIGN CODE</b>	BS EN 12266 & Respective standards mentioned in Annexures.
<b>FLUIDS HANDLED</b>	Sea Water, Fresh water, Fuel Oil, Lube Oil, Air
<b>OPERATING PRESSURE</b>	10 BAR
<b>OPERATING TEMPERATURE</b>	120 °C MAX
<b>FLUID VELOCITY</b>	3 – 4 Mtrs / Sec



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#### **4. BALL VALVES**

- 4..1. All ball valves shall comply with BS 5351 requirements.
- 4..2. All ball valves shall be Bi-directional.
- 4..3. All ball valves shall have antistatic arrangement to ensure electrical continuity between stem & body of valves.

#### **5. BUTTERFLY VALVES:**

- 5..1. All Butterfly valves shall comply with BS 5155 / BS EN 593 requirements.
- 5..2. All Butterfly valves shall be lugged type in design.
- 5..3. Split body type is not acceptable.
- 5..4. All Butterfly valves shall be bi-directional.
- 5..5. All Butterfly valves shall have back seat arrangement.
- 5..6. All Butterfly valves shall have antistatic arrangement to ensure electrical continuity between stem & body of valves.

#### **6. SWING CHECK VALVES:**

- 6..1. All check valves shall comply with BS 5154/BS MA65/BS1868 requirements.
- 6..2. The disc shall be solid type
- 6..3. The full port area shall be maintained without pockets from the inlet port to the valve seat to avoid turbulence.
- 6..4. At the outlet side of the valve seat the body shall be designed such that it allows sufficient swing of the disk to give a flow area at least equivalent to full port area.
- 6..5. The Lift check valves shall be spring type.
- 6..6. All check valves are to be tested at low pressure test (15 PSI air medium).
- 6..7. To be designed leak proof at very low pressure also.

#### **7. SDNR/ GLOBE VALVES:**

- 7..1. All SDNR/ GLOBE valves shall comply with BS 5154/BS MA65 requirements.
- 7..2. All SDNR/ GLOBE valves shall be of non-rising spindle with outside screw type.
- 7..3. The Disc shall be solid type.
- 7..4. All SDNR/ GLOBE valves shall have back seat arrangement.

#### **8. PRESSURE RELIEF & REDUCING VALVES:-**

- 8..1. All Valves are to be positively tight at pressure below the set pressure.
- 8..2. Reducing valves are to be of the fluid tight enclosed spring type, with enclosures vented to the outlet side of the valve. Springs shall be of Helical Compression Springs type only.
- 8..3. The springs in valves are not to be in contact with the fluid enclosed.
- 8..4. The coefficient of flow is to be calculated as per BS 4740 & is to be indicated in drawing.
- 8..5. The proportional band & degree of stability on step change of demand are also to be indicated.

#### **9. FIRE HYDRANT VALVE:-**

- 9..1. All fire hydrant valves shall comply with BS 5154 /IS 5290 requirements
- 9..2. All fire hydrant valves shall be of rising spindle type only.
- 9..3. The threading shall be gas tight type.
- 9..4. The hose connections shall be instantaneous hose couplings.
- 9..5. All fire hydrant valves to be supplied along with cap connection.
- 9..6. The hose connections shall be single catch type.



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9..7. End connection of valves is to be flanged at one end and other end male thread to suit instantaneous hose connection with cap with single lug as shown in the Annexure.

9..8. End flanges shall be cast integral with the body.

#### **10. 3-WAY VALVES:-**

10..1. Important characteristic of 3 way valve is multiport construction, so that one valve will provide two, three or even four different flow directions.

10..2. A 'soft 'sleeve' of PTFE or equivalent material is inserted between plug & body to reduce wear & tear and ensure positive sealing

10..3. For shipboard application, 'T' or 'L' ported valves are used in system applications such as steering gear, Fuel system etc.

#### **11. NEEDLE VALVES:-**

11..1. Needle Valve, rising stem type, suitable for fine flow regulation and isolation.

11..2. Screwed/threaded end connection.

#### **12. END CONNECTIONS:**

12..1. All valves shall have flange connections, except specified.

12..2. End flanges shall be cast or forged integral with the body.

12..3. Flanges are to conform to BS EN 1092-1 for pressure rating PN 10.

12..4. The flange thickness shall be as per BS EN 1092 part 1.

12..5. All flanges shall be flat face with 3 serrated concentric grooves.

#### **13. LOCKING ARRANGEMENT:**

13..1. All line valves shall have pin type locking arrangement.

#### **14. LIFTING ARRANGEMENTS:**

14..1. All valves 100 NB & above shall be provided with permanent lifting arrangement for ease of handling on board the ship.

#### **15. SERVICE APPLICATION:**

15..1. When used with liquids, these valves shall be suitable for flow velocity at the valve inlet 3-4 m/sec (minimum) with the valve fully open. The valves shall be suitable for tight shut off & regulating applications

#### **16. PASSAGE OF FLOW:**

16..1. The passage for the flow of fluid shall be clear & smooth. The flow area shall be not less than 90% of bore area.

16..2. Vendor to provide Cv values of valves offered.

16..3. Vendor to provide pressure drop values across the valve.

16..4. The valves shall be full-bore type.

#### **17. ANTI BLOW OUT STEM:**

17..1. All valves shall be designed to ensure that in the event of the gland being removed while the valve is under pressure, the stem does not blow out of the body.



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## **18. OPERATION:**

- 18..1. All valves are to close with a right hand (clockwise) motion of the hand wheel when facing the end of the stem. Valves are to be fitted with an indicator to show whether the valve is open or closed.
- 18..2. All SDNR/ Globe Valves are operated by hand wheel or Rod gearing (from remote place.)
- 18..3. The Butterfly valves may be operated by hand lever/ wrench/ gearbox / Actuators or Rod gearing (from remote place.)
- 18..4. All Butterfly valves above 125 NB (including) are to be Gear Operated.
- 18..5. The design of the valve is to ensure an ease of operation so that single arms clear pull of not more than 140 N is required by an operator or 70 N by each hand on the hand wheel/lever.
- 18..6. The gearboxes fitted on valves are to be considered as the integral part of the valve & designed to anti corrosion of the valve itself. All gear boxes are to be water tight at 5 metres water column.
- 18..7. Hand wheels/levers/ gearboxes shall be marked to indicate the direction of opening & closing.
- 18..8. Vendor to provide the actual torque required for the valve operation of the offered valves.
- 18..9. All line valves are to be so fitted to enable operation both locally and remotely by rod gearing and line valve should be prominently marked 'LINE ONLY'.

## **19. MATERIAL:**

- 19..1. Materials used in manufacturing of valves shall be such that it is compatible with all low-pressure fluids in surface ships.
- 19..2. Material requirements with specification, for various components of valves are given in ANNEXURES.
- 19..3. All fasteners shall be non-ferrous forged type only and should comply to international standards.
- 19..4. Repair of casting by repair is not allowed.
- 19..5. All raw material used for manufacturing shall be new virgin material only.
- 19..6. All material used are to be Asbestos Free.

## **20. DIMENSION:**

- 20..1. The dimension of valves shall be as per Annexures (as applicable)
- 20..2. No deviation in dimensions is acceptable.

## **21. SURFACE FINISH:**

- 21..1. The surface of the castings shall be examined visually and shall be free of adhering sand, scale, cracks & hot tears. Other surface discontinuities shall meet the visual acceptance standard SP55. Un-acceptable visual surface discontinuities shall be removed & their removal verified by visual examination of the resultant cavities.
- 21..2. The castings shall not be peened, plugged or impregnated to stop leaks.

## **22. VALVE BODY MARKING:**

- 22..1. In general, valves are to be permanently marked.
- 22..2. Permanent marking means the valve is to bear permanent identification, such as manufacturer's name or trademark, standard of compliance, material identity, pressure



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rating, etc., as required by the standard of compliance or the manufacturer's specification.

22..3. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life.

