

**BILL OF MATERIAL(SCOPE OF CONTRACTOR)**

SL.No	ITEM	SIZE	PR.RATING	QTY	MATERIAL	REMARKS
1	PIPE	50 NB	SCH 40	100 M	A 333 Gr.1	SEAMLESS
2	PIPE	40 NB	SCH 80	100 M	A 333 Gr.1	SEAMLESS
3	PIPE	80 NB	SCH 40	20 M	A 333 Gr.1	SEAMLESS
4	ELBOW 90°	50 NB	SCH 40	35 NOS	A 420 WPL6	SEAMLESS
5	ELBOW 90°	40 NB	CL 3000	8 NOS	A 350 LF2	SW
6	ELBOW 90°	80 NB	SCH 40	2 NOS	A 420 WPL6	SEAMLESS
7	EQ.TEE	50 NB	SCH 40	14 NOS	A 420 WPL6	SEAMLESS
8	UN EQ.TEE	80x50 NB	SCH 40	10 NOS	A 420 WPL6	SEAMLESS
9	REDUCER	80x50 NB	SCH 40	8 NOS	A 420 WPL6	SEAMLESS
10	REDUCER	80x40 NB	SCH 40	7 NOS	A 420 WPL6	SEAMLESS
11	FLANGE	80 NB		12 NOS	A 350 LF2	TO SUIT EXISTING
12	FLANGE	80 NB	CL. 300	3 NOS	A 350 LF2	WNRF ANSI B 16.5
13	BLIND FLANGE	80 NB	CL. 300	1 NO	A 350 LF2	RF ANSI B 16.5
14	FLANGE	50 NB	CL. 300	34 NOS	A 350 LF2	WNRF ANSI B 16.5
15	BLIND FLANGE	50 NB	CL. 300	2 NOS	A 350 LF2	RF ANSI B 16.5
16	FLANGE	40 NB	CL. 300	4 NOS	A 350 LF2	WNRF ANSI B 16.5
17	BALL VALVE	50 NB	CL. 300	15 NOS	A 352 Gr.LCB	RF ANSI B 16.5
18	BALL VALVE	40 NB	CL. 800	8 NOS	A 350 LF2	SW
19	BALL VALVE	15 NB	CL 800	6 NOS	A 350 LF2	SW
20	GASKET			AS REQD.	ASBESTOSE FILLED-SS	
21	BOLTS & NUTS			AS REQD.	A 320 Gr L7 A 194 Gr.4	

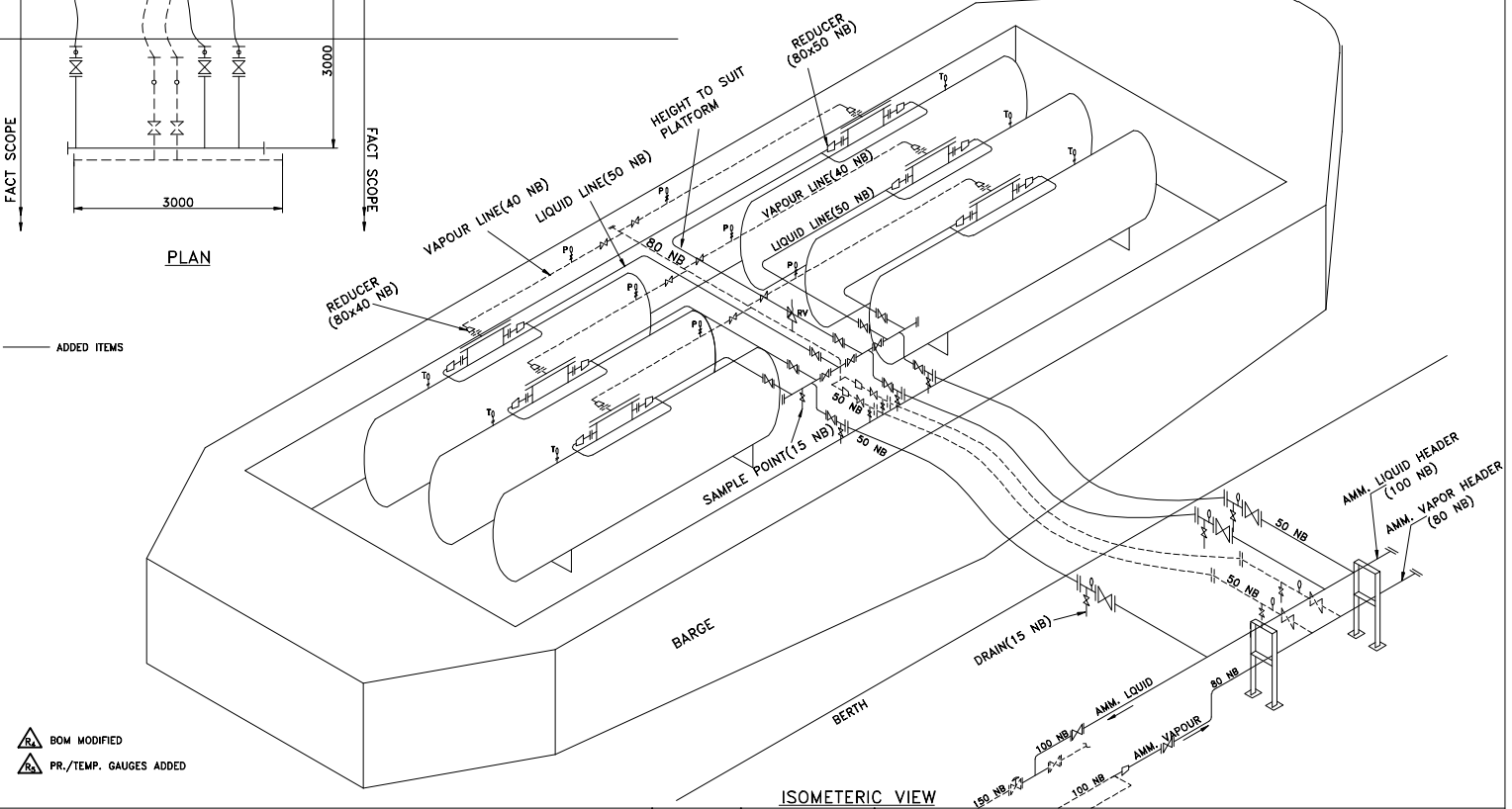
\*THE QTY SHOWN ABOVE IS ONLY INDICATIVE.

