## CHEMWAY GAIA

## SNO.5388

	配布先	
客先	船主	3
粉香•官厅	NK支部	3
工場	検査	1
設計	機装	1
	合計	8

# RESULT OF SEA TRIAL (MACHINERY PART)

- FINISHED PLAN -

Career;

Witnessed by Owner

LIST NO. 1M-7

IMO N	NO.   9354492
A4 36 A3 A2 A1 A0	GENERAL  MANAGER ASST. G.  MANAGER MANAGER MANAGER
-	ASST.MANAGER S. Kazeno STAFF H. Clehimato
TOTAL ,	DRAWN H. Clikimato

SHIN KURUSHIMA DOCKYARD COLLTD.

EHIME JAPAN 200

ENGINEERING DIVISION

DATE 2007/3/17 NO. SCALE

DWG.

M30-750-00-000

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Туре		Kobe Diesel-Mitsubishi UE Diesel Engine Uniflow scavenging exhaust-turbocharged two-stroke single-acting crosshead type				
Model			6UEC52LS			
Engine numbe	er	UE-2684				
Number of cy	linder	6				
Cylinder bor	е	mm	500			
Stroke		mm	1950			
			8670			
	Output	PS	11788			
. ·	Engine speed	min <sup>-1</sup>	127			
Maximum continuous	Mean piston speed	m/s	8. 26			
rating	Max. combustion pressure	MPa	147. 02			
	Brake mean effective pressure	MPa	1. 783			
	Indicated mean effective pressure	MPa	1.877			
Cylinder cer	nter distance		880 mm			
Overall leng	gth		6687 mm			
Width of bed	l plate		3100 mm			
Total height	·		8950 mm			
Height from	crank center to engine top		7302 mm			
Piston drawi	ing height from crank center	2	8900 mm			
Direction of	rotation		Clockwise (on ahead running, viewing from driving end)			
Superchargin	ng system		Constant-pressure turbocharging			
Reversing ge	ear		Self reversing			
Firing syste	em		Compression ignition			
Firing order	-		1-6-2-4-3-5			
Cooling syst	tem	Piston ······Lub.oil Cylinder jacket ····Fresh water Exhaust valve······Fresh water Air cooler······Sea water				
Starting sys	stem		Compressed air			
Turning gear	c		Electric motor driven			

## 2-1 AUX. MACHINERY A. PUMPS

ITEM	NO.	ТҮРЕ	CAPACITY m <sup>3</sup> /h x MPa	MOTOR kW x min-1
LUBRICATING OIL PUMP	2	VERTICAL CENTRIFUGAL	175 x 0.43	55 x 1800
COOLING SEA WATER PUMP	2	VERTICAL CENTRIFUGAL	490 x 0.20	45 x 1800
COOLING FRESH WATER PUMP	2	VERTICAL CENTRIFUGAL	65 x 0.25	7.5 x 3600
FUEL OIL SUPPLY PUMP	2	VERTICAL GEAR	4.5 x 0.39	3.7 x 1200
FUEL OIL CIRCILATING PUMP	2	VERTICAL GEAR	7.0 x 0.98 (+0.39)	5. 5 x 1200
EXH. V. DRIV. OIL PUMP	2	HORIZONTAL GEAR	7.5 x 0.49 (+0.20)	2. 2 x 1200

#### B. HEAT EXCHANGER

ITEM	NO.	TYPE	CAPACITY (m²)
LUBRICATING OIL COOLER	1	SHELL & TUBE	140. 0
FRESH WATER COOLER	I	SHELL & TUBE	27. 0
FUEL OIL HEATER	1	BENDEK	7000 L/h
JACKET PRE HEATER	1	PLATE CORE	3400 L/h

#### 2-2 PROPELLER

TYPE		5-BLADES SOLID, KEYLESS SKEWD TYPE
DIAMETER	mm	5750. 0
PITCH	mm	4026. 2
MATERIAL		Ni-Al-BLONZE
MAKER		NAKASHIMA PROPELLER CO., LTD.
REMARKS	•	

PLACE				TYO	SEA	
DATE	Mar. 14, 2007					
KIND OF LOAD			50%	70%	85%	100%
KIND OF FUEL & CALORIFIRE VALUE	1		HEAVY FU		40670	KJ/kg
SPEED OF REVOLUTION	m.	in <sup>-1</sup>	105.0	117.3	125.0	131. 4
BREAKE HORSE POWER (B. H. P. )	ΚV		4553	5993	7260	8653
BREAKE HORSE POWER (B. H. P. )	(1	PS)	6190	8148	9872	11765
SHIP SPEED (knots)			13. 20	14. 62	15.38	15. 97
FUEL CONSUMPTION						
NET PRE HOUR		g/h	804.0	1057.7	1267.0	1492.1
NET PRE HOUR (42700 kJ/kg)		g/h	765.8	1007.4	1206.8	1421.2
g/BHP/HOUR (42700 kJ/kg)		/KW. h	168. 2	168. 1	166. 2	164. 3
g/kW/HOUR (ISO CONDITION)		/kWh	168.5	168. 2	166.3	164. 5
g/PS/HOUR (ISO CONDITION)  FUEL PUMP RACK SCALE	(g/	/PSh)	123. 9	123. 7	122. 3	121.0
FUEL FUMP RACK SCALE			42.6	50.4	56.3	61.7
PRESSURE (LOCAL)	MPa					
MAX. COMBUSTION PRESS. (MEAN)	ivir a		0.50	11 67	19.01	14.01
COMPRESSION PRESS. (MEAN)			9. 58 6. 23	11. 67 8. 22	13. 21	14.01
SCAVENG. AIR MANIFOLD			0. 23	0. 14	9. 68 0. 18	11.11
CYL. COOLING WATER (REMOTE)			0.08	0. 14	0. 18	0. 22 0. 28
LUBRICATION OIL			0.23	0. 22	0. 28	0. 28
TURBOCHARGER LUB, OIL			0.14	0.13	0. 14	0. 14
FUEL OIL (REMOTE)			0.65	0.65	0.64	0.63
EXH. V. DRIV. OIL			0.40	0.39	0.38	0.37
START. AIR			2. 23	1. 93	2.06	2. 08
COOL. SEA WATER (REMOTE)			0. 22	0. 22	0. 22	0. 22
CYL. OIL. INLET			0.07	0.07	0. 07	0.07
BAROMETRIC PRESS.	(hPa	)	1014	1014	1014	1014
TEMPERATURE (LOCAL)	°C					
DOOM	2ND DECK		20.8	20.8	21.0	21.0
ROOM	3RD DECK		22.0	22.8	23. 3	24.0
FUEL OIL INLET	LOWER		21.5	21.5	22.0	22.5
	INLET		124. 0	124. 5	125.0	123.0
CYL. COOL. WATER	OUTLET (N	AIC A NI )	78.0	76.0	75.0	72.0
PISTON COOLLING OIL	OUTLET (N		85. 0	84.8	85.0	85.0
LUBRICATION OIL INLET	OOILEI (N	icait)	51.8 47.5	54. 0 48. 0	54. 9 48. 0	56.0
EXH. GAS AT CYLINDER OUTLET			41.0	40.0	40.0	48. 0
(MEAN)	REMOTE	<b>V</b>	326. 9	325. 3	335. 9	354. 6
CYL. OIL. INLET			48. 0	48. 5	47.0	47.0
				.0.0		
SCAVENG. AIR MANIFOLD	_		28.5	35. 5	40.0	45.0
TURBOCHARGER						
SPEED OF REVOLUTION (MEAN)	mi	in <sup>-1</sup>	8425	10225	11250	12050
EXH. GAS AT TURBOCHARGER	INLET °	C 🖊	352	359	375	401
	OUTLET °	C 💙	276	252	248	257
EXH. GAS PRESS. TURBINE OUTLET	mm/	lq pl	49	107	160	209
LUB. OIL TEMP.	OHMI DW O			~ ~ -		
		C	56.8	62. 5	65.8	68.0
T/C BLOWER INLET TEMP.	$^{\circ}$		22.0	22. 5	22. 5	23.0
	1	ŀ				

MAIN ENGINE:

