

APPLICABILITY BLOCK

JOB: M282HULL: 1953

JOB: M283HULL: 1956

JOB: M284HULL: 1957

11

21

DRAWING INDEX

SHEETDRAWING TITLE

1TITLE SHT/INDEX

2REFERENCES/REVS.

2AREVS.

3PRESS. GAUGE DET

4TEMP. GAUGE DET

5-8INSTRUMENT LIST

9SWITCHES/ALARMS

DOCUMENT DISTRIBUTION RECORD

ISSUE DATE	10-10-03	3-22-05	6-7-06	9-7-06															
REV #	0	1	2	3															
NOAA	1																		
PROG MGR	1																		
PROJ ENG	1																		
HMP PC	12	12	1	1															
NOISE CNTRL	1(1)																		
CHAND LLC	1																		
JOINER	0																		
HVAC	1																		
PROP SSV	1																		
TRAWL SSV	1																		
PRODUCTION DESIGN	1	1	1	1															
HPG PC		1	1	1															
ISSUED BY	DR	DR	DR																

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122000323REV

1098765432A21SHT

REVISION STATUS

VT Halter Marine, Inc.

Vision Technologies Systems

DRAWN BYRGH8/27/03

ABS APPV

CHECKED BYBC9/3/03

USCG APPV

APPROVED BYDMR10/10/03

OWNER APPV

HULL NO  
APPLICABILITY

CAGE CODE  
3BJ86

SIZE  
A

ESTIMATE NO  
00-104

SCALE  
NONE

VESSEL

FRV40 CLASS 63m FISHERIES RESEARCH VESSEL

TITLE

GAUGE & MISC.  
INSTRUMENT LIST

JOB NO.  
M282

ITEM  
500

DELIVERABLE  
FL05

SHEET  
001

REV  
03

FILE FL05-001-00

SHEET 1 OF

APPLICABILITY BLOCK

JOB: M282HULL: 1953

JOB: M283HULL: 1956

JOB: M284HULL: 1957

1

2

1

2

1

2

1

2

10-10-03

3-22-05

6-7-06

9-7-06

ISSUE DATE

REV #

NOAA

PROG MGR

PROJ ENG

HMP PC

NOISE CNTRL

CHAND LLC

JOINER

HVAC

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TRAWL SSV

PRODUCTION DESIGN

HPG PC

ISSUED BY

0

1

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DOCUMENT DISTRIBUTION RECORD														
ISSUE DATE	10-10-03	3-22-05	6-7-06	9-7-06										
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NOAA	1													
PROG MGR	1													
PROJ ENG	1													
HMP PC	12	12	1	1										
NOISE CNTRL	1(1)													
CHAND LLC	1													
JOINER	0													
HVAC	1													
PROP SSV	1													
TRAWL SSV	1													
PRODUCTION DESIGN	1	1	1	1										
HPG PC		1	1	1										
ISSUED BY	DR	DR	DR											

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	1	2	2	0	0	0	0	3	2	3	REV
10	9	8	7	6	5	4	3	2A	2	1	SHT

REVISION STATUS

<b>VT Halter Marine, Inc.</b>  <b>Vision Technologies Systems</b>			VESSEL FRV40 CLASS 63m FISHERIES RESEARCH VESSEL						
DRAWN BY RGH 8/27/03			ABS APPV		TITLE  GAUGE & MISC. INSTRUMENT LIST				
CHECKED BY BC 9/3/03			USCG APPV						
APPROVED BY DMR 10/10/03			OWNER APPV						
HULL NO APPLICABILITY		CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 001	REV 03	
ESTIMATE NO 00-104		SCALE NONE		FILE FL05-001-00			SHEET 1 OF		

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	10	9	8	7	6	5	4	3	2A	2	1	SHT
	REVISION STATUS											

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	10	9	8	7	6	5	4	3	2A	2	1	SHT
	REVISION STATUS											