22..4. The marks shall be clear & distinct for identification & shall contain the following details:

➤	Manufacturer's name or trademark
➤	Standard of compliance
➤	Material identity
➤	Pressure rating
➤	Valve Type
➤	Nominal Size
➤	Project Name, Order No. Fitting No.
➤	An arrow indicating the direction of flow when this is unique
➤	Body Test Pressure

### 23. INSPECTION:

<b>For Design</b>	<b>MDL</b>
<b>For Quality Control</b>	<b>TPI (IACS)</b>
<b>For receipt inspection</b>	<b>MDL Mumbai</b>

23..1. All valves shall be thoroughly inspected before dispatch for dimensions, fault, and irregularities & shall be clear of scale or internal deposits, visual checks & then pressure tested.

23..2. All valves shall be free from manufacturing & material defects.

23..3. TPI (IACS) will inspect all items as per approved QAP.

23..4. The flange faces, sealing surfaces, body seats & disc seats are clean. The bolting attached to the valve is to be checked for loosening in transit & handling.

### 24. TESTING:

24..1. Testing will be as per approved QAP.

24..2. All the line valves are to be tested in the presence of TPI (IACS).

24..3. The valve assembly is to be subjected to a hydrostatic seat leakage test in accordance with a BS EN 12266 – 1.

24..4. The manufacturer of a valve is to guarantee that the valve is constructed to the standard and conforming to the identifications to which it is marked. The manufacturer is to guarantee also that the valve has been tested before shipment to the pressure required by the pressure rating of the valve.

24..5. All TPI (IACS) approved certificates to be submitted to MDL for reference & records.



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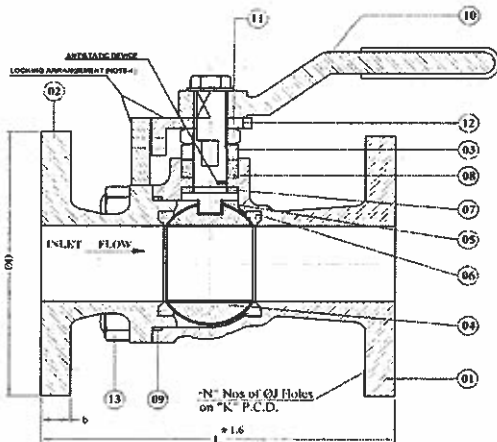
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**Annexure-1**

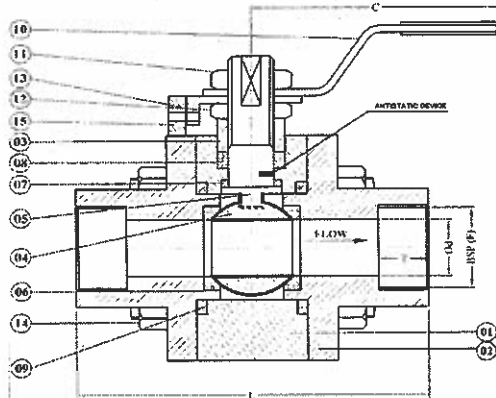
**VALVE DATA SHEET  
BALL VALVE**

1 GENERAL SPECIFICATION					
1.1	<b>FLUID HANDLED</b>	Oil/ Fresh Water/ Drainage/ Air	1.6	<b>BORE TYPE</b>	FULL BORE
1.2	<b>OP. PRESSURE</b>	10 Kg/Cm2	1.7	<b>END CONN.</b>	FLANGED
1.3	<b>OP. TEMPERATURE.</b>	120 °C MAX.	1.8	<b>FLANGE FACE</b>	BS EN 1092-1 (Flat face)
1.4	<b>MATING PIPE SPECN.</b>	CS as per ASME 36.10	1.9	<b>BODY TYPE</b>	SINGLE PIECE
1.5	<b>VALVE REF. DOC.</b>	BS 5351/ BS EN 13547	1.10	<b>VALVE OPERATION</b>	LEVER
2 MATERIAL SPECIFICATION					
	<b>PART</b>	<b>MATERIAL</b>			
2.1	<b>BODY</b>	CARBON STEEL (ASTM A105/ ASTM A216 WCB) OR SS 316 L (MOC as specified in the tender)			
2.2	<b>DISC/TRIM</b>	BRONZE OR SS 316L (MOC as specified in the tender)			
2.3	<b>OTHER PARTS OF THE VALVE</b>	As per Class Requirement			
3 STATUTORY REQUIREMENTS					
3.1	<b>INSPECTION &amp; TESTING</b>	BS EN 12266 – 1 & BS EN 12266 – 2			
3.2	<b>CERTIFICATION &amp; INSPECTION</b>	TPI (IACS)			

**Ball Valve (Flanged End)**



**Ball Valve (Screwed End)**



**FACE – TO – FACE DISTANCE  
(Ref: BS EN 558:2008, Basic Series No. 03)**

**FACE TO FACE DIMENSIONS  
(Inclusive of FLANGE THICKNESS)**

S. NO.	NOMINAL SIZE (DN)	DIMENSIONS		END CONNECTIONS
		L		
01	10	102		FLANGED
02	15	108		FLANGED
03	20	117		FLANGED
04	25	127		FLANGED
05	32	140		FLANGED
06	40	165		FLANGED
07	50	178		FLANGED
08	65	190		FLANGED
09	80	203		FLANGED
10	100	229		FLANGED
11	125	254		FLANGED
12	150	267		FLANGED

**BALL VALVE DIMENSIONS (SCREWED)**

S. NO.	NOMINAL SIZE (DN)	DIMENSION S (L)	END CONNECTIONS
01	10	70	½" BSP
02	15	75	¾" BSP
03	20	75	1" BSP
04	25	96	1 ¼" BSP
05	32	130	1 ½" BSP

**\*NOTE: Drawings shown in TSP are for reference and clear understanding of valve only**



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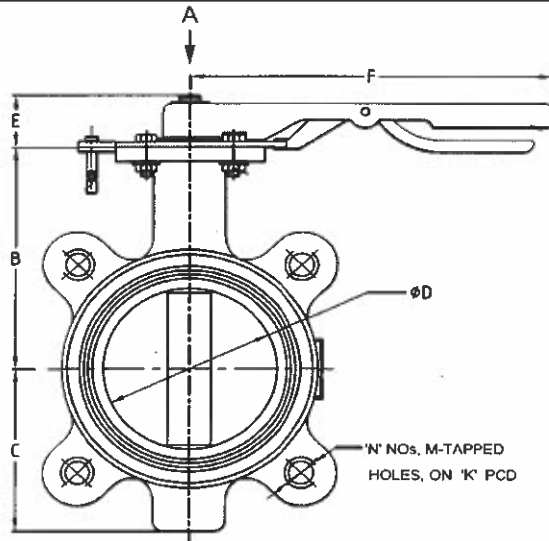
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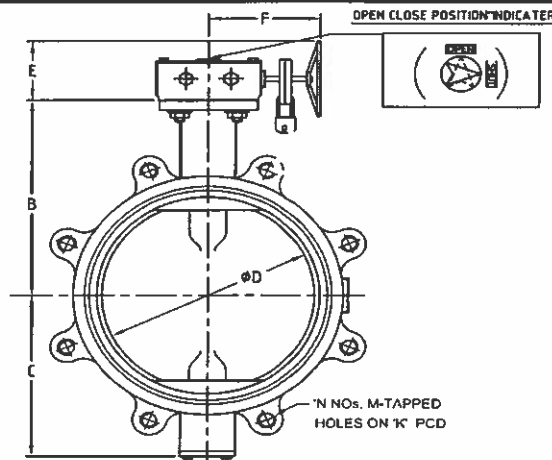
**ANNEXURE - 2**