KOBE DIESEL-MITSUBISHI 6UEC52LS

THERMOMETER: MTE 1100

7	TARTAT			***************************************	
4.	DATA	SHEET	0F	SEA	TRIAL

50% ENGINE LOAD

SNO. 5388

P- 5/

			IAL	Dito	TINE LUAD	ĐU%	2110.	0000	P	0,
RUN	TIME	COU	VTER	BHP	BHP				HADLE	F. 0.
NO.	TIME		RPM	(PS)	kw				DATA	RACK
GO	5:55	104		6207	4565				6. 50	42.0
RETURN	6:45	105		6173	4540				6.50	41.5
MEAN	_	105	. 0	6190	4553				6. 50	41.8
					***************************************					
F. O. RACK	SCALE									
RUN	-1			1	CYL. NO.				· · · · · · · · · · · · · · · · · · ·	MEAN
NO. GO	43. 0	2 43. 0	3 43. 0	4	5	6				
RETURN	43. 0	42.5	42. 5	43. 0 42. 5	42. 5 42. 5	42. 0 41. 5				42.8
RETURN	1 40.0	44.0	42.0	42.0	44.0	41.5	<u> </u>			42. 4
										42.6
RUN					CYL. NO.					
NO.	1	2	3	4	5	6				MEAN
GO		_		-	_	_	_	-		
RETURN	-	-				_		-	_	
COMP. PRE	SS. IN CY	L. (MPa)	****		OW NO					
RUN NO.	1	2	3	· .	CYL. NO.		T			MEAN
GO	6. 20	6.30	6. 20	6.30	5 6.30	6 20				
RETURN	6. 20	6. 20	6. 20	6. 20	6. 20	6. 30 6. 20				6.27
TILLOINI	U. 4V	U. 4V	U. 4U	1 0. 20	<u>  U. ZU</u>	0.20	L			6. 20 6. 23
MAX. COMP	P. PRESS. I	N CYL. (MI	Pa)							<u> </u>
RUN					CYL. NO.					NE 437
NO.	1	2	3	4	5	6				MEAN
GO	9.70	9.70	9.70	9.70	9.60	9. 70				9.68
RETURN	9.50	9.50	9.40	9.50	9.40	9. 50				9.47
										9.58
RUN					CVI NO	,		* *********		1
NO.	1	2	3	4	CYL. NO.	6				MEAN
	1		۲	4	l O	1 0	1			1 1
1 (40)			-	-	_		_			
GO RETURN			-		_		<u> </u>		-	
RETURN					<del>-</del>	_	ļ		_	
	******		****				ļ			
RETURN PRESSURE	- (MPa) (	- REMOTE/LO	OCAL)				ļ	<del>-</del>		OTI
PRESSURE RUN NO.	- (MPa) (	- REMOTE/LO RING AIR	OCAL) SCAVE		CYL. C		MA LUB.	- IN OIL	- FUEL	OIL
PRESSURE RUN NO. GO	- C (MPa) ( EXH. V. SP	- REMOTE/LO PRING AIR 0.62	OCAL) SCAVE	- N. AIR -	CYL. 0		- MA LUB. 0. 22	IN OIL 0. 22	- FUEL 0. 65	OIL
RETURN PRESSURE RUN NO. GO RETURN	- (MPa) (	REMOTE/LO PRING AIR 0.62 0.60		- N. AIR - -	CYL. 0 0. 29 0. 28		MA LUB. 0. 22 0. 22	- IN OIL 0. 22 0. 21	FUEL 0. 65 0. 65	OIL
PRESSURE RUN NO. GO	- C (MPa) ( EXH. V. SP	- REMOTE/LO PRING AIR 0.62	OCAL) SCAVE	- N. AIR -	CYL. 0		- MA LUB. 0. 22	IN OIL 0. 22	- FUEL 0. 65	OIL
RETURN PRESSURE RUN NO. GO RETURN MEAN	- (MPa) ( EXH. V. SP 	- REMOTE/LC RING AIR 0.62 0.60 0.61	OCAL) SCAVE 0. 08 0. 08 0. 08	N. AIR	CYL. C 0. 29 0. 28 0. 29	- . F. W. - -	MA LUB. 0. 22 0. 22 0. 22	IN OIL 0. 22 0. 21 0. 21	FUEL 0. 65 0. 65 0. 65	-
RETURN PRESSURE RUN NO. GO RETURN MEAN	- (MPa) ( EXH. V. SP 	REMOTE/LOPRING AIR 0.62 0.60	OCAL) SCAVE 0. 08 0. 08 0. 08	- N. AIR - -	CYL. C 0. 29 0. 28 0. 29		MA LUB. 0. 22 0. 22 0. 22	- IN OIL 0. 22 0. 21	FUEL 0. 65 0. 65 0. 65	OIL
RETURN PRESSURE RUN NO. GO RETURN MEAN RUN NO.	- (MPa) (EXH. V. SP	- REMOTE/LC RING AIR 0.62 0.60 0.61	OCAL) SCAVE 0. 08 0. 08 0. 08	EN. AIR  T. AIR	CYL. C 0. 29 0. 28 0. 29	- . F. W. - -	MA LUB. 0. 22 0. 22 0. 22	IN OIL 0. 22 0. 21 0. 21	FUEL 0. 65 0. 65 0. 65 BAROMET	RIC (hPa)
RETURN PRESSURE RUN NO. GO RETURN MEAN	- (MPa) (EXH. V. SP COOL. SE 0, 22	- REMOTE/LC RING AIR 0.62 0.60 0.61		— — — — — — — — — — — — — — — — — — —	CYL. CO. 29 0. 28 0. 29 CONTRO	- . F. W. - -	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI	IN OIL 0. 22 0. 21 0. 21 RIV. O. IN 0. 40	FUEL 0. 65 0. 65 0. 65	RIC (hPa)
RETURN PRESSURE RUN NO. GO RETURN MEAN RUN NO. GO	- (MPa) (EXH. V. SP	- REMOTE/LC RING AIR 0.62 0.60 0.61		EN. AIR  T. AIR	CYL. C 0. 29 0. 28 0. 29	- F. W	MA LUB. 0. 22 0. 22 0. 22	IN OIL 0. 22 0. 21 0. 21	FUEL 0. 65 0. 65 0. 65 BAROMET	RIC (hPa)
RETURN PRESSURE RUN NO. GO RETURN MEAN RUN NO. GO RETURN MO. GO RETURN	COOL. SE	- REMOTE/LC RING AIR 0.62 0.60 0.61		П. AIR  Т. AIR  2, 17 2, 28	CYL. C 0. 29 0. 28 0. 29 CONTRO 0. 66 0. 66	- F. W	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39	IN OIL 0. 22 0. 21 0. 21 RIV. 0. IN 0. 40 0. 39	FUEL 0. 65 0. 65 0. 65 BAROMET	RIC (hPa)
RETURN PRESSURE RUN NO. GO RETURN MEAN RUN GO RETURN MEAN RETURN MEAN	COOL. SE	REMOTE/LO RING AIR 0.62 0.60 0.61 CA WATER		П. AIR  Т. AIR  2, 17 2, 28	CYL. C 0. 29 0. 28 0. 29 CONTRO 0. 66 0. 66	- F. W	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39	IN OIL 0. 22 0. 21 0. 21 RIV. 0. IN 0. 40 0. 39	FUEL 0. 65 0. 65 0. 65 BAROMET	RIC (hPa)
RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN NO.	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22			П. AIR  Т. AIR  2, 17 2, 28	CYL. C 0. 29 0. 28 0. 29 CONTRO 0. 66 0. 66	- F. W	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39	IN OIL 0. 22 0. 21 0. 21 RIV. 0. IN 0. 40 0. 39	FUEL 0. 65 0. 65 0. 65 BAROMET	RIC (hPa)
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RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22  M/E CY CURE (°C) SCAVE 29. 0		DCAL) SCAVE 0. 08 0. 08 0. 08 STAR /LOCAL) LUB. 0	T. AIR  2. 17 2. 28 2. 23	CYL. CO. 29 0. 28 0. 29 CONTRO 0. 66 0. 66 0. 66 TUEL CO. 120. 0		MA LUB. 0, 22 0, 22 0, 22 0, 22 EXH. V. DI 0, 41 0, 39 0, 40	IN OIL 0. 22 0. 21 0. 21 RIV. O. IN 0. 40 0. 39 0. 40  C. F. W. IN 78. 0	FUEL 0. 65 0. 65 0. 65 BAROMETI THRUS	RIC (hPa)  1014 1014 1014 1014  T PAD 48. 0
RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22  M/E CY CURE (°C) SCAVE 29. 0 28. 0		DCAL) SCAVE  0. 08 0. 08 0. 08 STAR  /LOCAL) LUB. 0 47. 0 48. 0 47. 5	T. AIR  2. 17 2. 28 2. 23  DIL IN	CYL. C 0. 29 0. 28 0. 29  CONTRO 0. 66 0. 66 0. 66 120. 0 123. 0	DIL IN  123. 0 125. 0	MA LUB. 0, 22 0, 22 0, 22 0, 22 EXH. V. DI 0, 41 0, 39 0, 40 CYL. COOI 78. 0 78. 0 78. 0	IN OIL 0. 22 0. 21 0. 21 0. 21 RIV. 0. IN 0. 40 0. 39 0. 40  2. F. W. IN 78. 0 78. 0 78. 0	FUEL 0. 65 0. 65 0. 65  BAROMETI THRUS 48. 0 49. 0	RIC (hPa)  1014 1014 1014 1014  T PAD 48. 0 49. 0
RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. RETURN MEAN	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22  M/E CY  CURE (°C) SCAVE 29. 0 28. 0 28. 5		DCAL) SCAVE  0. 08 0. 08 0. 08 STAR' /LOCAL) LUB. 0 47. 0 48. 0 47. 5 EXH. V.	T. AIR  2. 17 2. 28 2. 23  IL IN  DRIV.	CYL. C 0. 29 0. 28 0. 29  CONTRO 0. 66 0. 66 0. 66 120. 0 123. 0 121. 5	DIL IN  123. 0 125. 0	MA LUB. 0. 22 0. 22 0. 22 0. 41 0. 39 0. 40 CYL. COOI 78. 0 78. 0 78. 0	IN OIL 0. 22 0. 21 0. 21 0. 21 0. 40 0. 39 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40	FUEL 0. 65 0. 65 0. 65  BAROMETI THRUS 48. 0 49. 0	RIC (hPa)  1014 1014 1014 1014  T PAD 48. 0 49. 0
RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN RUN NO. GO RETURN MEAN	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22  M/E CY  CURE (°C) SCAVE 29. 0 28. 0 28. 5		DCAL) SCAVE  0. 08 0. 08 0. 08 STAR' /LOCAL) LUB. 0 47. 0 48. 0 47. 5 EXH. V. OIL	T. AIR  2. 17 2. 28 2. 23  DIL IN  DRIV. IN	CYL. C 0. 29 0. 28 0. 29  CONTRO 0. 66 0. 66 0. 66 120. 0 123. 0 121. 5	DIL IN  123. 0 124. 0 . OIL IN	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39 0. 40 CYL. COOI 78. 0 78. 0 78. 0	IN OIL 0. 22 0. 21 0. 21 0. 21 0. 39 0. 40 0. 40 78. 0 78. 0 78. 0 CYL COM JT	FUEL 0. 65 0. 65 0. 65  BAROMETI THRUS 48. 0 49. 0	RIC (hPa)  1014 1014 1014 1014  T PAD 48. 0 49. 0
RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN	C(MPa) ( EXH. V. SP  COOL. SE  0. 22  0. 22  0. 22  M/E CY  CURE (°C)  SCAVE  29. 0  28. 0  28. 5  SEA V  13. 0		DCAL) SCAVE  0. 08 0. 08 0. 08 STAR' /LOCAL) LUB. 0 47. 0 48. 0 47. 5 EXH. V.	T. AIR	CYL. C 0. 29 0. 28 0. 29  CONTRO 0. 66 0. 66 0. 66 120. 0 123. 0 121. 5	OIL IN  123.0 124.0  OIL IN 48.0	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39 0. 40 CYL. COOI 78. 0 78. 0 78. 0	IN OIL 0. 22 0. 21 0. 21 0. 21 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 39 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40 0. 40	FUEL 0. 65 0. 65 0. 65  BAROMETI THRUS 48. 0 49. 0	RIC (hPa)  1014 1014 1014 1014  TPAD 48. 0 49. 0
RETURN PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN RUN NO. GO RETURN MEAN	C (MPa) ( EXH. V. SP  COOL. SE 0. 22 0. 22 0. 22  M/E CY  CURE (°C) SCAVE 29. 0 28. 0 28. 5	REMOTE/LC RING AIR  0. 62 0. 60 0. 61  A WATER	CAL) SCAVE 0. 08 0. 08 0. 08 STAR' /LOCAL) LUB. 0 47. 0 48. 0 47. 5 EXH. V. OIL -	T. AIR  2. 17 2. 28 2. 23  DIL IN  DRIV. IN	CYL. C 0. 29 0. 28 0. 29  CONTRO 0. 66 0. 66 0. 66 120. 0 123. 0 121. 5	DIL IN  123. 0 124. 0 . OIL IN	MA LUB. 0. 22 0. 22 0. 22 0. 22 EXH. V. DI 0. 41 0. 39 0. 40 CYL. COOI 78. 0 78. 0 78. 0	IN OIL 0. 22 0. 21 0. 21 0. 21 0. 39 0. 40 0. 40 78. 0 78. 0 78. 0 CYL COM JT	FUEL 0. 65 0. 65 0. 65  BAROMETI THRUS 48. 0 49. 0	RIC (hPa)  1014 1014 1014 1014  TPAD 48. 0 49. 0