**VT Halter Marine, Inc.**  
 **Vision Technologies  
Systems**



<b>VT Halter Marine, Inc.</b>  <b>Vision Technologies Systems</b>	VESSEL FRV40 CLASS 63m FISHERIES RESEARCH VESSEL
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<b>VT Halter Marine, Inc.</b>  <b>Vision Technologies Systems</b>	VESSEL FRV40 CLASS 63m FISHERIES RESEARCH VESSEL
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DRAWN BY RGH 8/27/03	ABS APPV
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CHECKED BY BC 9/3/03	USCG APPV
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APPROVED BY DMR 10/10/03	OWNER APPV
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DRAWN BY RGH 8/27/03	ABS APPV	TITLE  GAUGE & MISC. INSTRUMENT LIST
CHECKED BY BC 9/3/03	USCG APPV	
APPROVED BY DMR 10/10/03	OWNER APPV	

DRAWN BY RGH 8/27/03	ABS APPV	TITLE  GAUGE & MISC. INSTRUMENT LIST
CHECKED BY BC 9/3/03	USCG APPV	
APPROVED BY DMR 10/10/03	OWNER APPV	

HULL NO APPLICABILITY	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 001	REV 03
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 1 OF	

HULL NO APPLICABILITY	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 001	REV 03
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 1 OF	

REVISIONS				
REV	ZONE	DESCRIPTION	DATE	APPROVED
1		1. EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1956. 2. ADDED PRESS SW LIST AND SHT 9 TO DWG. 3. ADDED VENDOR REQUESTED PRESSURE GAUGES. ITEM 2 PER DESIGN DEV ITEM 3 PER VENDOR	3/22/05	DMR

CONTD ON SHT 2A

18	MACHINERY CONTROL & ALARM SYSTEM BLOCK DIAGRAM		M282-202-FE24
17	ALARM & CONTROL POINT LIST		M282-202-FE25
16	SCIENTIFIC VACUUM SYSTEM DIAGRAM		M282-551-FP24
15	AUXILIARY SEAWATER COOLING SYSTEM DIAGRAM		M282-524-FP23
14	EGG SAMPLING SYSTEM DIAGRAM		M282-524-FP21
13	FIREMAIN SYSTEM DIAGRAM		M282-521-FP20
12	SCIENTIFIC SEAWATER SYSTEM DIAGRAM		M282-524-FP18
11	SEAWATER WASHDOWN SYSTEM DIAGRAM		M282-523-FP17
10	CHILLED WATER SYSTEM DIAGRAM		M282-514-FP16
9	JACKET WATER & AFTERCOOLER SYSTEM DIAGRAM		M282-532-FP13
8	LUBE OIL TRANSFER & SERVICE SYSTEM DIAGRAM		M282-262-FP12
7	OILY WASTE & WASTE OIL SYSTEM DIAGRAM		M282-593-FP11
6	MAIN SEAWATER SYSTEM DIAGRAM		M282-256-FP08
5	SHIPS SERVICE COMPRESSED AIR SYSTEM DIAGRAM		M282-551-FP07
4	GREY & BLACK WATER SYSTEM DIAGRAM		M282-528-FP05
3	FUEL SERVICE & TRANSFER SYSTEM DIAGRAM		M282-541-FP04
2	FRESH & POTABLE WATER SYSTEM DIAGRAM		M282-533-FP03
1	BILGE AND BALLAST SYSTEM DIAGRAM		M282-529-FP01
NO.	TITLE		DRAWING NUMBER

REFERENCES							
HULL NO 1953	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 002	REV 02
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 2 OF	