VALVE DATA SHEET BUTTERFLY VALVE (Bi-Directional)					
<b>1 GENERAL SPECIFICATION</b>					
1.1	<b>MEDIUM</b>	Oil/ Sea Water Fresh Water/ Drainage/ Air	1.6	<b>BORE TYPE</b>	FULL BORE
1.2	<b>OP. PRESSURE</b>	10 Kg/Cm2	1.7	<b>END CONN.</b>	LUG TYPE
1.3	<b>OP. TEMPERATURE</b>	120 °C MAX.	1.8	<b>FLANGE FACE</b>	BS EN 1092-1 (Flat face)
1.4	<b>CONNECTING PIPE SPECN</b>	CS as per ASME 36.10	1.9	<b>BODY TYPE</b>	SINGLE PIECE
1.5	<b>VALVE REF. DOC.</b>	BS 5155 / BS EN 593	1.10	<b>VALVE OPERATION</b>	LEVER / GEAR OPERATED
<b>2 MATERIAL SPECIFICATION</b>					
<b>PART</b>			<b>MATERIAL</b>		
2.1	<b>BODY</b>	CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB			
2.2	<b>DISC/TRIM</b>	BRONZE			
2.3	<b>OTHER PARTS OF THE VALVE</b>	As per Class Requirement			
<b>3 STATUTORY REQUIREMENTS</b>					
3.1	<b>INSPECTION &amp; TESTING</b>	BS EN 12266 – 1 & BS EN 12266 – 2			
3.2	<b>CERTIFICATION &amp; INSPECTION</b>	TPI (IACS)			

**BUTTERFLY VALVE (LEVER OPERATED TYPE)**



**BUTTERFLY VALVE (GEAR OPERATED TYPE)**



**\*NOTE:** Drawings shown in TSP are for reference and understanding of valve only.

**For Face to Face distance – BS EN 558:2008, Basic Series no 20**



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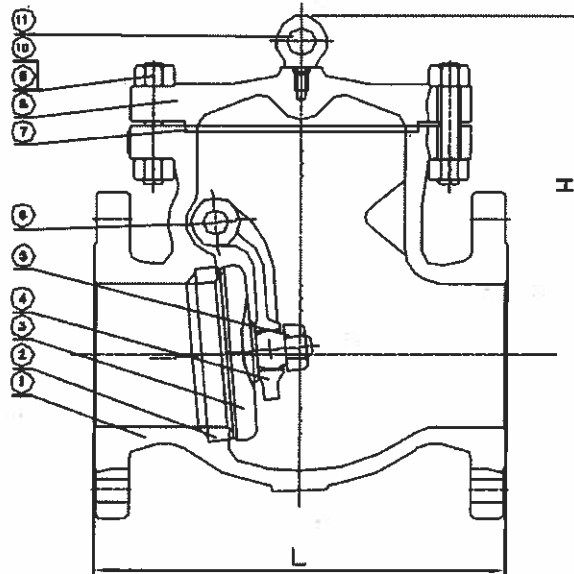
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**ANNEXURE - 3**

VALVE DATA SHEET SWING CHECK VALVE					
<b>1</b>	<b>GENERAL SPECIFICATION</b>				
1.1	<b>MEDIUM</b>	Oil/ Sea Water Fresh Water/ Drainage/ Air	1.6	<b>BORE TYPE</b>	FULL BORE
1.2	<b>OP. PRESSURE</b>	10 Kg/Cm2	1.7	<b>END CONN.</b>	FLANGED
1.3	<b>OP. TEMPERATURE</b>	120 °C MAX.	1.8	<b>FLANGE FACE</b>	BS EN 1092-1 (Flat face)
1.4	<b>CONNECTING PIPE SPECN</b>	CS as per ASME 36.10	1.9	<b>BODY TYPE</b>	
1.5	<b>VALVE REF. DOC.</b>	BS 5154/ BS MA65/ BS1868/ BS EN 16767	1.10	<b>VALVE OPERATION</b>	SPRING OPERATED
<b>2</b>	<b>MATERIAL SPECIFICATION</b>				
	<b>PART</b>		<b>MATERIAL</b>		
2.1	<b>BODY</b>		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	<b>DISC / TRIM</b>		BRONZE		
2.3	<b>OTHER PARTS OF THE VALVE</b>		As per Class Requirement		
<b>3</b>	<b>STATUTORY REQUIREMENTS</b>				
3.1	<b>INSPECTION &amp; TESTING</b>		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	<b>CERTIFICATION &amp; INSPECTION</b>		TPI (IACS)		

**SWING CHECK VALVE  
DIMENSIONS REQUIREMENT**



NO.	PART DESCRIPTION	NO.	PART DESCRIPTION
1	BODY	7	GASKET
2	SEAT	8	BONNET
3	DISC	9	BOLT
4	HINGE	10	NUT
5	NUT	11	EYEBOLT
6	PIN		

**\*NOTE:** Drawing shown in TSP is for reference and understanding of valve only.

**For Face to Face distance – BS EN 558:2008, Basic Series no 48**



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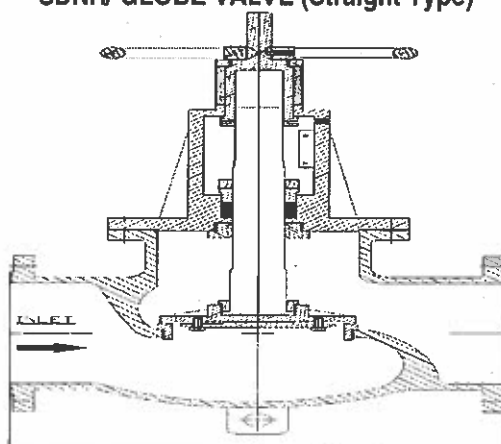
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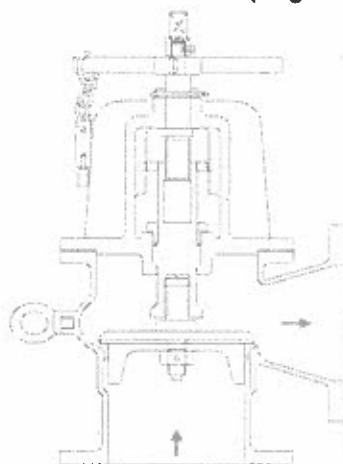
**ANNEXURE - 4**

VALVE DATA SHEET SDNR/ GLOBE VALVES					
1 GENERAL SPECIFICATION					
1.1	MEDIUM	Oil/ Sea Water/ Drainage	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BOLTED BONNET TYPE
1.5	VALVE REF. DOC.	BS 5154 / BS MA65	1.10	VALVE OPERATION	HAND WHEEL / ROD GEARING (REMOTE)
2 MATERIAL SPECIFICATION					
	PART		MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**SDNR/ GLOBE VALVE (Straight Type)**



**SDNR/ GLOBE VALVE (Angle Type)**



**\*Note:** Drawings shown are for reference and understanding of valve type only.

**For Face to Face distance – Straight Type: BS EN 558:2008, Basic Series no 1**

**For Face to Face distance – Angle Type: BS EN 558:2008, Basic Series no 11**



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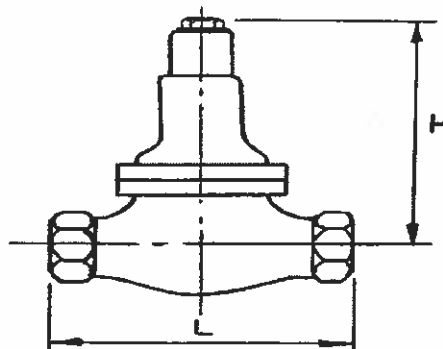
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**ANNEXURE - 5**

VALVE DATA SHEET PRESSURE RELIEF VALVE					
1 GENERAL SPECIFICATION					
1.1	MEDIUM	AIR	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	BS4740	1.10	VALVE OPERATION	SPRING LOADED
2 MATERIAL SPECIFICATION					
PART			MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**PRESSURE RELIEF VALVE**



**\*Note: Drawings shown are for reference and understanding of valve type only.**

Valve Diameter (mm)	Dimensions (mm)	
	L	H
15	89	138
20	92	138
25	127	213
32	152	213
40	178	260



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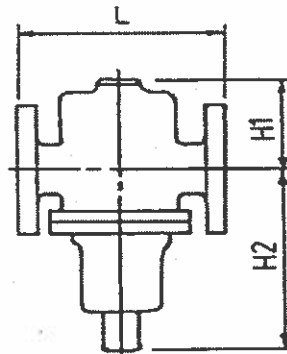
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**ANNEXURE - 6**