DATA SHEET OF SEA TRIAL		ENU	INE LUAD	50%	2110° 2388	P- 6/
JACKET COOL. F. W. CYL. OUT	ΓMP °C (RE	MOTE)				
RUN			CYL. NO.			MOUNT
NO. 1 2	3	4	5	6		MEAN
GO 85. 0 85. 0	85. 0	85.0	85.0	85.0		85. 0
RETURN 85.0 85.0	85.0	85.0	84.0	84.0		84. 7
						84. 8
JACKET COOL. F. W. CYL. OUT	<u> IMP °C(LO</u>	CAL)			,	
RUN			CYL. NO.			——— MEAN
NO. 1 2	3	4	5	6		
GO 85.0 85.0	85.0	85.0	85.0	85. 0		85. 0
RETURN 85.0 85.0	85.0	85.0	85.0	85.0		85.0
PISTON COOL.OIL OUT TMP	°C (REMOTE	\				85. 0
RUN RUN	C (REMOTE	<del>)</del>	CYL. NO.			
NO. 1 2	3	4	5	6		MEAN
GO 50.0 51.0		51. 0	51.0	51.0		50.8
RETURN 51.0 52.0		53. 0	52. 0	52. 0		52. 0
Indicial Call Call		00.0	02.0 1	02.0		51.4
PISTON COOL. OIL OUT TMP	°C (LOCAL)					01. 1
RUN	<u> </u>		CYL. NO.			
NO. 1 2	3	4	5	6		MEAN
GO 50.5 51.0	51.5	51.0	51.5	51.0		51.1
RETURN 52.0 52.5	53. 0	52.5	53. 0	52. 5		52.6
						51.8
EXH. GAS CYL. OUT TMP °C (F	REMOTE)					
RUN			CYL. NO.			———— MEAN
NO. 1 2	3	4	5	6		
GO 330 330	331	321	330	323		327. 5
RETURN 330 325	333	322	328	320		326. 3
EVIL CAS OVI OUT THE 90 /	OCAL					326. 9
EXH. GAS CYL. OUT TMP °C (I	JUCAL)	*****	CYL. NO.	***************************************		
NO. 1 2	3	4	5 T	6		MEAN
GO	- -	<del>4</del>	<u> </u>	- 6		
RETURN	-	_		<del>-</del> :		
TOTOM	I I		<u> </u>			

				TURBO	CHARGER			
RUN	SPEED	BLOW	ER IN	EXH. C	SAS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.
NO.	(min-1)	P(kPa)	T (°C)	IN	(℃)	OUT	(°C)	(mmAq)
GO	8550	0.17	22.0	354	-	275	-	49
RETURN	8300	0, 17	22.0	350	_	276		49
MEAN	8425	0.17	22.0	352		276		49

TURBOCHARGER								
RUN		LUB. OIL (REMOTE/LOCAL)						
NO.	P (MPa) IN (°C) OUT (°C)							
GO	0.16	0.14	_	57.0	56. 5			
RETURN	0.16	0.14		57.0	57.0			
MEAN	0.16	0.14		57.0	56.8			

RUN	E/R	TEMP. (	℃)
NO.	2ND	3RD	LOW.
GO	21.0	22.0	21.5
RETURN	20.5	22. 0	21.5
MEAN	20.8	22. 0	21, 5

AIR COOL	ŁK .					
RUN	AIR TEMP. (°C)		P. (°C)   C. W. TEMP. (°C)		PRESS. DROP	
NO.	IN	OUT	IN	OUT	kPa	
GO	80.0	31.0	21.0	26.0	0.60	
RETURN	78.0	29.0	21.0	25.0	0.60	
MEAN	79 0	30 0	21 0	25 5	0.60	

