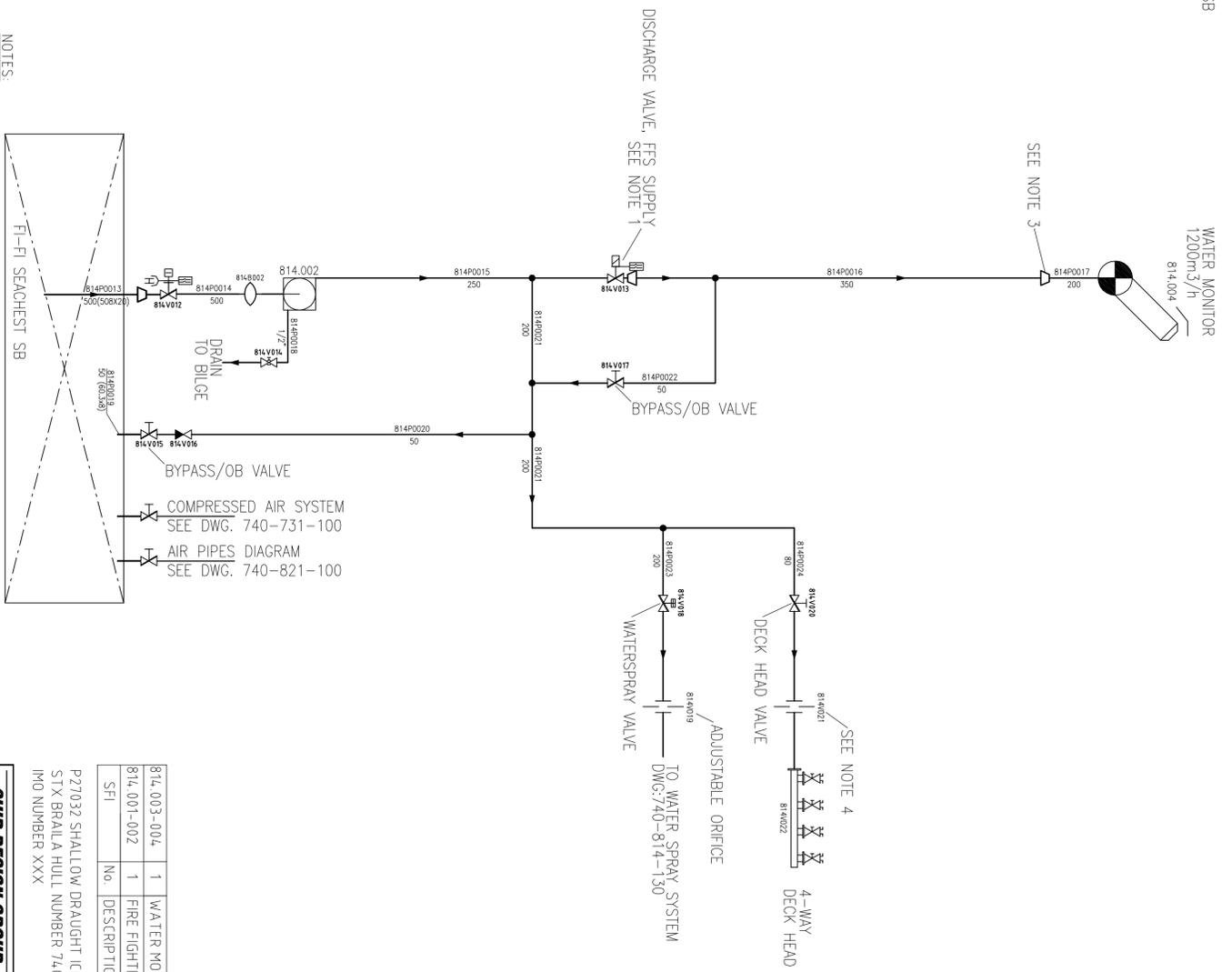
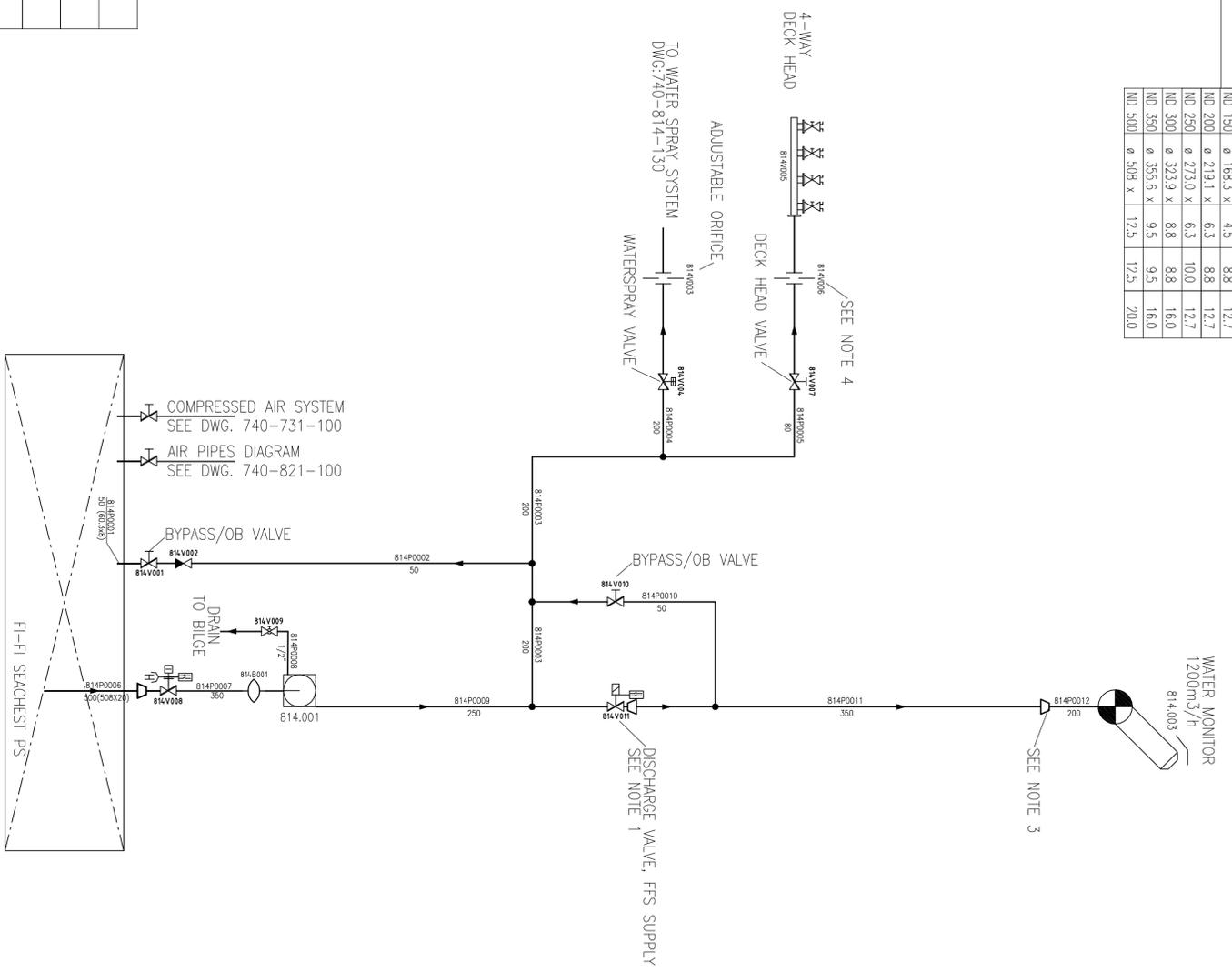