VALVE DATA SHEET PRESSURE REDUCING VALVE					
<b>1 GENERAL SPECIFICATION</b>					
1.1	MEDIUM	AIR	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	BS4740	1.10	VALVE OPERATION	SPRING LOADED/ DIAPHRAGM
<b>2 MATERIAL SPECIFICATION</b>					
<b>PART</b>			<b>MATERIAL</b>		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
<b>3 STATUTORY REQUIREMENTS</b>					
3.1	INSPECTION & TESTING		BS EN 12266 – 1 & BS EN 12266 – 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**PRESSURE REDUCING VALVE**



**\*Note: Drawings shown are for reference and understanding of valve type only.**

Valve Diameter (mm)	Dimensions (mm)		
	L	H1	H2
15	158	76	155
20	174	92	162
25	177	92	162
32	212	100	237
40	280	148	290
50	304	174	354
65	305	165	412
80	305	162	536
100	406	222	655
125	460	240	675
150	508	248	672



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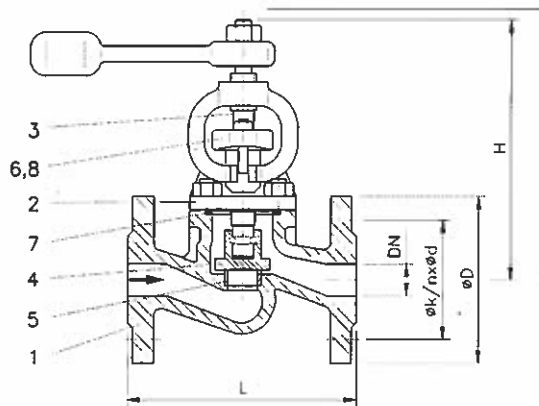
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**ANNEXURE - 7**

VALVE DATA SHEET SELF CLOSING VALVE					
1 GENERAL SPECIFICATION					
1.1	MEDIUM	SEA WATER / OIL	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	SINGLE PIECE
1.5	VALVE REF. DOC.	NES 360/ NEW 375/ EQUIVALENT	1.10	VALVE OPERATION	SPRING LOADED
2 MATERIAL SPECIFICATION					
	PART			MATERIAL	
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**SELF CLOSING VALVE**



**\*Note:** Drawings shown are for reference and understanding of valve type only.

Valve Diameter (NB)	Dimensions (mm)		
	L	D	H
15	130	95	195
20	150	105	195
25	160	115	195
32	180	200	200



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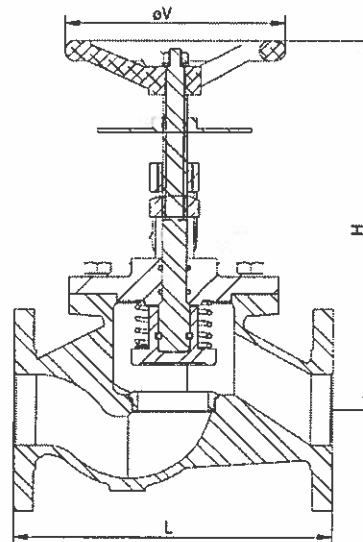
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**ANNEXURE - 8**

VALVE DATA SHEET QUICK CLOSING VALVE					
<b>1</b>					
GENERAL SPECIFICATION					
1.1	MEDIUM	OIL	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm <sup>2</sup>	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	EN 558/ EN 13789	1.10	VALVE OPERATION	SPRING LOADED/ DIAPHRAGM
<b>2</b>					
MATERIAL SPECIFICATION					
PART			MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
<b>3</b>					
STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**QUICK CLOSING VALVE**



**\*Note: Drawings shown are for reference and understanding of valve type only.**

DN	D (mm)	L (mm)	H Open (mm)	V (mm)
15	95	130	195	100
20	105	150	200	100
25	115	160	205	100
32	140	180	265	150
40	150	200	275	150
50	165	230	280	150



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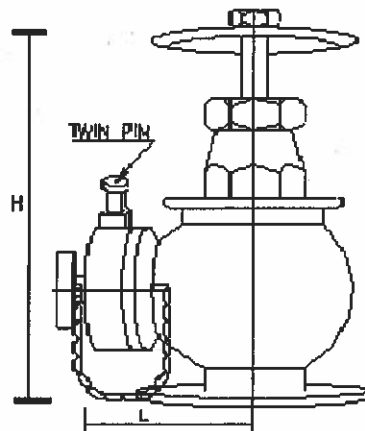
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**ANNEXURE-9**

VALVE DATA SHEET FIRE HYDRANT VALVE					
1 GENERAL SPECIFICATION					
1.1	MEDIUM	SEA WATER	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	BS 5354 / IS 5290/	1.10	VALVE OPERATION	HANDWHEEL
2 MATERIAL SPECIFICATION					
PART			MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**FIRE HYDRANT VALVE**



**TYPE 1 : RIGHT ANGLE**

**\*Note:** Drawings shown are for reference and understanding of valve type only.

SIZE	FIRE HYDRANT RIGHT ANGLE TYPE 1	
	L	H
	50 NB	245 (max)
65NB	245 (max)	200 (max)



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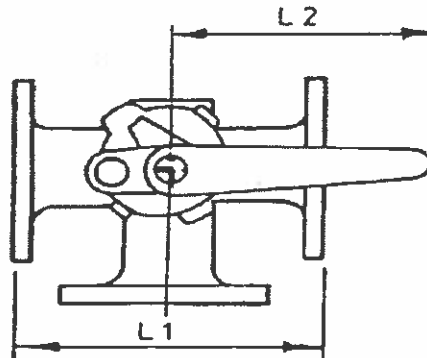
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**ANNEXURE - 10**

VALVE DATA SHEET					
L-PORTED PLUG (3 WAYS) VALVE					
1	GENERAL SPECIFICATION				
1.1	MEDIUM	OIL	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm <sup>2</sup>	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	CONNECTING PIPE SPECN	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	BS 5351	1.10	VALVE OPERATION	LEVER
2	MATERIAL SPECIFICATION				
	PART		MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3	STATUTORY REQUIREMENTS				
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**L-PORTED PLUG (3 WAY) VALVE**



**\*NOTE:**

Drawings attached in TSP are for reference and understanding of valve only.

**L-PORTED VALVE DIMENSIONS (FLANGED)**

SR. NO.	NOMINAL SIZE (DN)	DIMENSIONS			END CONNECTIONS	REMARKS
		L1	H*	L2		
01	25	165	158	140	FLANGED	
02	40	221	200	215	FLANGED	
03	50	241	215	235	FLANGED	
04	65	267	235	265	FLANGED	
05	80	305	250	285	FLANGED	
06	100	356	270	305	FLANGED	

\* NOTE: H- Approx dimension to top of locating pin.



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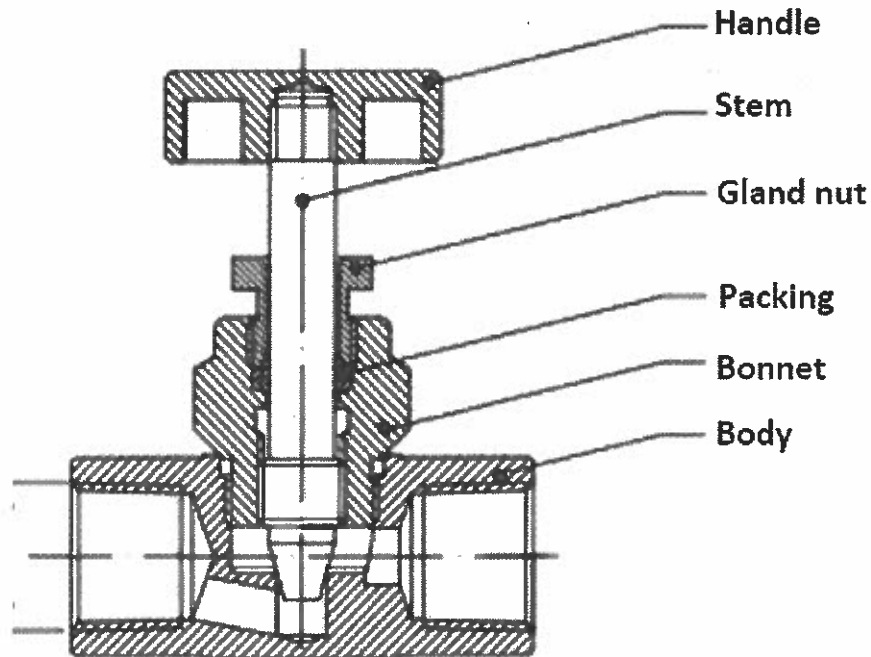
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**ANNEXURE - 10A**

VALVE DATA SHEET					
NEEDLE VALVE					
1 GENERAL SPECIFICATION					
1.1	MEDIUM	SEA WATER	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	10 Kg/Cm2	1.7	END CONN.	SCREWED
1.3	OP. TEMPERATURE	120 °C MAX.	1.8	THREAD TYPE	BSP THREAD
1.4	CONNECTING PIPE SPECN	CS as per ASME 36.10	1.9	BODY TYPE	BONNET TYPE
1.5	VALVE REF. DOC.	BS 5351	1.10	VALVE OPERATION	HAND WHEEL
2 MATERIAL SPECIFICATION					
PART			MATERIAL		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per Class Requirement		
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING		BS EN 12266 - 1 & BS EN 12266 - 2		
3.2	CERTIFICATION & INSPECTION		TPI (IACS)		

**NEEDLE VALVE**



**\*NOTE:**

Drawings attached in TSP are for reference and understanding of valve only.

