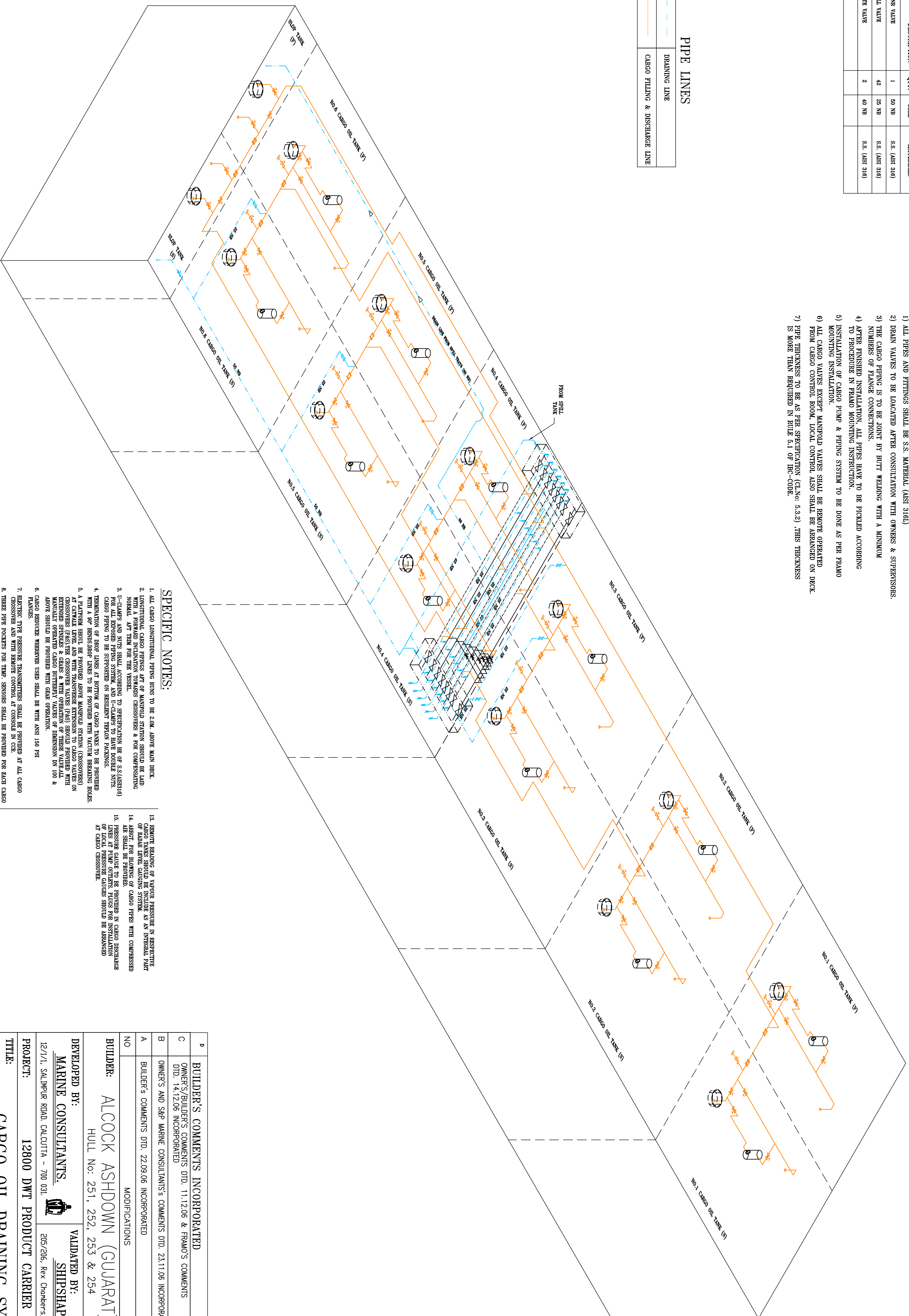


MATERIAL LIST				
SYMBOL	DESCRIPTION	QTY.	SIZE	MATERIALS
	SINK VALVE	1	60 NB	S.S. (ASTM 316)
	BALL VALVE	42	20 NB	S.S. (ASTM 316)
	GATE VALVE	2	40 NB	S.S. (ASTM 316)

### GENERAL NOTES:

- 1) ALL PIPES AND FITTINGS SHALL BE S.S. MATERIAL (ASTM 316).
- 2) DRAIN VALVES TO BE LOCATED AFTER CONSULTATION WITH OWNERS & SUPERVISORS.
- 3) THE CARGO PIPING IS TO BE JOINT BY HOT WELDING WITH A MINIMUM NUMBERS OF FLANGE CONNECTIONS.
- 4) AFTER FINISHED INSTALLATION, ALL PIPES HAVE TO BE PICKLED ACCORDING TO PROCEDURE IN FRAMO MOUNTING INSTRUCTION.
- 5) INSTALLATION OF CARGO PUMP & PIPING SYSTEM TO BE DONE AS PER FRAMO MOUNTING INSTALLATION.
- 6) ALL CARGO VALVES EXCEPT MANROOF VALVES SHALL BE REMOTE OPERATED FROM CARGO CONTROL ROOM. LOCAL CONTROL ALSO SHALL BE ARRANGED ON DECK.
- 7) PIPE THICKNESS TO BE AS PER SPECIFICATION (Q.No: 5.3.2). THIS THICKNESS IS MORE THAN REQUIRED IN RULE 51 OF IBC-COD.