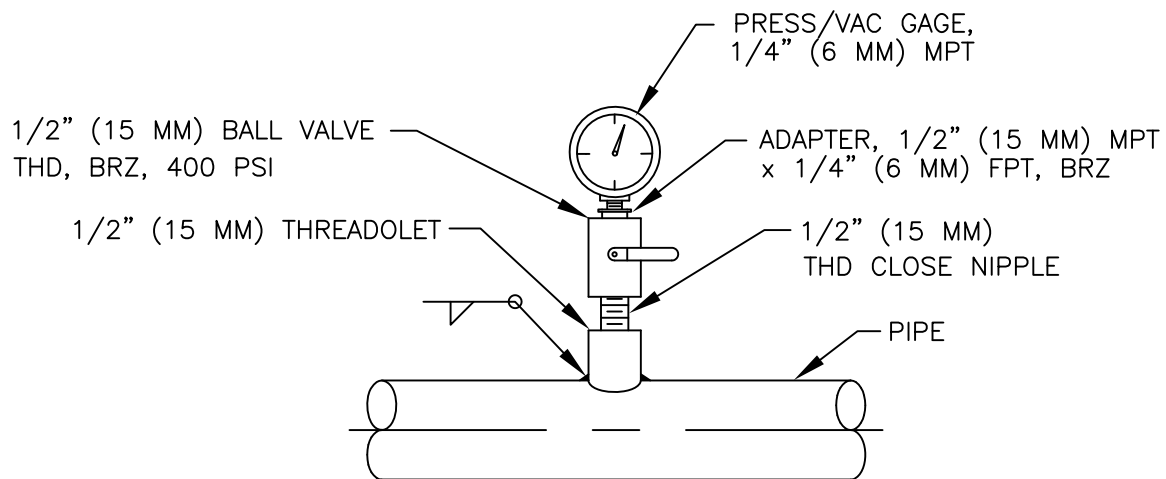
# REVISIONS CONTD

REV	ZONE	DESCRIPTION	DATE	APPROVED
2		1. EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1957. 2. UPDATED COMPONENT LIST. <u>ITEM 2 PER ENG DEVELOPMENT</u>	6/7/06	DMR
3		1. THIS REVISION REFLECTS THE AS-BUILT CONDITION FOR HULL 1953.		

HULL NO 1953	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 02A	03
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 2A OF	

## NOTES

1. SPECIFIC PRESSURE/VACUUM GAUGES AND ISOLATION VALVES ARE ORDERED FROM ASSOCIATED DRAWINGS.
2. PRESSURE/VACUUM GAUGES MUST BE CALIBRATED NO MORE THAN THREE MONTHS PRIOR TO SHIP DELIVERY. THE CALIBRATION METHOD AND DATE OF CALIBRATION MUST BE RECORDED.
3. PRESSURE/VACUUM GAUGE INDICATIONS MUST BE IN METRIC UNITS OF MEASURE.