	S/	T TEMP. (°C	) S/T L.O. (MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	24. 0	39.0	0. 103	28. 0
RETURN	25.0	39. 5	0. 103	28.0
MEAN	24. 5	39.3	0. 103	28.0

RUN NO.	F. O. CONSUMPTION				
	ACTUAL	42700 kJ/ks			
NO.	kg/h	kg/h	g/kWh		
GO	814.7	776.0	170.0		
RETURN	793, 3	755. 5	166.4		
MEAN	804.0	765.8	168. 2		

RUN	SHIP
NO.	SPEED
110.	knots
GO	13. 22
RETURN	13. 18
MEAN	13. 20

PUMPS

		L. 0.	JACKET C. F. W.	EXH. V. D. O.	COOL. S.W.	CYL. O. CIRC.	F. O. SUPPLY	F. O. CIRC.
USED NO.		1	1	1	1	1	1	1
SUC. PRESS.	(MPa)		0.13	0. 23	0.050	0.05	0.08	0.44
DEL. PRESS.	(MPa)	0.33	0. 28	0.40	0. 225	0.07	0, 44	0.65
CURRENT	(Amp)	70.0	11.0	4. 5	62.0	****	4. 2	5, 2

**COOLER** 

	L. 0.	C. F. W.	
L.O. or F.W.IN (℃)	52.0	85.0	
L.O. or F.W.OUT (℃)	40.0	27.0	
S.W. or F.W.IN (℃)	20.0	22.0	
S.W. or F.W.OUT (℃)	22.0	25. 0	

HEATER

	F. 0.	
F. 0. IN (°C)	117.0	
F. O. OUT (℃)	125. 0	

TEMP. CONT. VALVE & VISCO, CONT. VALVE

	F. 0.	VISCO.
	(°C)	(cSt)
SET	-	13.0
ACTUAL	-	13.0
VALVE OPEN	_	6/10

TEMP, CONT, VALVE

TENH . CONT. YALYE				
	L. 0.	COOL		
		F. W.		
SET (°C)	48.0	85. 0		
ACTUAL (°C)	48.0	85.0		
VALVE OPEN	B-0.5	B-3		Ĭ i

		L. 0.	F. 0.	
		2ND	2ND	
IN PRESS.	(MPa)	0. 24	0.65	
OUT PRESS.	(MPa)	0. 23	0.64	
DIFF, PRESS.	(MPa)	0.01	0.01	

т	A TO A	CHEEP	O.D.	CEA	TOTAL
11	AIA	SHEFT	1111	$\rightarrow$ $\vdash$ $\land$	IKIAL

ENGINE LOAD 70% SNO. 5388

P- 8/

DATA SHI	EET OF S	EA TRIAL		ENG	SINE LOAD	70%	SNO.	5388	P-	8/
RUN		COLL	NTER	ВНР	ВНР	1		l	LIADIE	
NO.	TIME	1	RPM	(PS)					HADLE	F. O.
GO	7:35	117		8199	kw				DATA	RACK
RETURN	8:15	117			6030				7.6	51.5
MEAN	8.15	117		8097	5955				7.6	51.5
MEAN	_	11/	. 3	8148	5993				7.6	51.5
F. O. RACK	SCALE									
RUN					CYL. NO.					
NO.	1	2	3	4	5	6				MEAN
GO	51.0	51.0	50. 5	50.5	50.5	50.5				50. 7
RETURN	50. 5	50.0	50.0	50.0	50.0	50.0				50.1
									J	50.4
RUN					CVI NO					1
NO.	1	2	3	4	CYL, NO. 5	6	T		1	MEAN
GO				<u></u>						
RETURN	_		_							
KETOKK						_				
	SS. IN CY	L. (MPa)								<u> </u>
RUN	_				CYL. NO.					MEAN
NO.	11	2	3	4	5	6				MICAIN
GO	8. 2	8.3	8.2	8. 2	8.3	8, 3				8.3
RETURN	8. 2	8. 2	8. 1	8. 2	8.2	8. 2				8.2
MAN COL	n nonge -	N 0171 /	n \							8.2
RUN	. PRESS. 1	N CYL. (M	Pa)		CMI NO					
NO.	1	2	3		CYL. NO.		<b>!</b>		1	MEAN
GO	11 0			4	5	6				
RETURN	11.8 11.6	11.8 11.5	11. 8 11. 5	11.8	11.8	11.8				11.8
KELUKN	11.0	11.0	11.5	11.5	11.5	11.6				11.5
										11. 7
RUN					CYL. NO.					
NO.	1	2	3	4	5	6	1			MEAN
GO	-		-						_	
RETURN	_	-	_		_		-	_	_	
PRESSURE	(MPa) (	REMOTE/L	OCAL)		1					
RUN	EXH. V. SP	RING AIR	SCAVE	N. ATR	CYL. C	. F. W.	Į.	IN	FUEL	.OIL
NO.								OIL		
GO	-	0.65	0. 14	••••	0. 28		0. 22	0. 22	0.65	
RETURN		0.64	0. 14		0. 28	-	0. 22	0. 22	0.65	
MEAN		0, 65	0. 14	_	0.28		0. 22	0. 22	0.65	
RUN					]					
NO.	COOL. SE	A WATER	STAR	Γ. AIR	CONTRO	DL. AIR	EXH. V. DI	RIV. O. IN	BAROMETI	RIC(hPa)
GO	0. 22	_	_	1.9	0.69		0.38	0. 39		1014
RETURN	0. 22			1. 95	0.69	-	0.38	0.38		1014
MEAN	0. 22			1. 93	0.69		0.38	0.39		1014
				4,00	0.00		0.00	0.00		1014
RUN	M/R CV	L.O.IN								
NO.	MI/E UI				<u></u>					
GO	-	0.07								
RETURN	_	0.07								
MEAN		0.07								
mm mee i -	unn /0~\	/D7112=	/r 00:							
	URE (℃)	(REMOTE	/LUCAL)				I		I	
RUN	SCAVE	N. AIR	LUB. 0	IL IN	FUEL O	OIL IN	CYL COOL	. F. W. IN	ТНВПС	T PAD
NO.										
GO	35.0		48.0		123.0	124.0	78.0	76.0	50.0	49.6
RETURN	36.0	-	48.0		123.0	125.0	76.0	76.0	50.0	49.6
MEAN	35. 5		48. 0		123.0	124, 5	77.0	76.0	50.0	49.6
Dilki			EVII II	DDTU	1		0.5	NY		
RUN	SEA V	VATER	EXH. V.	DKIV.	M/E CYL	OIL IN	C. F. W. (	CYL COM		

RUN NO.	SEA 1	WATER	EXH. V. DRIV. OIL IN		M/E CYL.OIL IN		C.F.W.CYL COM OUT		
GO	13.0			48. 0	_	48.0	-	86.0	
RETURN	13.0	_		48.0	_	49.0		85. 0	
MEAN	13.0			48.0		48.5		85. 5	

DATA SHI	IEET OF SEA TRIAL			ENG	INE LOAD	70%	SNO.	5388	P- 9/
JACKET O	COOL. F. W.	CYL. OUT	TMP ℃(	REMOTE)					
RUN					CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
GO	85. 0	85.0	85.0	85.0	85.0	85.0			85. 0
RETURN	84.0	85.0	84.0	85.0	84.0	84.0			84. 3
				-					84.7
	COOL. F. W.	CYL. OUT	TMP °C(	LOCAL)					•
RUN		<b></b>			CYL. NO.				MEAN
NO.	1	2	3	4	5	6			
GO	85. 0	85.0	85.0	85.0	85. 0	85.0			85.0
RETURN	84.0	85.0	85.0	85.0	85.0	84. 0	<u> </u>		84. 7
			00 (	>					84.8
	COOL. OIL	OUT TMP	°C (REMO	TE)					
RUN					CYL. NO.				MEAN
NO.	1 1	2	3	4	5	6			
GO	53.0	54.0	54.0	54,0	54.0	54.0			53.8
RETURN	53.0	54.0	54.0	54.0	54.0	54.0			53. 8
DIOWON (	2001 071	OTTO TOTAL	90 /r 001	- \					53.8
RUN	COOL. OIL	OUI IMP	°C (LOCA	L)	CVI NO				
NO.			3	I	CYL. NO.		T		MEAN
GO	53.5	2		4	5	6			F1.0
RETURN	53. 5	54. 0 54. 0	54.0 54.0	54. 0 54. 0	54. 5 54. 5	54.0			54.0
RETURN	55.5	04.0	04.0	<u> 54. U</u>	54.5	54.0	<u> </u>		54.0
EAH CVC	CYL. OUT	TMP °C (	REMOTE)						54.0
RUN	CIL. OUI	IMI C	KEMOTE/		CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
GO	324	326	325	320	330	325			325. 0
RETURN	325	325	325	322	329	327			325. 5
TIDI OILL			020	<u> </u>	1 020	021	11		325. 3
EXH. GAS	CYL. OUT	TMP °C(	LOCAL)						1 020.0
RUN					CYL. NO.				
1				Г					MFAN