PIPE ID: 814_P xxxx	HOT DIP GALVANIZED STEEL PIPES	MINIMUM WALL THICKNESS OF PIPES ACCORDING TO BV Rules Pt. C, Ch. I, Sec. 10, Table 6
MATERIAL: S13J10	Weld thickness	
PIPE NUMBER	General	Intrinsically Oxidized
PIPE SFI NUMBER	ND	OD
PIPE RUNNING NUMBER	ND 15	ø 22.3 x 3.6
PIPE VALVE SFI NUMBER	ND 20	ø 28.9 x 4.0
PIPE RUNNING NUMBER	ND 25	ø 33.7 x 4.5
PIPE VALVE SFI NUMBER	ND 32	ø 42.4 x 4.5
PIPE RUNNING NUMBER	ND 40	ø 48.3 x 4.5
PIPE VALVE SFI NUMBER	ND 50	ø 60.3 x 4.5
PIPE RUNNING NUMBER	ND 65	ø 76.1 x 4.5
PIPE VALVE SFI NUMBER	ND 80	ø 88.9 x 4.5
PIPE RUNNING NUMBER	ND 100	ø 114.3 x 4.5
PIPE VALVE SFI NUMBER	ND 125	ø 139.7 x 4.5
PIPE RUNNING NUMBER	ND 150	ø 168.3 x 4.5
PIPE VALVE SFI NUMBER	ND 200	ø 219.1 x 6.3
PIPE RUNNING NUMBER	ND 250	ø 273.0 x 6.3
PIPE VALVE SFI NUMBER	ND 300	ø 323.9 x 8.8
PIPE RUNNING NUMBER	ND 350	ø 355.6 x 9.5
PIPE VALVE SFI NUMBER	ND 500	ø 508 x 12.5