Thread sizes:

- DN15 – ½" BSP
- DN25 – 1" BSP



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**ANNEXURE - 11**

(To be filled in by the *SUPPLIER* & submitted as part of the Offer)

**COMPLIANCE MATRIX**

With reference to the subject Requisition received along with the MDL Inquiry and our  
**QUOTATION** No. \_\_\_\_\_ Dated \_\_\_\_\_  
\_\_\_\_\_ we hereby confirm / clarify the following :

<b>TSP Para No</b>	<b>Complied / Not Complied</b>	<b>Offer Reference (Page &amp; Para No.)</b>	<b>Deviations with reasons (if any)</b>
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

The Bidder should fill in this form for the deviations of his bid from the requirements as stated in the TSP. If no deviation is required, bidder should fill in "NIL" in the deviation column. Deviation listed other than deviation form shall not be considered.

**BIDDER'S COMPANY SEAL  
DATE**

**BIDDER'S SIGNATURE &**



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**ANNEXURE - 12**

**WEIGHT CERTIFICATE**

**EQUIPMENT DESCRIPTION :**

**EQUIPMENT NO. :**

The form has to be completed by Vendor & to be supplied along with the equipment.

**VENDOR'S NAME**

**Ref. Drg. No.**

**ADDRESS**

**TELEPHONE NO.**

**Part No.**

**ORDER NO.**

**EQPT. NO.**

**METHOD OF WEIGHING :**

Vendor to prescribe Method & Equipment Used :

**DATE OF LAST  
CALIBRATION**

**SPECIFIED ACCURACY  
REQUIREMENT**

**NOTE :-**

**RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT :**

(Excluding packing, temporary protection etc.)

**ALLOCATED WEIGHT**

(Weight estimate agreed by purchaser and vendor based on order specs)

**REASONS FOR VARIATION BETWEEN ALLOCATED WEIGHT AND CERTIFIED WEIGHT :**

**WEIGHING ADDRESS :**

**WITNESSED BY**

**FOR VENDOR**

**FOR PURCHASER**

**Date:**

**Representative**

**Representative**

**Signature / Date & Seal**

**Signature / Date & Seal**





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	ANNEXURE - 2 SWING CHECK VALVE	13
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## SECTION - I

### 1. GENERAL REQUIREMENT

#### 1.1 APPLICATION

The items projected in this specification are for use on 7500 DWT Multi-Purpose Dry Cargo Vessel for Navi Merchants being built by Mazagon Dock Shipbuilders Ltd.

#### 1.2 CLASSIFICATION

The Vessel will be registered under Danish flag and built under survey and in accordance with the rules of Classification Society of DNV.

#### 1.3 OPERATING CONDITION

Machinery/Equipment shall be able to achieve its specified output and operate satisfactorily under extreme tropical conditions as mentioned below:

- (a) Ambient air temperature : -25 °C to 35 °C
- (b) Sea water temperature : -2 °C (Winter) / 32 °C (Summer)

#### 1.4 SUPPLIER'S OFFER:

- a) The offer should be strictly conforming to the details indicated in technical requirements and in the relevant specifications / drawings / documents (All latest issues are to be followed).
- b) The offer should be complete with all relevant details such as technical specification, material specification, overall dimensions etc.
- c) No omission in the specifications shall relieve the supplier of his responsibility to ascertain these requirements to perform work and furnish material in accordance with codes specified.
- d) Any clarification required regarding Technical Specification should be sought before submission of the offer.
- e) Any incorrect / incomplete submission / non confirmation to any requirement shall lead to non-acceptance of offer.
- f) Vendor has to ensure complete awareness of the relevant International & Indian standards. Suppliers to note that no kind of correspondence as regards to non-awareness / ignorance on its part will be entertained, post order. Vendor to adhere strictly to all requirements mentioned in technical requirements.
- g) Clause wise compliance matrix for each para of this technical specification clearly indicating deviations if any as per Annexure-5 to be submitted along with offer. No deviation shall be granted after placement of order.
- h) General arrangement drawing with BOM/Catalogues along with class approval/type approval certificate for equipment to be supplied with offer. Weight details also to be submitted as per format enclosed as Annexure-6.

**1.5 Binding drawing & QAP approval:** Vendor shall submit the drawings & QAP for approval to DNV for approval within 2 weeks of placement of order. 1 set of drawing & QAP to be



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submitted to MDL as well for review. Vendor shall be completely responsible to get drawings & QAP approved from class within stipulated time.

**1.6 INSPECTION:** All equipment/items shall be inspected by DNV. Cost for the inspection shall be borne by the supplier. All inspection report to be submitted along with main equipment.

Equipment should be manufactured to the highest quality.

Receipt inspection shall be done by MDL on receipt of material in stores to verify completeness of the scope of supply and intactness of the supplied equipment. Defective / damaged parts and deficiency, if any, in supply shall be made good by OEM free of cost. OEM shall be intimated the date of receipt inspection.

**1.7 TEST & TRIAL:** The performance requirement of equipment is to be confirmed during shop test at manufactures work & during the ships trial on board.

Test & Trial protocol shall be prepared by vendor in consultation with inspection agency and Test & Trial of the valves shall be offered to inspection agencies.

**1.8 DOCUMENTATION:** Following documentation in hard as well as in soft copy to be submitted by vendor along with equipment.

S. No	Type of Documents / Drawings	Quantity / Yard
(i)	As Fitted Drawings with part list /Catalogue (final GA & manufacturing Drgs)	4
(ii)	Inspection Certificates, inspection reports of inspection agency, certified test reports, FATS reports, material test reports, weight certificates etc	4
(iii)	Weight Certificates	4
(iv)	Soft copy of all above documents in CD or Pen drive	2

a) All documents must be in English language only.

b) All drawings & documents shall contain dimensions & other parameters in S.I. units only.

c) Documentation is to be forwarded to the consignee in a separate enclosure, along with supplies.

d) Material/Test/Inspection Certificate is to carry a reference number or any other details so as to relate the certificates with the relevant material.

**1.9 GUARANTEE/WARANTEE:**

The equipment along with associated auxiliaries/components shall be warranted by the equipment supplier for the stipulated performance for a period of twelve (12) months from the date of supply of equipment to MDL or twelve (12) months after planned delivery date (D) of the ship by MDL to the Owner, whichever is later.

During the said period, the equipment supplied shall be warranted against any malfunction, defects, material failure, and non-compliance to ordered specifications, sub-optimal performance, design deficiency, poor workmanship and quality. Any expense on account of equipment malfunction, repair or supply of spares against guarantee defects is to be borne by



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the equipment supplier. In case, warranty extension is required the same is to be catered for by the equipment supplier. If any defective part to be taken back to OEM's factory (i.e. importing and re-exporting from Country of origin), for service purpose the liability of the same shall be borne by the supplier.