RUN	CIL. OUI	YL. OUT TMP C (LOCAL)  CYL. NO.							
NO.	1	2	3	4	5	6			MEAN
GO	-	-			-	-			
RETURN		-			-				

	THEDOCHARCED									
TURBOCHARGER										
RUN	SPEED	BLOW	ER IN	EXH. G	AS TEMP.	(REMOTE/I	LOCAL)	BACK PRESS.		
NO.	(min-1)	P(kPa)	T (°C)	IN	(℃)	OUT	(°C)	(mmAq)		
GO	10250	0.30	22. 5	358	<u> </u>	252	_	107		
RETURN	10200	0.30	22. 5	360		252		107		
MEAN	10225	0.30	22. 5	359		252		107		

	TURBOCHARGER							
RUN		LUB. OIL (REMOTE/LOCAL)						
NO.	P	(MPa)	IN $(\mathbb{C})$	OUT	(°C)			
GO	0.15	0.14	-	62.0	62. 5			
RETURN	0.15	0.13	-	63.0	62.5			
MEAN	0.15	0.13		62. 5	62. 5			

RUN	E/R TEMP. (℃)					
NO.	2ND	3RD	LOW.			
GO	20.5	22. 5	21.5			
RETURN	21.0	23.0	21.5			
MEAN	20.8	22. 8	21.5			

_	AIR COOLER										
I	RUN	AIR TEM	¶P. (℃)	C. W. TE	MP. (°C)	PRESS. DROP					
-	NO.	IN	OUT	IN	OUT	kPa					
	GO	106.0	37.0	22.0	31.0	0.85					
	RETURN	105.0	37.0	22.0	30.5	0.80					
	MEAN	105.5	37.0	22.0	30.8	0, 83					

	S/	T TEMP. (°	C) S/T L. (	). (MPa)	INTER	RM. SHAFT	BRG.
RUN	L. 0.	FWD			TEMP	P. ℃ (L00	CAL)
NO.		SEAL TK			NO. 1		
GO	26.0	43.0	0. 103		29. 5		***************************************
RETURN	27. 5	44.0	0. 103		30.0		
MEAN	26.8	43.5	0. 103		29.8		

ENGINE LOAD 70% SNO. 5388 P- 10/

RUN	F.O. CONSUMPTION						
NO.	ACTUAL	42700 kJ/kg					
NO.	kg/h	kg/h	g/kWh				
GO	1064.9	1014.2	168. 2				
RETURN	1050.5	1000.6	168.0				
MEAN	1057. 7	1007.4	168. 1				

RUN	SHIP		
NO.	SPEED		
NO.	knots		
GO	14.49		
RETURN	14. 75		
MEAN	14.62		

PUMPS

		L. 0.	JACKET C.F.W.	EXH. V. D. O.	COOL. S. W.	CYL. O. CIRC.	F.O. SUPPLY	F. O. CIRC.
USED NO.		1	1	<u>р. б.</u> 1	1	1	1	1
SUC. PRESS.	(MPa)	_	0.13	0. 23	0.048	0.05	0.08	0.43
DEL. PRESS.	(MPa)	0.32	0. 29	0.4	0. 225	0.07	0.43	0.65
CURRENT	(Amp)	70.0	11.0	4.5	62. 0		4. 2	5. 2

COOLER

	L. 0.	C. F. W.	
L.O. or F.W. IN (°C)	55.0	85. 0	
L.O. or F.W.OUT (°C)	44.0	29.0	
S.W. or F.W.IN (°C)	22.0	25. 0	
S.W. or F.W.OUT (℃)	25.0	29. 0	

HEATER

	F. 0.	
F.O. IN (°C)	117.0	
F.O. OUT (℃)	125.0	

TEMP. CONT. VALVE & VISCO. CONT. VALVE

I DMI : OOM : TILLY L	<del>\( \text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tin}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\tex{\tex</del>	COLUE TINE
	F. 0.	VISCO.
	(℃)	(cSt)
SET	-	13.0
ACTUAL	_	13.0
VALVE OPEN	-	6.5/10

TEMP, CONT. VALVE

I Dill & COIT	1 - 1111111				
		L. 0.	COOL		
			F.W.		
SET	(°C)	48. 0	85. 0		
ACTUAL	(°C)	48. 0	85. 0		
VALVE OPEN		0	B-2. 5		

CIMILITE				
		L. 0.	F. 0.	
		2ND	2ND	
IN PRESS.	(MPa)	0. 24	0.65	
OUT PRESS.	(MPa)	0. 23	0.64	
DIFF, PRESS.	(MPa)	0.01	0.01	

ከለጥለ	SHEET	ΛE	CEA	TOTAL

DATA SHE	ET OF SE	EA TRIAL		ENG	GINE LOAD	85%	SNO.	5388	P	11/
RUN	TIME	i .	VTER	BHP	BHP				HADLE	F. 0.
NO.	0.00	ENG.		(PS)	kw				DATA	RACK
GO	9:00	125		9878	7265				8.3	56.5
RETURN MEAN	9:40	125 125		9865	7255				8.3	<u>56. 5</u>
MEAN		120	. 0	9872	7260				8.3	<u>56. 5</u>
F. O. RACK	SCALE									
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MEAN
GO	57.0	56.5	56.5	56.5	56.0	55, 5				56.3
RETURN	<u>56.</u> 5	56. 5	56.0	56, 5	56.0	55. 5				56. 2
										56.3
RUN		,			CYL. NO.					1
NO.	1	2	3	4	5	6	<u> </u>			MEAN
GO	_			_	_		_	_		
RETURN		_	-		_	-			_	
COMP PPP		T (245)						-	•	
COMP. PRES	SS. IN CY	L. (MPa)			CYL. NO.					1
NO.	1	2	3	4	5	6	<u></u>			MEAN
GO	9.7	9.7	9.6	9.7	9.7	9.7				9. 7
RETURN	9. 7	9. 7	9. 6	9.7	9.7	9.7				9.7
		-	- 1	<u></u>		• -	<u> </u>		1	9.7
MAX. COMP.	PRESS. I	<u>N CYL</u> . (MI	Pa)							
RUN					CYL. NO.					1/15/11
NO.	1	2	3	4	5	6				MEAN
GO	13.3	13. 3	13.3	13. 2	13. 2	13. 2				13.3
RETURN	13. 2	13. 2	13. 2	13.2	13. 1	13. 1				13. 2
										13. 2
F DYDY I										
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MEDIA
GO	<u> </u>	_			-			-		
RETURN						_	_	-		
PRESSURE	(MPa) (	REMOTE /I (	CAL)							
RIIN							I MA	IN		
NO.	EXH. V. SP	RING AIR	SCAVE	N. AIR	CYL. C	. F. W.		OIL	FUEL	0IL
GO		0.62	0.18	_	0.28	_	0. 22	0. 22	0.64	_
RETURN		0.64	0. 18	-	0.28		0. 22	0. 22	0.64	
MEAN		0.63	0. 18		0.28		0. 22	0. 22	0.64	
					<u> </u>					t
RUN	COOI SE	A WATER	ርጥለው'	T. AIR	CONTRA	OL. AIR	EAR A VI	RIV. O. IN	DADOMEC	DIC/LD \
NO.		an WAIER	SIMK			Nr. VIV	<u> </u>		BAROMET	KIC(NPa)
GO	0. 22	-		2. 19	0.67		0.38	0.38	-	1014
RETURN	0. 22		_	1.92	0.70	_	0.38	0.37		1014
MEAN	0. 22			2.06	0.69		0.38	0.38		1014
RUN									1	
NO.	M/E CY	L.O.IN								
GO	_	0.07								1
RETURN		0.07			-					<u> </u>
MEAN		0.07								
		<u> </u>		1	I		1		<u></u>	
TEMPERATI	JRE (°C)	(REMOTE	/LOCAL)							
RUN	SCAVEN. AIR LUB. OIL IN				CHE: (	יאד ודר	CVI COO	E W TM	Tinic	T DAT
NO.		11. UTI/	LUD. U	117 TIA	FUEL (	OIL IN	UIL. COOL	. F. W. IN	L THRUS	T PAD
GO	40.0		48.0		123.0	125.0	76.0	75, 0	50.0	50.0
RETURN	40.0	-	48.0		124.0	125.0	75. 0	75. 0	50.0	50.1
MEAN	40.0		48.0		123.5	125.0	75.5	75.0	50.0	50.1
RUN	SEA V	VATER		DRIV.	M/E CYL	OIL IN	C. F. W. (			
NO.				, IN			JQ			
GO	13.0	-	*****	48.0		47.0	-	85.0	1	