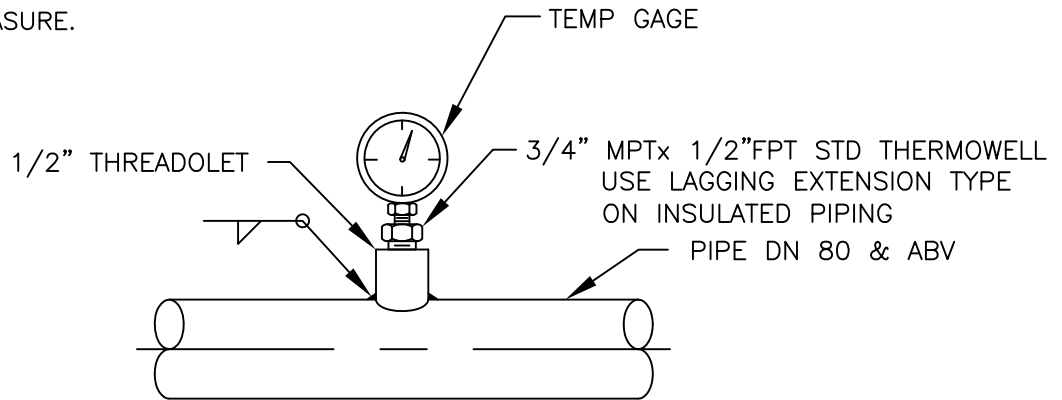


## LOCAL PRESS/VAC GAGE CONN DETAIL

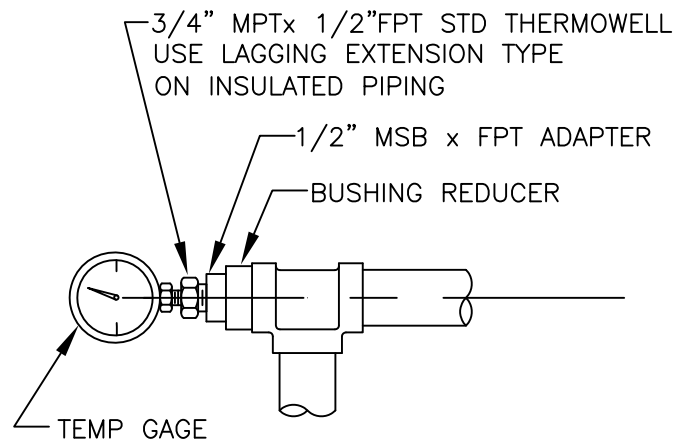
HULL NO 1953	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 003	00
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 3 OF	

## NOTES

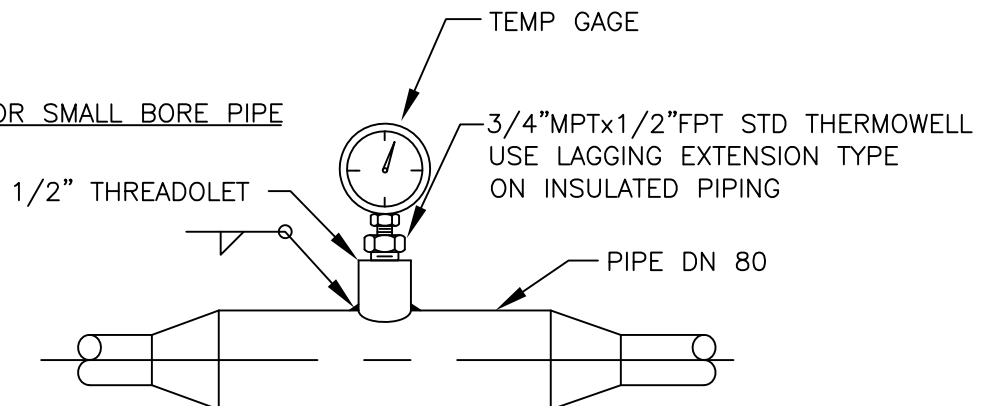
1. SPECIFIC TEMPERATURE GAUGES ARE ORDERED FROM ASSOCIATED DRAWINGS.
2. TEMPERATURE GAUGES MUST BE CALIBRATED NO MORE THAN THREE MONTHS PRIOR TO SHIP DELIVERY. THE CALIBRATION METHOD AND DATE OF CALIBRATION MUST BE RECORDED.
3. TEMPERATURE GAUGE INDICATIONS MUST BE IN METRIC UNITS OF MEASURE.



INSTALLATION METHOD FOR LARGE BORE PIPE



INSTALLATION METHOD FOR SMALL BORE PIPE



INSTALLATION METHOD FOR SMALL BORE PIPE

## LOCAL TEMPERATURE GAGE CONN DETAIL

HULL NO 1953	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 004	00
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-00				SHEET 4	OF