Planned Delivery dates (D) of the ship are as under:

Ship no.	Planned Delivery date
1	Mar 2027
2	Mar 2027
3	Mar 2027
4	Aug 2027
5	Sept 2027
6	Oct 2027



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## SECTION - II

### 1. SCOPE

#### Scope of Specification:

- 1..1. Scope of supply will cover Design, Manufacture, Inspection, Testing, Preservation, Packaging, Forwarding and Satisfactory Operation on board ship for all the valves listed in this specification.
- 1..2. The supplied item shall be of standard design.
- 1..3. The Material, Construction & Testing requirement of valves shall conform to the Codes / Standards specified in the valve data sheet.  
(Refer Annexure – 1 to 4 as applicable).
- 1..4. Each type of valve is to conform to specifications acceptable to inspection agencies.
- 1..5. Types of valves covered by this specification are as follows:
  - a) Ball Valve
  - b) NR Swing Check Valve
  - c) SDNR (Angular & Straight)
  - d) Pressure Reducing Valve

#### Scope of Offer:

- 1..6. The Vendor's offer shall contain minimum of the following documents/information:
- 1..7. Valve drawing with part list.
- 1..8. Clause wise conformation to all points (Compliance Matrix).
- 1..9. Approx. Weight of valve ( $\pm 5\%$ ) in weight certificate sheet duly filled.
- 1..10. Valve Type Approval certificate/proof of design of valve, if available.
- 1..11. Draft / Approved QAP of valve

#### Important Notes:

- 1..12. Drawings indicated in this specification are for understanding & reference purpose only.
- 1..13. Vendor has to design & offer the valves meeting the technical requirements indicated in the specification.
- 1..14. The offer received without the "compliance matrix" duly filled in, signed and stamped will not be considered.



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### SECTION III

## 2. TECHNICAL REQUIREMENTS

### DESIGN REQUIREMENTS

- 2..1. The valves are to be designed to offer minimum pressure drop during flow. Care is to be taken to avoid complications in operating or sudden change in section. The manufacturer is to submit Flow coefficient (Cv) for each type of valve. Flow coefficient (Cv) needs to be as low as possible.
- 2..2. Valve body thickness wherever not specified in the standard shall be as per ANSI B16.34
- 2..3. To arrive at the minimum valve body thickness, in accordance with ASME B 16.34, the valve designer should suitably incorporate applicable allowance based on corrosion / manufacturing allowance.
- 2..4. An arrow to be embossed on the body to indicate the direction of flow (As applicable)
- 2..5. Stops shall be provided to ensure positive alignment of valves with the ports
- 2..6. All valves shall be field serviceable.
- 2..7. In case of leakage through gland, the technicians/watch keeper on board the ship should be able to change the gland packing/seal even though the fluid is flowing through the valve under pressure (Back Seat provision)
- 2..8. The valve offered should operate smoothly under tropical marine conditions. It shall withstand contamination through air, oil, salt water & other contaminants associated with the marine environment.
- 2..9. The valves shall be designed suitably to withstand impact loading without any portion of the equipment coming adrift or creating a hazard to personnel or to any other equipment.
- 2..10. Rubber seats / seals used in to the valve body & penetrated by the valve spindle shall be adequately reinforced to prevent the seat from getting inflated by pressure behind the seat. Circumferential joints of the rubber seats shall be bonded together.
- 2..11. Rubber components of Valve shall be designed such that it permits removal & replacement at the site of the installation. Rubber seats shall be clamped mechanically secured or bonded to the body or disc. Method of bonding shall be tested in accordance with ASTM D429.
- 2..12. Spring used shall be helical type. Supplier to provide data sheet of spring with spring constant, material & spring life cycle.
- 2..13. Valves are to be provided with local indicators as Open & Closed for indicating the open/shut-off position of the assembly.
- 2..14. All fasteners/ pins etc are to have positive locking devices to ensure that they do not open while in use.
- 2..15. For allowable tolerances for face to face, center to face, end to end and center to end dimensions of valves refer BS EN 558
- 2..16. ASTM A105 is applicable for valves sizes upto 25 NB- All valve sizes 25 NB & below shall be manufactured by forging process only.  
ASTM A216 WCB is applicable for valves sizes above 25 NB : All valve of sizes above 25 NB shall be manufactured by casting/Forging process.

### 3. DESIGN PARAMETERS:

<b>DESIGN CODE</b>	BS EN 12266 & Respective standards mentioned in Annexures.
<b>FLUIDS HANDLED</b>	Sea Water, Fresh water, Fuel Oil, Lube Oil, Air
<b>OPERATING PRESSURE</b>	40 BAR
<b>OPERATING TEMPERATURE</b>	120 °C MAX
<b>FLUID VELOCITY</b>	3 – 4 Mtrs / Sec



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#### **4. BALL VALVES**

- 4..1. All ball valves shall comply with BS 5351 requirements.
- 4..2. All ball valves shall be Bi-directional.
- 4..3. All ball valves shall have antistatic arrangement to ensure electrical continuity between stem & body of valves.

#### **5. SWING CHECK VALVES:**

- 5..1. All check valves shall comply with BS 5154/BS MA65/BS1868 requirements.
- 5..2. The disc shall be solid type
- 5..3. The full port area shall be maintained without pockets from the inlet port to the valve seat to avoid turbulence.
- 5..4. At the outlet side of the valve seat the body shall be designed such that it allows sufficient swing of the disk to give a flow area at least equivalent to full port area.
- 5..5. The Lift check valves shall be spring type.
- 5..6. All check valves are to be tested at low pressure test (15 PSI air medium).
- 5..7. To be designed leak proof at very low pressure also.

#### **6. SDNR VALVES:**

- 6..1. All SDNR valves shall comply with BS 5154/BS MA65 requirements.
- 6..2. All SDNR valves shall be of non-rising spindle with outside screw type.
- 6..3. The Disc shall be solid type.
- 6..4. All SDNR valves shall have back seat arrangement.

#### **7. PRESSURE REDUCING VALVES:-**

- 7..1. All Valves are to be positively tight at pressure below the set pressure.
- 7..2. Reducing valves are to be of the fluid tight enclosed spring type, with enclosures vented to the outlet side of the valve. Springs shall be of Helical Compression Springs type only.
- 7..3. The springs in valves are not to be in contact with the fluid enclosed.
- 7..4. The coefficient of flow is to be calculated as per BS 4740 & is to be indicated in drawing.
- 7..5. The proportional band & degree of stability on step change of demand are also to be indicated.

#### **8. END CONNECTIONS:**

- 8..1. All valves shall have flange connections, except specified.
- 8..2. End flanges shall be cast or forged integral with the body.
- 8..3. Flanges are to conform to BS EN 1092-1 for pressure rating PN 10.
- 8..4. The flange thickness shall be as per BS EN 1092 part 1.
- 8..5. All flanges shall be flat face with 3 serrated concentric grooves.

#### **9. LOCKING ARRANGEMENT:**

- 9..1. All line valves shall have pin type locking arrangement.

#### **10. LIFTING ARRANGEMENTS:**

- 10..1. All valves 100 NB & above shall be provided with permanent lifting arrangement for ease of handling on board the ship.



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#### **11. SERVICE APPLICATION:**

- 11..1. When used with liquids, these valves shall be suitable for flow velocity at the valve inlet 3-4 m/sec (minimum) with the valve fully open. The valves shall be suitable for tight shut off & regulating applications

#### **12. PASSAGE OF FLOW:**

- 12..1. The passage for the flow of fluid shall be clear & smooth. The flow area shall be not less than 90% of bore area.  
12..2. Vendor to provide Cv values of valves offered.  
12..3. Vendor to provide pressure drop values across the valve.  
12..4. The valves shall be full-bore type.

#### **13. ANTI BLOW OUT STEM:**

- 13..1. All valves shall be designed to ensure that in the event of the gland being removed while the valve is under pressure, the stem does not blow out of the body.