RUN NO.	SEA V	VATER	EXH. V. OIL	.DRIV. .IN	M/E CYL	OIL IN	C. F. W. O	CYL COM UT		
GO	13.0	_		48.0	-	47.0		85.0		
RETURN	13. 0	-	_	48.0	_	47.0	_	85.0	-	
MEAN	13.0			48.0		47.0		85.0		

ACKET C RUN	OOL. F. W.	CYL. OUT	IMP °C(I	REMOTE)	CYL. NO.				
NO.	1	2	3	4	5	6	<u> </u>		MEAN
GO	85. 0	86.0	86. 0	86.0	85.0	85. 0			85. 5
RETURN	84.0	85.0	84. 0	85. 0	84.0	84. 0			84.3
								1	84. 9
ACKET C	OOL. F. W.	CYL. OUT	<u>rmp °C(i</u>	LOCAL)	A111				
RUN					CYL. NO.				— MEAN
<u>NO.</u> GO	85. 0	2	3	4	5	6			
RETURN	85. 0	85. 0 85. 0	85. 0 85. 0	85. 0 85. 0	85.0	85.0			85.0
KETUKIN	00.0	00.0	85.0	85.0	85. 0	85.0			85.0
TSTON C	COOL. OIL	OUT TMP	°C (REMO)	LE)					85.0
RUN	, , , , , , , , , , , , , , , , , , ,	OOI IMI	C (REMO)	11/	CYL. NO.				
NO.	1	2	3	4	5	6			─ MEAN
GO	54.0	55.0	55. 0	55.0	55.0	55.0			54.8
RETURN	54.0	55.0	55.0	55.0	55. 5	55.0			54.9
			0- 4						54. 9
	00L. 0IL	OUT TMP	°C (LOCAL	_)					
RUN					CYL. NO.				— MEAN
NO.	<u> </u>	2	3	4	5	6			
GO DETUDN	54.5	<u>55. 0</u>	55.0	<u>55. 0</u>	<u>55. 5</u>	55.0			55.0
RETURN	54.0	55.0	55. 0	55.0	55.0	55.0			54.8
YH CAS	CYL. OUT	TMP °C (I	REMOTE)						54.9
RUN	OIL. OOI	11111 () (1	(LINOIL)		CYL. NO.				
NO.	1	2	3	4	5	6		·····	─ MEAN
GO	334	333	333	336	346	337			336. 5
RETURN	335	335	334	334	341	333			335.3
									335. 9
	CYL. OUT	TMP °C(I	LOCAL)						
RUN				<u> </u>	CYL. NO.	·····			MEAN
NO.	<u>l</u>	2	3	4	5	6			BILLYDY
GO DETUDN				_	_	_			
RETURN			<del>-</del>	-	_				
									<u> </u>

ENGINE LOAD

	TURBOCHARGER										
RUN	SPEED	BLOWER IN		EXH. GAS TEMP.		(REMOTE/LOCAL)		BACK PRESS.			
NO.	(min-1)	P(kPa)	T (°C)	IN	$(\mathcal{C})$	OUT	(°C)	(mmAq)			
GO	11250	0, 35	22.5	374	ļ	248	_	160			
RETURN	11250	0.38	22, 5	375	-	248		160			
MEAN	11250	0.37	22. 5	375		248		160			

	TURBOCHARGER										
RUN		LUB. OIL (REMOTE/LOCAL)									
NO.	P	P (MPa) IN (°C) OUT (°C)									
GO	0.15	0.14	_	66.0	65. 5						
RETURN	0.15	0.14	_	66.0	66.0						
MEAN	0. 15	0. 14		66.0	65.8						

RUN	E/R TEMP. (℃)					
NO.	2ND	3RD	LOW.			
GO	21.0	23.0	22.0			
RETURN	21.0	23. 5	22.0			
MEAN	21.0	23. 3	22. 0			

AIR COOLER							
RUN	AIR TEN	ſ₽. (°C)	C.W. TE	MP. (°C)	PRESS. DROP		
NO.	IN	OUT	IN	OUT	kPa		
GO	123.0	42.5	22.0	32.5	0.95		
RETURN	123.0	43.0	21.5	32.0	0.90		
MEAN	123. 0	42.8	21.8	32. 3	0.93		

	S/	T TEMP. (°C)	S/T L.O. (MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	28. 0	46.0	0. 103	30.0
RETURN	28.0	46.5	0.103	30.0
MEAN	28.0	46.3	0. 103	30.0

RUN	F.O. CONSUMPTION					
NO.	ACTUAL	42700 kJ/kg				
NO.	kg/h	kg/h	g/kWh			
GO	1268. 2	1208.0	166.3			
RETURN	1265.7	1205.6	166. 2			
MEAN	1267.0	1206.8	166.2			

RUN	SHIP
	SPEED
NO.	knots
GO	15. 18
RETURN	15.58
MEAN	15. 38

PUMPS

		L. 0.	JACKET	EXH. V.	COOL.	CYL. O.	F. 0.	F. 0.
			C. F. W.	D. 0.	S. W.	CIRC.	SUPPLY	CIRC.
USED NO.		1	1	1	1	1	1	1
SUC. PRESS.	(MPa)	_	0.13	0. 23	0.048	0.05	0.08	0.43
DEL. PRESS.	(MPa)	0.33	0. 29	0.39	0. 225	0.07	0.43	0.65
CURRENT	(Amp)	70.0	11.0	4.5	62.0	_	4.2	5. 2

COOLER

000001			
	L. 0.	C. F. W.	
L.O. or F.W. IN (°C)	56.0	85.0	
L.O. or F.W.OUT (°C)	44.0	30.0	
S.W. or F.W.IN (°C)	22.0	26.0	
S.W. or F.W.OUT (°C)	26.0	31.0	

HEATER

	F. 0.	
F. O. IN (℃)	116.0	
F.O. OUT (℃)	125. 0	

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0.	VISCO.
	(°C)	(cSt)
SET	-	13.0
ACTUAL	-	13.0
VALVE OPEN	_	7/10

TEMP. CONT. VALVE

		L. 0.	COOL		
			F.W.		
SET	(°C)	48.0	85.0		
ACTUAL	(°C)	48.0	85.0		
VALVE OF	PEN	C-0.5	B-2		

~ 11(1111111111111111111111111111111111				
		L. 0.	F. 0.	
		2ND	2ND	
IN PRESS.	(MPa)	0. 24	0.65	
OUT PRESS.	(MPa)	0. 23	0.64	
DIFF, PRESS.	(MPa)	0.01	0.01	