PIPE LINES	
	DRAINING LINE
	CARGO FILLING & DISCHARGE LINE



### SPECIFIC NOTES:

1. ALL CARGO DRAINING PIPING HOS TO BE 2.0M ABOVE MAIN DECK.
2. DIRECTIONAL CARGO PIPING AT OF MANROOF STATION SHOULD BE LAD NORMAL LEFT TURN FOR THE VESSEL.
3. U-CLAMP AND WIRE SHALL ACCORDING TO SPECIFICATION BE OF S.S.(ASTM316) FOR ALL EXPOSED PIPING SYSTEM AND U-CLAMP TO HAVE DOUBLE NUTS.
4. TERMINATION OF HOSE LINES AT BOTTOM OF CARGO TANKS TO BE PROVIDED WITH A 90° BROS-SHOOT VALVE TO BE PROVIDED WITH VACUUM BREAKING HOLES.
5. A PLATFORM SHALL BE PROVIDED ABOVE MANROOF STATION (CROSSOVERS) AT CAYKALE LEVEL AND WITH TRANSVERSE EXTENSION TO CARGO VALVES ON EXTENDING SIGNALS & GAINS & WITH OPERATION OF THESE VALVE ALL MANUALLY OPERATED CARGO BUTTERFLY VALVES OF DIMENSION DN 100 & ABOVE SHOULD BE PROVIDED WITH GEAR OPERATION.
6. CARGO REDUCERS WHEREVER USED SHALL BE WITH ANSI 100 PSI.
7. REMOTE PIPE PRESSURE TRANSDUCERS SHALL BE PROVIDED AT ALL CARGO CROSSOVER AND WITH REMOTE CONTROL AT CONSOLE IN CCR.
8. THREE PIPE PICKERS FOR TANK, SENSORS SHALL BE PROVIDED FOR EACH CARGO & SLOP TANK AND IT IS RECOMMENDED TO INCLUDE THESE PIPE PICKERS AS INDICATED PARTS OF EACH FRAMO FRAMEWORK.
9. CONTROLLED FROM CONSOLE IN CCR.
10. CAYKALE SHOULD PREPARE BY MIN. 1500 mm.
11. BLANK FLANGES WHEREVER USED SHOULD BE PROVIDED WITH HAND GEAR, 12. A CARGO HOSE BOX SHOULD BE PROVIDED AT PLATFORM ABOVE MANROOF STATION & WITH WOOD BOTTOM.
13. REMOTE ARRANGING OF VARIING PRESSURE IN REMOTE CARGO TANKS SHOULD BE INCLUDE AS AN INTEGRAL PART OF BLANK LEVEL GAINING SYSTEM.
14. ALERT FOR BLOWING OF CARGO PRES WITH COMPRESSOR PRESSURE GAUGE TO BE PROVIDED IN CARGO DISCHARGE LINES AT PIPE OUTLET. TAGS FOR INSTALLATION OF LOCAL PRESSURE GAUGES SHOULD BE ARRANGED AT CARGO CROSSOVER.

D	12.09.06	1:100	MC-52	SS/MC-52/13	REV
C	12.09.06				D
B	12.09.06				
A	12.09.06				
NO					
<b>BUILDER'S COMMENTS INCORPORATED</b> OWNER'S/BUILDER'S COMMENTS DTD. 11.12.06 & FRAMO'S COMMENTS DTD. 14.12.06 INCORPORATED OWNER'S AND S&P MARINE CONSULTANTS' COMMENTS DTD. 23.11.06 INCORPORATED BUILDER'S COMMENTS DTD. 22.09.06 INCORPORATED MODIFICATIONS BY DATE					
<b>BUILER: ALCOCK ASHDOWN (GUJARAT) LTD.</b> HULL NO: 251, 252, 253 & 254					
<b>DEVELOPED BY:</b> MARINE CONSULTANTS. 12/1/1, SALLIPUR ROAD, CALCUTTA - 700 031.			<b>VALIDATED BY:</b> SHIPSHAPE SOLUTIONS 205/206, Rex Chambers, V.H. Mang. Mabel- 400 001.		
<b>PROJECT: 12800 DWT PRODUCT CARRIER</b>					
<b>TITLE: CARGO OIL DRAINING SYSTEM</b>					
OWNER'S AND S&P MARINE CONSULTANTS' COMMENTS DTD. 12.09.06 INCORPORATED MC. PROJECT No. DWG. NO.					
CHECKED	R.ROY	12.09.06	1:100	MC-52	REV
NOTED					D
				SHEET	1 OF 1