## INSTRUMENT LIST

ITEM NO.	QTY	SERVICE	DIAL SIZE	TYPE	RANGE/ SETTING	CONN TYPE/SIZE	SYSTEM	REMARKS	REF NO.
529-P-I-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-16 BAR	1/4" MPT	BILGE	LIQUID FILLED	1
529-P-I-02	1	PUMP DISCHARGE	2 1/2"	PRESS	0-16 BAR	1/4" MPT	BALLAST	LIQUID FILLED	1
529-P-I-03	1	EDUCTOR SW SPLY	2 1/2"	PRESS	0-16 BAR	1/4" MPT	BALLST	LIQUID FILLED	1
533-P-I-01	1	PRESSURE PUMP	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-02	1	PRESSURE PUMP	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-03	1	MAIN HEADER	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-04	1	HW CIRC PUMP	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-05	1	HW CIRC PUMP	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-06	1	PW FILL (STBD)	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
533-P-I-07	1	WINDOW WASH TK	2 1/2"	PRESS	0-10 BAR	1/4" MPT	POTABLE WATER	LIQUID FILLED	2
541-P-I-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	FUEL OIL TRANSFER	LIQUID FILLED	3
528-P-I-02	1	WASTE WTR PUMP DISCH	2 1/2"	PRESS	0-6 BAR	1/4" MPT	GREY/BLK WATER	LIQUID FILLED	4
551-P-I-01	1	SVCE AIR COMPSR	2 1/2"	PRESS	0-16 BAR	1/4" MPT	SERVICE AIR	LIQUID FILLED	5
551-P-I-02	1	SVCE AIR COMPSR	2 1/2"	PRESS	0-16 BAR	1/4" MPT	SERVICE AIR	LIQUID FILLED	5
551-P-I-03	1	AIR RECEIVER	2 1/2"	PRESS	0-16 BAR	1/4" MPT	SERVICE AIR	LIQUID FILLED	5
551-P-I-04	1	AIR RECEIVER	2 1/2"	PRESS	0-16 BAR	1/4" MPT	SERVICE AIR	LIQUID FILLED	5
551-P-I-05	1	SHAFT SEAL	2 1/2"	PRESS	0-16 BAR	1/4" MPT	SERVICE AIR	LIQUID FILLED	5
256-P-I-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	MAIN SEAWATER	LIQUID FILLED	6
256-P-I-02	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	MAIN SEAWATER	LIQUID FILLED	6
256-P-I-03	1	STERN TUBE SEAL	2 1/2"	PRESS	0-2 BAR	1/4" MPT	MAIN SEAWATER	LIQUID FILLED	6
593-P-I-01	1	WASTE OIL XFR PUMP	2 1/2"	PRESS	0-6 BAR	1/4" MPT	OILY WASTE WASTE OIL	LIQUID FILLED	7

HULL NO  
1953ESTIMATE NO  
00-104CAGE CODE  
3BJ86SCALE  
NONESIZE  
AJOB NO.  
M282ITEM  
500DELIVERABLE  
FLO5SHEET  
005SHEET 5 OF  
00

FILE FLO5-001-00

PLOT:1:1

## INSTRUMENT LIST

ITEM NO.	QTY	SERVICE	DIAL SIZE	TYPE	RANGE/ SETTING	CONN TYPE/SIZE	SYSTEM	REMARKS	REF NO.
593-PI-02	1	WASTE OIL CIRC PUMP	2 1/2"	PRESS	0-16 BAR	1/4" MPT	OILY WASTE WASTE OIL	LIQUID FILLED	7
262-PI-01	1	LUBE OIL PUMP	2 1/2"	PRESS	0-6 BAR	1/4" MPT	LUBE OIL XFR	LIQUID FILLED	8
532-PI-01	1	JACKETWATER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	JKT COOLER	LIQUID FILLED	9
532-PI-02	1	JACKETWATER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	JKT COOLER	LIQUID FILLED	9
532-PI-03	1	AFTERCOOLER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	AFTER COOLER	LIQUID FILLED	9
532-PI-04	1	AFTERCOOLER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	AFTER COOLER	LIQUID FILLED	9
532-PI-05	1	JACKETWATER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	JKT COOLER	LIQUID FILLED	9
532-PI-06	1	JACKETWATER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	JKT COOLER	LIQUID FILLED	9
532-PI-07	1	AFTERCOOLER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	AFTER COOLER	LIQUID FILLED	9
532-PI-08	1	AFTERCOOLER OUTLET	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	AFTER COOLER	LIQUID FILLED	9
514-PI-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-10 BAR	1/4" MPT	CHILLED WATER	LIQUID FILLED	10
514-PI-02	1	PUMP DISCHARGE	2 1/2"	PRESS	0-10 BAR	1/4" MPT	CHILLED WATER	LIQUID FILLED	10
514-PI-03	1	PUMP DISCHARGE	2 1/2"	PRESS	0-10 BAR	1/4" MPT	CHILLED WATER	LIQUID FILLED	10
514-PI-04	1	EXPANSION TANK	2 1/2"	PRESS	0-10 BAR	1/4" MPT	CHILLED WATER	LIQUID FILLED	10
523-PI-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	SEAWATER WASHDOWN	LIQUID FILLED	11
524-PI-25	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	SCIENTIFIC SEAWATER	LIQUID FILLED	12
524-PI-26	1	PUMP DISCHARGE	2 1/2"	PRESS	0-6 BAR	1/4" MPT	SCIENTIFIC SEAWATER	LIQUID FILLED	12
521-PI-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-16 BAR	1/4" MPT	FIREMAIN	LIQUID FILLED	13
524-PI-15	1	PUMP DISCHARGE	2 1/2"	PRESS	0-2.5 BAR	1/4" MPT	EGG SAMPLING	LIQUID FILLED	14
524-PI-01	1	PUMP DISCHARGE	2 1/2"	PRESS	0-4 BAR	1/4" MPT	AUX SW COOLING	LIQUID FILLED	15