ARMATURES ID: 814_V xxx	VALVE	PIPE
ARMATURES ID: 814_V xxx	VALVE	PIPE
EQUIPMENT ID: 814_xxxx	VALVE	PIPE
EQUIPMENT ID: 814_xxxx	VALVE	PIPE



NOTES:

1. DISCHARGE VALVE MAX 1m FROM THE PUMP.
2. PIPE INCREASE IMMEDIATE AFTER THE DISCHARGE VALVE.
3. REDUCER ND350 TO ND200 MAX 1m FROM WATER MONITOR.
4. SET ND80 ORIFICE BEFORE DECK HEAD TO MINIMUM FLOW AREA.
5. ENSURE PROPER DRAINAGE OF THE PIPING SYSTEM.
6. WATER SPRAY VALVE AND DECK HEAD VALVE MAX 3m FROM PUMP.
7. DISCHARGE VALVE TO BE IN CLOSED PRIOR TO CLUTCH-IN TO AVOID WATER HAMMER.
8. BYPASS/OB VALVES SHOULD BE OPEN TO AVOID PUMP OVERHEATING AT LOW RATE DELIVERY RATES.
9. OBSERVE PEAK OF PUMP CURVE FOR PRESSURE CLASS SELECTION OF VALVES.
10. THE SEA WATER SUCTION VALVE AND WATER DELIVERY VALVE AND PUMP PRIME MOVER ARE TO BE OPERABLE FROM THE SAME POSITION.
11. THE STARTING OF FIRE FIGHTING PUMP WHEN SEA WATER INLET VALVES ARE CLOSED IS EITHER TO BE PREVENTED BY AN INTER-LOCK SYSTEM OR TO TRIGGER AN AUDIBLE AND VISUAL ALARM.
12. THE FOUNDATION OF THE MONITOR SHOULD BE CAPABLE OF WITHSTANDING THE REACTION FORCES OF THE WATER JET.

	WATER MONITOR
	BALL VALVE
	RETAINING POSITION ON FAILURE
	LIMIT SWITCHES
	WIRE HAND OPERATION OF QUICK CLOSING VALVE
	BUTTERFLY VALVE SCHEMATIC REMOTE CONTROL
	BUTTERFLY VALVE REMOTE CONTROL
	EXPANSION PIECE
	CENTRIFUGAL PUMP
	ORIFICE
	NON-RETURN VALVE
	SYMBOLS

814_003-004	1	WATER MONITOR 1	1200 m ³ /h	FFS 1200 LB	
814_001-002	1	FIRE FIGHTER PUMP	1500 m ³ /h, 15bar	CENTRIFUGAL	
SFI	No.	DESCRIPTION	CAPACITY	TYPE	REMARKS

P27032 SHALLOW DRAUGHT ICEBREAKING TUG (SDBT)
 STX BRAILA HULL NUMBER 740
 IMO NUMBER XXXX

SHIP DESIGN GROUP

Naval Architects, Marine Engineers, Consultants
 51 Doganai Street, 80025 Cluj, Romania
 Phone: +4 036 476 672
 Fax: +4 036 469 336
 E-mail: sdg@shipdesigngroup.ro
 Number of Companies: 17/1999/1994

STATUS Date: 2008-08-08

1 VERY PRELIMINARY 2 FOR OTHER DESIGN 3 FOR WORKSHOP DESIGN 4 AS DESIGN 5 AS BUILT

Copyright of this note, including the AI, rights reserved. No part may be reproduced without the prior approval of Aker Arctic Technology Inc.

SDG

Aker Arctic

Scale	1:1
Drawn by/Checked by	740-814-110
Appr'd/Rev'd	A
Scale	1(1)