#### **14. OPERATION:**

- 14..1. All valves are to close with a right hand (clockwise) motion of the hand wheel when facing the end of the stem. Valves are to be fitted with an indicator to show whether the valve is open or closed.  
14..2. All SDNR/ Globe Valves are operated by hand wheel or Rod gearing (from remote place.)  
14..3. The Butterfly valves may be operated by hand lever/ wrench/ gearbox / Actuators or Rod gearing (from remote place.)  
14..4. All Butterfly valves above 125 NB (including) are to be Gear Operated.  
14..5. The design of the valve is to ensure an ease of operation so that single arms clear pull of not more than 140 N is required by an operator or 70 N by each hand on the hand wheel/lever.  
14..6. The gearboxes fitted on valves are to be considered as the integral part of the valve & designed to anti corrosion of the valve itself. All gear boxes are to be water tight at 5 metres water column.  
14..7. Hand wheels/levers/ gearboxes shall be marked to indicate the direction of opening & closing.  
14..8. Vendor to provide the actual torque required for the valve operation of the offered valves.  
14..9. All line valves are to be so fitted to enable operation both locally and remotely by rod gearing and line valve should be prominently marked 'HIGH PRESSURE LINE ONLY'.

#### **15. MATERIAL:**

- 15..1. Materials used in manufacturing of valves shall be such that it is compatible with all low-pressure fluids in surface ships.  
15..2. Material requirements with specification, for various components of valves are given in ANNEXURES.  
15..3. All fasteners shall be non-ferrous forged type only and should comply to international standards.  
15..4. Repair of casting by repair is not allowed.  
15..5. All raw material used for manufacturing shall be new virgin material only.  
15..6. All material used are to be Asbestos Free.



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#### 16. DIMENSION:

- 16..1. The dimension of valves shall be as per Annexures (as applicable)
- 16..2. No deviation in dimensions is acceptable.

#### 17. SURFACE FINISH:

- 17..1. The surface of the castings shall be examined visually and shall be free of adhering sand, scale, cracks & hot tears. Other surface discontinuities shall meet the visual acceptance standard SP55. Un-acceptable visual surface discontinuities shall be removed & their removal verified by visual examination of the resultant cavities.
- 17..2. The castings shall not be peened, plugged or impregnated to stop leaks.

#### 18. VALVE BODY MARKING:

- 18..1. In general, valves are to be permanently marked.
- 18..2. Permanent marking means the valve is to bear permanent identification, such as manufacturer's name or trademark, standard of compliance, material identity, pressure rating, etc., as required by the standard of compliance or the manufacturer's specification.
- 18..3. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life.
- 18..4. The marks shall be clear & distinct for identification & shall contain the following details:

➤	Manufacturer's name or trademark
➤	Standard of compliance
➤	Material identity
➤	Pressure rating
➤	Valve Type
➤	Nominal Size
➤	Project Name, Order No. Fitting No.
➤	An arrow indicating the direction of flow when this is unique
➤	Body Test Pressure

#### 19. INSPECTION:

<b>For Design</b>	<b>DNV</b>
<b>For Quality Control</b>	<b>DNV</b>
<b>For receipt inspection</b>	<b>MDL Mumbai</b>

- 19..1. All valves shall be thoroughly inspected before dispatch for dimensions, fault, and irregularities & shall be clear of scale or internal deposits, visual checks & then pressure tested.
- 19..2. All valves shall be free from manufacturing & material defects.
- 19..3. DNV will inspect all items as per approved QAP.
- 19..4. The flange faces, sealing surfaces, body seats & disc seats are clean. The bolting attached to the valve is to be checked for loosening in transit & handling.

#### 20. TESTING:



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- 20..1. Testing will be as per approved QAP.
- 20..2. All the line valves are to be tested in the presence of DNV.
- 20..3. The valve assembly is to be subjected to a hydrostatic seat leakage test in accordance with a BS EN 12266 – 1.
- 20..4. The manufacturer of a valve is to guarantee that the valve is constructed to the standard and conforming to the identifications to which it is marked. The manufacturer is to guarantee also that the valve has been tested before shipment to the pressure required by the pressure rating of the valve.
- 20..5. All DNV approved certificates to be submitted to MDL for reference & records.



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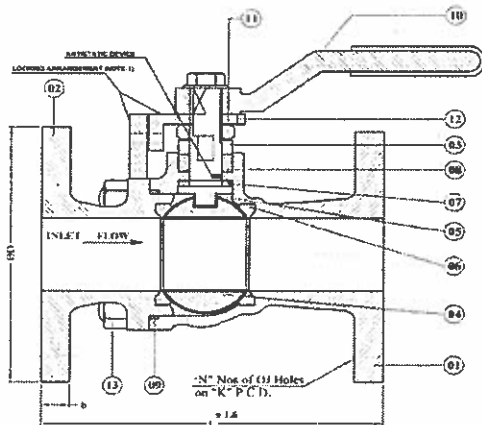
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**Annexure-1**

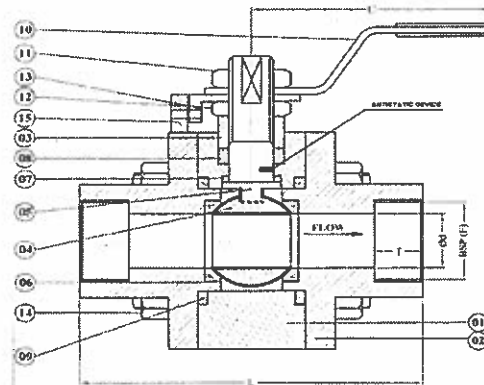
**VALVE DATA SHEET  
 BALL VALVE**

1 GENERAL SPECIFICATION					
1.1	FLUID HANDLED	Air	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	40 Bar	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	SINGLE PIECE
1.5	VALVE REF. DOC.	BS 5351/ BS EN 13547	1.10	VALVE OPERATION	LEVER
2 MATERIAL SPECIFICATION					
	PART	MATERIAL			
2.1	BODY	CARBON STEEL , SPECIFICATION- ASTM A105/ ASTM A216 WCB			
2.2	DISC/TRIM	BRONZE			
2.3	OTHER PARTS OF THE VALVE	As per DNV Class Requirement			
3 STATUTORY REQUIREMENTS					
3.1	INSPECTION & TESTING	BS EN 12266 – 1 & BS EN 12266 – 2			
3.2	CERTIFICATION & INSPECTION	DNV			

**Ball Valve (Flanged End)**



**Ball Valve (Screwed End)**



**FACE - TO - FACE DISTANCE  
 (Ref: BS EN 558:2008)**

**\*NOTE: Drawings shown in TSP are for reference and clear understanding of valve only**



**MAZAGON DOCK SHIPBUILDERS LTD.,**  
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**DESIGN  
ENGINEERING**

**YARD NO  
21001 to 21006**

**TSP. NO.**

101/01

**REV. NO.**

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**DATE**

30.04.2025

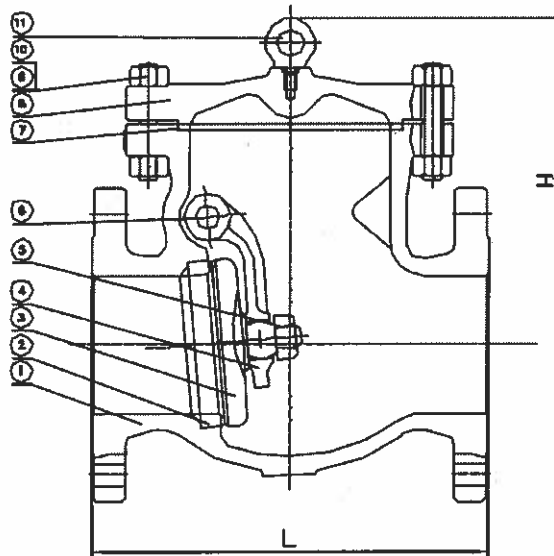
**PAGE NO.**

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**ANNEXURE - 2**

VALVE DATA SHEET SWING CHECK VALVE					
<b>1</b>	<b>GENERAL SPECIFICATION</b>				
1.1	<b>MEDIUM</b>	Air	1.6	<b>BORE TYPE</b>	FULL BORE
1.2	<b>OP. PRESSURE</b>	40 Bar	1.7	<b>END CONN.</b>	FLANGED
1.3	<b>OP. TEMPERATURE</b>	120 °C MAX.	1.8	<b>FLANGE FACE</b>	BS EN 1092-1 (Flat face)
1.4	<b>CONNECTING PIPE SPECN</b>	CS as per ASME 36.10	1.9	<b>BODY TYPE</b>	
1.5	<b>VALVE REF. DOC.</b>	BS 5154/ BS MA65/ BS1868/ BS EN 16767	1.10	<b>VALVE OPERATION</b>	SPRING OPERATED
<b>2</b>	<b>MATERIAL SPECIFICATION</b>				
	<b>PART</b>	<b>MATERIAL</b>			
2.1	<b>BODY</b>	CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB			
2.2	<b>DISC / TRIM</b>	BRONZE			
2.3	<b>OTHER PARTS OF THE VALVE</b>	As per DNV Class Requirement			
<b>3</b>	<b>STATUTORY REQUIREMENTS</b>				
3.1	<b>INSPECTION &amp; TESTING</b>	BS EN 12266 - 1 & BS EN 12266 - 2			
3.2	<b>CERTIFICATION &amp; INSPECTION</b>	DNV			