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HULL NO	1953	CAGE CODE	3BJ86	SIZE	A	JOB NO.	M282	ITEM	500	DELIVERABLE	FLO5	SHEET	006	SHEET	6	OF	00
ESTIMATE NO	00-104	SCALE	NONE	FILE FLO5-001-00													

PLOT:1:1

## INSTRUMENT LIST

ITEM NO.	QTY	SERVICE	DIAL SIZE	TYPE	RANGE/ SETTING	CONN TYPE/SIZE	SYSTEM	REMARKS	REF NO.
524-PI-02	1	PUMP DISCHARGE	2 1/2"	PRESS	0-4 BAR	1/4" MPPT	AUX SW COOLING	LIQUID FILLED	15
524-PI-03	1	PUMP DISCHARGE	2 1/2"	PRESS	0-4 BAR	1/4" MPPT	AUX SW COOLING	LIQUID FILLED	15
524-PI-04	1	PUMP DISCHARGE	2 1/2"	PRESS	0-4 BAR	1/4" MPPT	AUX SW COOLING	LIQUID FILLED	15
528-VI-01	1	EDUCTOR VAC GAUGE	2 1/2"	VAC	-1-0 BAR	1/4" MPPT	GREY/BLK WATER	LIQUID FILLED	4
551-VI-100	1	PUMP SUCTION	2 1/2"	VAC	-1-0 BAR	1/4" MPPT	SCIENTIFIC VAC. SYS.	VAC GAUGE	16
533-TI-01	1	WATER HEATER EXIT	3"	TEMP	0-120°C	N/A	POTABLE WATER		2
533-TI-02	1	WATER HEATER EXIT	3"	TEMP	0-120°C	N/A	POTABLE WATER		2
533-TI-03	1	WATER HEATER EXIT	3"	TEMP	0-120°C	N/A	POTABLE WATER		2
256-TI-01	1	STBD SEACHEST	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-02	1	PORT SEACHEST	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-03	1	HEAT EXH OUTLET	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-04	1	HEAT EXH OUTLET	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-05	1	HEAT EXH OUTLET	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-06	1	HEAT EXH OUTLET	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-07	1	MN PRPSN MOTOR OUT	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-08	1	MN PRPSN MOTOR OUT	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
256-TI-09	1	THRUST BRG OUTLET	3"	TEMP	0-100°C	1/2" MPPT	MAIN SEAWATER	LIQUID FILLED	6
514-TI-03	1	CHW SPLY	3"	TEMP	0-50°C	SUPPLIED W/UNIT	CHILLED WATER	SUPPLIED W/UNIT	10
514-TI-04	1	CHW RTN	3"	TEMP	0-50°C	SUPPLIED W/UNIT	CHILLED WATER	SUPPLIED W/UNIT	10
514-TI-01	1	CW CHILLER SPLY	3"	TEMP	TBD	1/2" MPPT	CHILLED WATER	LIQUID FILLED	10
514-TI-02	1	CW CHILLER RTN	3"	TEMP	TBD	1/2" MPPT	CHILLED WATER	LIQUID FILLED	10