n	ATA	SHEET	OΒ	CEA	TOTAL
"	AIA	SHEEL	1314	> HA	LKIAL

ENGINE LOAD 100%

SNO	-5388
31711	$-3.3\Delta\Delta$

p	1	1	/
	- 1	4	

DATA SHE	EET OF SE	EA TRIAL		ENG	SINE LOAD	100%	SNO.	5388	P	14/
RUN		COUR	VTER	BHP	BHP			<u> </u>	HADIR	F 0
NO.	TIME	4	RPM		1 .				HADLE	F. 0.
	10.0			(PS)	kw				DATA	RACK
GO	10:25	131		11646	8565				8.8	61.0
RETURN	11:05	131		11884	8740				8.8	62.0
MEAN	-	131	. 4	11765	8653				8.8	61.5
E O DACK	CCALE								<u> </u>	<u> </u>
F. O. RACK RUN	SCALE				CYL. NO.					<u> </u>
NO.	1	2	3	4	5	6		i		MEAN
GO	61. 5	61.5	61. 5	61.0	61.0				<u> </u>	C1 0
RETURN	62. 5	62. 5	62. 5	62. 0		60.5	<u> </u>			61. 2
KLIORY I	02.0	02.0	02.0	1 02.0	62. 5	61.5				62.3 61.7
DUN										V
RUN NO.	1	2	3	1 4	CYL. NO.	C	1	I	1	MEAN
GO	1			4	5	6				
				-	_	_				
RETURN		_	-		-	_				
COMP. PRE	SS. IN CY	L (MPa)								
RUN	-v. III VI.				CYL. NO.					100.00
NO.	1	2	3	4	5	6				MEAN
GO	11. 0	11.1	11.0	11.0	11.1	11.1	<u> </u>			11, 1
RETURN	11. 1	11. 2	11. 1	11. 2	11. 2	11. 2				11. 2
, a VIIII	~ ^ - ^ -	, <u></u>		,				I	.L	11. 1
MAX. COMP	. PRESS. II	N CYL. (MI	Pa)							11.1
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MEAIN
GO	14.0	14.0	14.0	14.0	14.0	14.0				14.0
RETURN	14.0	14. 1	14.0	14.0	14.0	14.0				14.0
					<u> </u>		.1		1	14.0
RUN					CYL. NO.					MEAN
NO.	1 :	2	3	4	5	6				MEAN
GO	-		-	-	_	****	-		_	
RETURN	_		-		_	_	_	<del></del>	_	
		777		-					•	
<b>PRESSURE</b>	(MPa) (	REMOTE/LO	OCAL)						'	
RUN	EVII V CD	ים דאור אדם	CCANE	INI ATD	CVI C	D UI	MA	IN		O.T.
NO.	EAR. V. SP	RING AIR	SCAVE	EN. AIR	CYL. C	. F. W.	LUB.		FUEL	. 01L
GO	_	0.63	0. 21	_	0. 28		0, 22	0. 22	0.63	
RETURN	_	0.67	0. 22		0.28	-	0. 22	0. 22	0.63	
MEAN	1	0.65	0. 22		0. 28		0. 22	0. 22	0.63	
1477171	1	V. UU	0. 22	1	U. 40		U. 44	U. ZZ	1 0.03	
RUN	COOI CE	A WATER	C/T A D/	T. AIR	COMPDO	יודא וו	EVII 1/ IN	OTV O TAY	DADOMES	TOUR \
NO.		A BAILN	JAIC	1. N1N	CONTRO	vr. VIV	EATI. Y. DI	RIV. O. IN	BAROMETI	tic (nPa)
GO	0.22	_		2. 43	0.63		0.37	0.37		1014
RETURN	0. 22		_	1.73	0.63		0.37	0.37	_	1014
MEAN	0. 22	<u> </u>		2.08	0.63		0.37	0.37		1014
				·						1011
RUN	M/E CY	I O IN								
NO.	m/E CI	r. o. III							<u> </u>	
GO	- 1	0.07								
RETURN	_	0.07								
MEAN		0.07			<u> </u>					
	·····									
TEMPERAT	URE (℃)	(REMOTE	/LOCAL)				T			
RUN	SCAVE	NATR	I IIR O	IL IN	FUEL C	TI TN	CAI COU	F. W. IN	THRUS	T DAD
NO.		11. (111I/		TL III				W. 11N	Lukus	I FAD
GO	45.0	_	48.0	_	121.0	123. 0	73.0	72.0	50.0	50. 5
RETURN	45.0	_	48.0	_	122.0	123. 0	73.0	72. 0	50.0	50.5
MEAN	45.0		48.0		121.5	123. 0	73.0	72. 0	50.0	50.5
						12010		· 4. V	, 00.0	
RUN	ODA "	IATED	EXH. V.	DRIV.	u/n our	OT: 733	C. F. W. C	CYL COM		
NO.	SEA V	YAIEK		. IN	M/E CYL	. UIL IN	JO JO			

RUN NO.	SEA V	VATER	EXH. V. OIL	DRIV. IN	M/E CYL	OIL IN		CYL COM UT	
GO	13.0	****		48.0	_	47.0	_	85. 0	
RETURN	13.0			48.0	<del>-</del>	47.0	-	85.0	
MEAN	13.0			48.0		47.0		85.0	

						200,0	51,01 0000	1	10/
TACKET (	COOL. F. W.	CYL. OUT	TMP °C()	REMOTE)					
RUN		010.001	11/11 (1	KIDINO FED	CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
GO	83. 0	84. 0	83. 0	84.0	83. 0	83. 0			83. 3
RETURN	84.0	84. 0	84.0	84.0	83. 0	84. 0			83.8
									83.6
<u> JACKET (</u>	OOL. F. W.	CYL. OUT	TMP °C(1	LOCAL)					
RUN					CYL. NO.				MEAN
NO.	1	2	3	4	5	6			
GO RETURN	85.0	85.0	85. 0	85.0	85.0	85.0			85. 0
KETUKIN	85.0	85.0	85. 0	85.0	85.0	85. 0			85. (
TSTON (	COOL. OIL	OHT TMD	°C (REMO	רבו				L	85. (
RUN	OOL. OIL	001 1WI	C (REMO	112)	CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
GO	55. 0	56. 0	56.0	56.0	56.0	56.0			55. 8
RETURN	55.0	56.0	56.0	57.0	56.0	56.0			56. (
	,							· · · · · · · · · · · · · · · · · · ·	55. 9
ISTON C	00L.0IL	OUT TMP	℃ (LOCAI	L)				L	
RUN			· · · · · · · · · · · · · · · · · · ·		CYL. NO.				MEAN
NO.	<u>l</u>	2	3	4	5	6			
GO	<u>55. 0</u>	56.0	56. 0	56.0	57.0	<u>56. 0</u>			56.
RETURN	55. 5	56.0	56.0	56.5	56.5	56.0			56.
YH CAS	CYL. OUT	TMD % (1	REMOTE)					L	56,
RUN	C1L. 001	IMI C(I	KEMOTE)		CYL. NO.				
NO.	1	2	3	4	5	6			MEA
GO	353	357	354	350	357	356			354.
RETURN	351	352	353	354	359	359			354.
									354.
EXH. GAS CYL. OUT TMP °C (LOCAL)									
RUN					CYL. NO.				MEA
NO.	1	2	3	4	5	6			MEAL
			_		-	-			
GO RETURN			_						

	TURBOCHARGER							
RUN	SPEED	BLOW	ER IN	EXH.	GAS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.
NO.	(min-1)	P(kPa)	T (°C)	IN	(°C)	OUT	(°C)	(mmAq)
GO	12000	0.45	23.0	399		256	-	208
RETURN	12100	0.46	23.0	402	-	257	1	210
MEAN	12050	0.46	23.0	401	*	257		209

	TURBOCHARGER						
RUN		LUB. OIL (REMOTE/LOCAL)					
NO.	Р	(MPa)	IN (℃)	OUT	(°C)		
GO	0. 15	0.14		68.0	68.0		
RETURN	0.15	0.14	_	68.0	68.0		
MEAN	0.15	0.14		68.0	68. 0		

RUN	E/R	TEMP. (	°C)
NO.	2ND	3RD	LOW.
GO	21.0	24. 0	22. 5
RETURN	21.0	24.0	22.5
MEAN	21.0	24.0	22. 5

AIR COOL	ER				
RUN	AIR TEM	ΛΡ. (°C)	C. W. TE	MP. (°C)	PRESS. DROP
NO.	IN	OUT	IN	OUT	kPa
GO .	135.0	49.0	22.0	36.0	0. 95
RETURN	137.0	49.0	22.0	36.5	0. 95
MEAN	136 0	49 N	22.0	363	0.95

	S/	T TEMP. (°C)	S/T L.O. (MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	28. 5	47.5	0. 103	31. 0
RETURN	28. 5	48.0	0. 103	32. 0
MEAN	28. 5	47.8	0. 103	31.5

RUN	F. 0.	. CONSUMP	LION
NO.	ACTUAL	42700	kJ/kg
NO.	kg/h	kg/h	g/kWh
G0	1477.4	1407.1	164.3
RETURN	1506.8	1435.2	164. 2
MEAN	1492 1	1421 2	164-3

	RUN	SHIP
	NO.	SPEED
	IYO.	knots
	GO	15.71
RI	ETURN	16, 23
N	1EAN	15. 97

<u>PUMPS</u>

		L. 0.	JACKET C. F. W.	EXH. V. D. O.	COOL. S.W.	CYL. O. CIRC.	F. O. SUPPLY	F. O. CIRC.
USED NO.		1	1	1	1	I	1	1
SUC. PRESS.	(MPa)	_	0.13	0. 23	0.045	0.05	0.08	0.42
DEL. PRESS.	(MPa)	0.33	0. 29	0.38	0. 225	0.07	0.42	0.65
CURRENT	(Amp)	70.0	11.0	4.5	62.0		4.2	5. 2