**NOTE**  
PIPE LINES(BOTH LIQUID & VAPOR) FROM BULLET TO FIRST I/V ARE TO BE PUF INSULATED BY THE CONTRACTOR

**BILL OF MATERIAL(SCOPE OF FACT)**

SL.No	ITEM	SIZE	PR.RATING	QTY	MATERIAL	REMARKS
1	PIPE	100 NB	SCH 40	25 M	A 333 Gr.1	SEAMLESS
2	PIPE	80 NB	SCH 40	30 M	A 333 Gr.1	SEAMLESS
3	PIPE	50 NB	SCH 40	30 M	A 333 Gr.1	SEAMLESS
4	PIPE	15 NB	SCH 80	5 M	A 333 Gr.1	SEAMLESS
5	BALL VALVE	50 NB	CL. 300	5 NOS	A 352 Gr.LCB	RF ANSI B 16.5
6	BALL VALVE	100 NB	CL. 300	1 NO	A 352 Gr.LCB	RF ANSI B 16.5
7	BALL VALVE	80 NB	CL. 300	1 NO	A 352 Gr.LCB	RF ANSI B 16.5
8	BALL VALVE	15 NB	CL. 800	5 NOS	A 350 LF2	SW
9	FLANGE	50 NB	CL. 300	15 NOS	A 350 LF2	WNRF ANSI B 16.5
10	FLANGE	40 NB	CL. 300	2 NOS	A 350 LF2	WNRF ANSI B 16.5
11	FLANGE	100 NB	CL. 300	3 NOS	A 350 LF2	WNRF ANSI B 16.5
12	BLIND FLANGE	100 NB	CL. 300	1 NO	A 350 LF2	RF ANSI B 16.5
13	FLANGE	80 NB	CL. 300	2 NOS	A 350 LF2	WNRF ANSI B 16.5
14	BLIND FLANGE	80 NB	CL. 300	1 NO	A 350 LF2	RF ANSI B 16.5
15	ELBOW 90°	100 NB	SCH 40	2 NOS	A 420 WPL6	SEAMLESS
16	ELBOW 90°	80 NB	SCH 40	3 NOS	A 420 WPL6	SEAMLESS
17	EQ.TEE	100 NB	SCH 40	1 NO	A 420 WPL6	SEAMLESS
18	REDUCER	100x80 NB	SCH 40	1 NO	A 420 WPL6	SEAMLESS
19	WELDOLET	150/100 NB	SCH 40	1 NO	A 350 LF2	MSS SP 97
20	WELDOLET	100/50 NB	SCH 40	3 NOS	A 350 LF2	MSS SP 97
21	WELDOLET	80/50 NB	SCH 40	2 NOS	A 350 LF2	MSS SP 97
22	WELDOLET	50/15 NB	SCH 40	10 NOS	A 350 LF2	MSS SP 97
23	QUICK RELEASE COUP. WITH HOSE	50 NB		5 NOS		3 M
24	ISMC 100				AS REQD.	
25	PR. GAUGE			5 NOS		
26	STUDS & NUTS	M 16		200 Nos	A 320 Gr L7 A 194 Gr.4	90 MM LONG
27	GASKET	50 NB		30 NOS	SPIRAL WOUND ASBESTOSE FILLED-SS	

**NOTES**  
1. All dimensions are in MM unless otherwise specified.  
2. The header connection to the existing liquid & vapour shall be isolated by providing slip plates.



△ BOM MODIFIED  
△ PR./TEMP. GAUGES ADDED

**TITLE**  
ARRANGEMENT FOR AMMONIA UNLOADING AT BOAT BASIN-FACT(CD)  
(GENERAL ARRANGEMENT-AMMONIA TRANSPORTATION THROUGH BARGE)

Drawn	Viswanathan	THE FERTILISERS AND CHEMICALS TRAVANCORE LTD	
Checked		TECHNICAL SERVICES	
Approved		TS / M / SK - 697 R <sub>5</sub>	DATE 08.08.2011