HULL NO  
1953CAGE CODE  
3BJ86

SCALE

NONE

ESTIMATE NO  
00-104JOB NO.  
M282ITEM  
500DELIVERABLE  
FLO5SHEET  
007

02

SHEET 7 OF

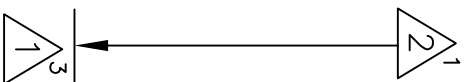
FILE FLO5-001-00

PLOT:1:1



# INSTRUMENT LIST

ITEM NO.	QTY	SERVICE	DIAL SIZE	TYPE	RANGE/ SETTING	CONN TYPE/SIZE	SYSTEM	REMARKS	REF NO.
256-TI-14	0	AIR COMPRESS COOLING	ON PANEL	TEMP	-	-	MAIN SEAWATER	VENDOR SUPPLIED	6
256-TI-15	0	AIR COMPRESS COOLING	ON PANEL	TEMP	-	-	MAIN SEAWATER	VENDOR SUPPLIED	6
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
NOT USED									
524-PI-05	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	VENDOR SUPPLIED	15
524-PI-06	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	VENDOR SUPPLIED	15
524-PI-07	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	VENDOR SUPPLIED	15
524-PI-08	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	VENDOR SUPPLIED	15
524-PI-09	1	WATER MAKER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	LIQUID FILLED	15
524-PI-10	1	WATER MAKER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	AUX SW COOLING	LIQUID FILLED	15
514-PI-05	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	CHILLED WATER	VENDOR SUPPLIED	10
514-PI-06	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	CHILLED WATER	VENDOR SUPPLIED	10
514-PI-07	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	CHILLED WATER	VENDOR SUPPLIED	10
514-PI-08	1	CW CHILLER UNIT	2 1/2"	PRESS	0-6 BAR	1/4" MPT	CHILLED WATER	VENDOR SUPPLIED	10



NOTE:

\* GAUGES DENOTED BY THIS SYMBOL ARE TO BE NON-METALLIC.

HULL NO	1953	CAGE CODE	3BJ86	SCALE	NONE	FILE FLO5-001-00	JOB NO.	M282	ITEM	500	DELIVERABLE	FLO5	SHEET	008	OF	8
ESTIMATE NO	00-104	SIZE	A													