**SWING CHECK VALVE  
DIMENSIONS REQUIREMENT**



NO.	PART DESCRIPTION	NO.	PART DESCRIPTION
1	BODY	7	GASKET
2	SEAT	8	BONNET
3	DISC	9	BOLT
4	HINGE	10	NUT
5	NUT	11	EYEBOLT
6	PIN		

**\*NOTE:** Drawing shown in TSP is for reference and understanding of valve only.

**For Face to Face distance – BS EN 558:2008**



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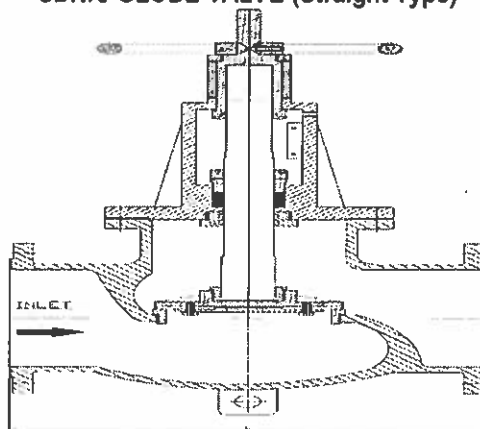
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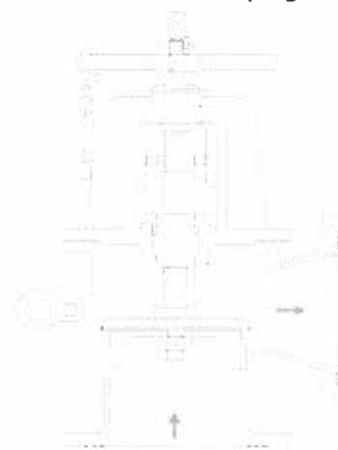
**ANNEXURE - 3**

VALVE DATA SHEET SDNR VALVES					
<b>1 GENERAL SPECIFICATION</b>					
1.1	MEDIUM	Air	1.6	BORE TYPE	FULL BORE
1.2	OP. PRESSURE	40 Bar	1.7	END CONN.	FLANGED
1.3	OP. TEMPERATURE.	120 °C MAX.	1.8	FLANGE FACE	BS EN 1092-1 (Flat face)
1.4	MATING PIPE SPECN.	CS as per ASME 36.10	1.9	BODY TYPE	BOLTED BONNET TYPE
1.5	VALVE REF. DOC.	BS 5154 / BS MA65	1.10	VALVE OPERATION	HAND WHEEL / ROD GEARING (REMOTE)
<b>2 MATERIAL SPECIFICATION</b>					
	<b>PART</b>		<b>MATERIAL</b>		
2.1	BODY		CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB		
2.2	DISC / TRIM		BRONZE		
2.3	OTHER PARTS OF THE VALVE		As per DNV Class Requirement		
<b>3 STATUTORY REQUIREMENTS</b>					
3.1	INSPECTION & TESTING		BS EN 12266 – 1 & BS EN 12266 – 2		
3.2	CERTIFICATION & INSPECTION		DNV		

**SDNR/ GLOBE VALVE (Straight Type)**



**SDNR/ GLOBE VALVE (Angle Type)**



**\*Note:** Drawings shown are for reference and understanding of valve type only.

**For Face to Face distance – Straight Type: BS EN 558:2008**

**For Face to Face distance – Angle Type: BS EN 558:2008**



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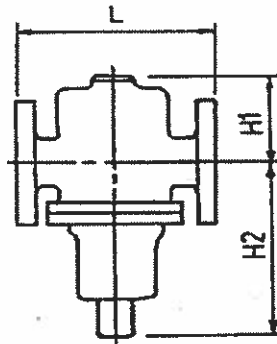
**PAGE NO.**

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**ANNEXURE - 4**

VALVE DATA SHEET PRESSURE REDUCING VALVE					
<b>1</b>	<b>GENERAL SPECIFICATION</b>				
1.1	<b>MEDIUM</b>	AIR	1.6	<b>BORE TYPE</b>	FULL BORE
1.2	<b>OP. PRESSURE</b>	40 Bar	1.7	<b>END CONN.</b>	FLANGED
1.3	<b>OP. TEMPERATURE.</b>	120 °C MAX.	1.8	<b>FLANGE FACE</b>	BS EN 1092-1 (Flat face)
1.4	<b>MATING PIPE SPECN.</b>	CS as per ASME 36.10	1.9	<b>BODY TYPE</b>	BONNET TYPE
1.5	<b>VALVE REF. DOC.</b>	BS4740	1.10	<b>VALVE OPERATION</b>	SPRING LOADED/ DIAPHRAGM
<b>2</b>	<b>MATERIAL SPECIFICATION</b>				
	<b>PART</b>	<b>MATERIAL</b>			
2.1	<b>BODY</b>	CARBON STEEL, SPECIFICATION- ASTM A105/ ASTM A216 WCB			
2.2	<b>DISC / TRIM</b>	BRONZE			
2.3	<b>OTHER PARTS OF THE VALVE</b>	As per DNV Class Requirement			
<b>3</b>	<b>STATUTORY REQUIREMENTS</b>				
3.1	<b>INSPECTION &amp; TESTING</b>	BS EN 12266 - 1 & BS EN 12266 - 2			
3.2	<b>CERTIFICATION &amp; INSPECTION</b>	DNV			

**PRESSURE REDUCING VALVE**



**\*Note: Drawings shown are for reference and understanding of valve type only.**



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ANNEXURE - 5

(To be filled in by the SUPPLIER & submitted as part of the Offer)

**COMPLIANCE MATRIX**

With reference to the subject Requisition received along with the MDL Inquiry and our  
QUOTATION No. \_\_\_\_\_ Dated \_\_\_\_\_  
\_\_\_\_\_ we hereby confirm / clarify the following :

TSP Para No	Complied / Not Complied	Offer Reference (Page & Para No.)	Deviations with reasons (if any)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			

The Bidder should fill in this form for the deviations of his bid from the requirements as stated in the TSP. If no deviation is required, bidder should fill in "NIL" in the deviation column. Deviation listed other than deviation form shall not be considered.

**BIDDER'S COMPANY SEAL  
DATE**

**BIDDER'S SIGNATURE &**



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ANNEXURE - 6

### WEIGHT CERTIFICATE

EQUIPMENT DESCRIPTION :

EQUIPMENT NO. :

The form has to be completed by Vendor & to be supplied along with the equipment.

VENDOR'S NAME

Ref. Drg. No.

ADDRESS

TELEPHONE NO.

Part No.

ORDER NO.

EQPT. NO.

METHOD OF WEIGHING :

Vendor to prescribe Method & Equipment Used :

DATE OF LAST  
CALIBRATION

SPECIFIED ACCURACY  
REQUIREMENT

NOTE :-

RESULT OF WEIGHING TOTAL EQUIPMENT DRY WEIGHT :

(Excluding packing, temporary protection etc.)

ALLOCATED WEIGHT :

(Weight estimate agreed by purchaser and vendor based on order specs)

REASONS FOR VARIATION BETWEEN ALLOCATED WEIGHT AND CERTIFIED WEIGHT :

WEIGHING ADDRESS :

WITNESSED BY

FOR VENDOR

FOR PURCHASER

Date:

Representative

Representative

Signature / Date & Seal

Signature / Date & Seal