# COMPONENT LIST

1<sup>2</sup>

ITEM NO.	SIZE	SERVICE	DESCRIPTION	BODY MATERIAL	TRIM MAT.	MAKE/MODEL	REMARKS	REF
533-PS-01	6	POT. WTR	PRESSURE SWITCH, 0-5 BAR	316 SST	SST	OMEGA/PSW-110	START@3.1 BAR STOP@3.8 BAR	2
533-PS-02	6	POT. WTR	PRESSURE SWITCH, 0-5 BAR	316 SST	SST	OMEGA/PSW-110	START@2.6 BAR STOP@3.8 BAR	2
533-PT-01	6	POT. WTR	PRESS. XDUCER, 0-5 BAR	316 SST	SST	OMEGA/PX725-300GI	W/SNUBBER, PS-2G, MCCS XDCR	2
541-FA-01	125	FUEL OIL	FLOW ALARM			OMEGA FSW-21		3
		BLACK WATER	(2)VACUUM SWITCHES			VENDOR SUPPLIED		4
551-PA-01	15	COMP. AIR	PRESSURE ALARM	316 SST	SST	OMEGA/PX725-300GI	W/SNUBBER PS-2G, LEAD SW, 690kPa	5
551-PA-02	15	COMP. AIR	PRESSURE ALARM	316 SST	SST	OMEGA/PX725-300GI	W/SNUBBER PS-2G, LEAD SW, 690kPa	5
551-PT-01	15	COMP. AIR	PRESS. XDUCER, 0-10 BAR	CU/AL EPOXY COATED NEMA 4	SST	OMEGA/PX725-300GI	W/SNUBBER, PS-2G, MCCS XDCR	5
551-PT-02	15	COMP. AIR	PRESS. XDUCER, 0-10 BAR	CU/AL EPOXY COATED NEMA 4	SST	OMEGA/PX725-300GI	W/SNUBBER, PS-2G, MCCS XDCR	5
551-PS-01	6	COMP. AIR	PRESS. SWITCH, 2-10 BAR	316 SST	SST	OMEGA/PSW-112	W/SNUBBER PS-2G, LEAD SW 760/860 kPa	5
551-PS-02	6	COMP. AIR	PRESS. SWITCH, 2-10 BAR	316 SST	SST	OMEGA/PSW-112	W/SNUBBER PS-2G, LAG SW 660/860 kPa	5
551-PS-03	6	COMP. AIR	PRESS. SWITCH, 2-10 BAR	316 SST	SST	OMEGA/PSW-112	W/SNUBBER PS-2G, 600 kPa	5
256-PS-01	6	MAIN SW	PRESS. SWITCH 0-6 BAR	NEMA 4X EPOXY COATED AL ENCLOSURE	NI-PLATED BRASS CONN	OMEGA PSW-107	MSW PUMP DISCH LOW PRESS. 15A SPDT SWITCH, 0-6 BAR ADJ RANGE	6
		HYD	PRESS. SWITCH			VENDOR SUPPLIED	WATERTIGHT DOORS	
		HYD	LOW PRESS. ALARM			VENDOR SUPPLIED	WATERTIGHT DOORS	
532-LA-01	6	JW/AC SYS	LEVEL ALARM GEN #1 AC EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-02	6	JW/AC SYS	LEVEL ALARM GEN #1 JW EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-03	6	JW/AC SYS	LEVEL ALARM GEN #2 AC EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-04	6	JW/AC SYS	LEVEL ALARM GEN #2 JW EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-05	6	JW/AC SYS	LEVEL ALARM GEN #3 \AC EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-06	6	JW/AC SYS	LEVEL ALARM GEN #3 JW EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-07	6	JW/AC SYS	LEVEL ALARM GEN #4 AC EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
532-LA-08	6	JW/AC SYS	LEVEL ALARM GEN #4 JW EXP TK			MURPHY LEVEL SW EL-150-K1	VENDOR SUPPLIED	9
524B-TS-01		SCTFC SW	TEMP SENSOR			SEABIRD ELECTRONICS SBE-3		12
524B-FS-01		SCTFC SW	FLOW SENSOR			GF SIGNET MK 515 ROTOR X		12
521-PT-01	6	FIRE	PRESS. XDUCER, 0-16 BAR	316 SST	SST	OMEGA/PX725-300GI	W/SNUBBER, PS-2G, MCCS XDCR	13
524A-FM-01		EGG SAMP	FLOW METER	CARBON STL	PRO LINED	HMS 1000 SENSOR W/ HML 200		14
524-PS-01	6	AUX SW	PRESSURE SWITCH	NEMA 4X EPOXY COATED AL ENCLOSURE	NI-PLATED BRASS CONN	OMEGA PSW-107	AUX SW PUMP DISCH LOW PRESS. 15A SPDT SWITCH, 0-4 BAR ADJ RANGE	15

HULL NO 1953	CAGE CODE 3BJ86	SIZE A	JOB NO. M282	ITEM 500	DELIVERABLE FL05	SHEET 009	01
ESTIMATE NO 00-104	SCALE NONE	FILE FL05-001-01				SHEET 9 OF	