**COOLER** 

	L. 0.	C. F. W.	
L.O. or F.W.IN (°C)	57.0	85. 0	
L.O. or F.W.OUT (℃)	45.0	32.0	
S.W. or F.W.IN ( $^{\circ}$ C)	22.0	27.0	
S.W. or F.W.OUT (°C)	27.0	33.0	

HEATER

	F. 0.		
F. 0. IN (℃)	115. 0		
F.O. OUT (℃)	125.0		,

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0. (℃)	VISCO. (cSt)
SET		13.0
ACTUAL	-	13.0
VALVE OPEN		7.5/10

TEMP, CONT. VALVE

TEMI CON	t YALYL				
		L. 0.	COOL		
			F. W.		1
SET	(°C)	48.0	85.0		
ACTUAL	(°C)	48.0	85.0		
VALVE OF	PEN	C-1	B-1.5		

		L. O. 2ND	F. 0. 2ND	
_IN PRESS.	(MPa)	0.24	0.65	
OUT PRESS.	(MPa)	0. 23	0,64	
DIFF, PRESS.	(MPa)	0.01	0.01	

KIND	OF OIL	FUEL	OIL
NA NA	ME	DIESEL OIL	HEAVY FUEL OIL
SPECIFIC GRAVIT	Y 15/4℃	0.8743	0.954
	(cSt at 50.0°C)	2. 791	152
VISCOCITY			
FLASH POINT	℃	73. 5	88. 5
POUR POINT	$^{\circ}$	-20.0	-22.5
WATER CONTENT	VOL. %	0	0.05
CARBON RESIDUE	WT. %	0.005	12.3
NITROGEN	%	0.03	0. 25
SULPHUR	%	0.71	2. 59
HIGH CALORIFIC LOWER CALORIFIC		44920 42210	43090 40670

#### 6. RESULT OF MAIN ENGINE MINIMUM RUNNING TEST

MEASURED ITEM	RES	SULT	REMARKS
MAIN ENGINE REVOLUTION	35.0	min-1	
FUEL OIL RACK	18.0		
TURBO CHARGER REVOLUTION	1950	min-1	
SCAV, AIR PRESSURE	0.05	MPa	
SCAV, AIR TEMPERATURE	28.0	°C	

#### 7. M/E EMERGENCY STOP TEST

**RESULT** 

1) OVER SPEED TRIP
(M/E R. P. M. FOR TEST 100 min<sup>-1</sup>)

 $100 \text{min}^{-1}$ 

2) M/E BRG L. O. LOW PRESSURE TEST (SET 0.08 MPa)

<u>0.08MPa</u>

3) EXH. DRIVE OIL LOW PRESSURE TEST (SET 0.20 MPa)

<u>0.2MPa</u>

4) EXH. V. SPRING AIR LOW PRESSURE TEST (SET 0.44 MPa)

0.45MPa

5) MANUAL EMERGENCY STOP

C/R

GOOD

#### 8. RESULT OF STARTING INTERLOCK TEST

RESULT

1) TURNING GEAR "ENGAGED" 2) LUB OIL LOW PRESS.

(ENGAGED) (SET 0.08 MPa) GOOD GOOD

3) CAM SHAFT STOPPER "DISENGAGED"

(DISENGAGED)

GOOD

DATE		13-Mar-07
ROOM TEMPERATURE	$^{\circ}$ C	22
LUB.OIL INLET TEMP.	$^{\circ}$ C	48
FUEL OIL INLET TEMP.	°C	25
CYL. C. W. INLET TEMP.	°C	44

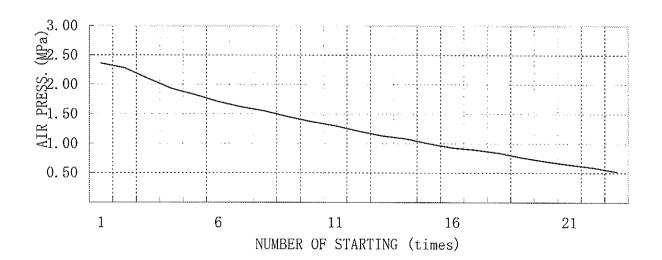
RESULT OF TEST

(No. 2 AIR RESERVOIR USED)

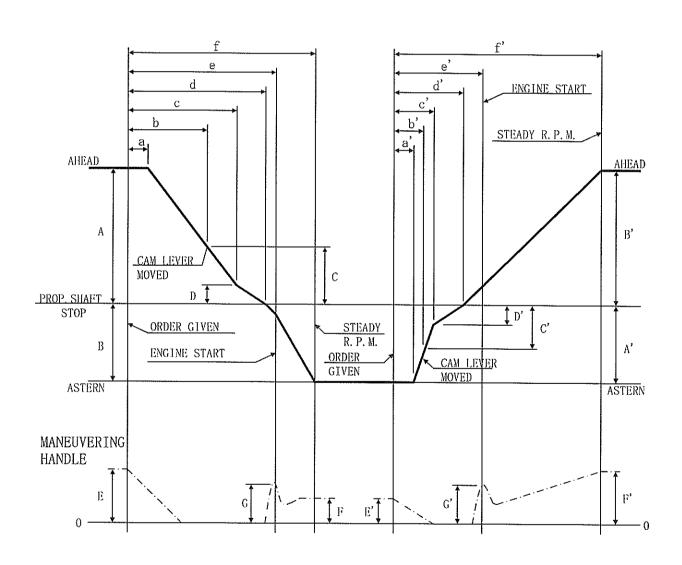
NUMBER	AIR VESSEL	PRESS.		NUMBER	AIR VESS	EL PRESS.	
OF	(MPa)			OF	(M	Pa)	
START.	BEFORE	AFTER		START.	BEFORE	AFTER	]
	STARTING	STARTING	NOTE		STARTING	STARTING	NOTE
1	2.36	2. 28	AHEAD	18	0.84	0.76	ASTERN
2	2, 28	2. 10	ASTERN	19	0. 76	0.70	AHEAD
3	2. 10	1. 93	AHEAD	20	0. 70	0.64	ASTERN
4	1	1.83	ASTERN	21	0.64	0.59	AHEAD
5	1.83	1.71	AHEAD	22	0. 59	0.52	ASTERN
6		1.62	ASTERN	23	0. 52	FAIL	AHEAD
7	1.62	1. 55	AHEAD	24			ASTERN
8	1.55	1. 45	ASTERN	25			AHEAD
9	1, 45	1. 37	AHEAD	26			ASTERN
10	<del></del>	1. 30	ASTERN	27			AHEAD
11	1.30	1.21	AHEAD	28			ASTERN
12	1.21	1. 13	ASTERN	29			AHEAD
13	1. 13	1. 08	AHEAD	30			ASTERN
14		1. 00	ASTERN	31			AHEAD
15		0. 93	AHEAD	32			ASTERN
16	0, 93	0.89	ASTERN	33			AHEAD
17	0.89	0.84	AHEAD	34			ASTERN

CAPACITY OF STARTING AIR BOTTLE	$\mathrm{m}^3$	4.0
NUMBER OF STARTING	NUNBER	22
PRESSURE DROP FOR STARTING	MPa	1.84
TOTAL AIR CONSUMPTION	$m^3$	72. 6
AIR CONSUMPTION PER ON STARTING (FREE AIR)	$m^3$	3. 30
STROKE VOLUME	$\mathrm{m}^3$	2. 3573
AIR CONSUMPTION PER ON STARTING / STROKE VOLUME		1. 40

-DIAGRAPH- (C/R CONTROL) STARTING AIR PRESS. - NUMBER OF STARTUNG



		AF	$I \rightarrow AS$	AS	$\rightarrow$ AH
	AT ORDER GIVEN	A	131.4	A'	95
M/E REVOLUTION	AT STEADY R.P.M.	В	95	B'	131.4
(min-1)	AT CAM MOVED	C	42	C'	42
	AT OPERATION FOR START	D	30	D'	30
	FROM ORDER TO HANDLE STOP	a	10''	a'	7''
	FROM ORDER TO CAM MOVED	b	3' 27' '	b'	11''
TIME	FROM ORDER TO OPERATION FOR START	С	3' 28' '	c'	13''
(MIN. & SEC.)	FROM ORDER TO M/E STOP	d	3' 29' '	ď	14''
	FROM ORDER TO M/E START	е	3' 30' '	e'	15''
	FROM ORDER TO STEDY R.P.M.	f	5' 07' '	f'	11' 53' '
POSITION OF	AT ORDER GIVEN	Е	8. 7	E'	5. 5
MANEUVRING	AT STEADY R.P.M.	F	5. 5	F'	8. 7
HANDLE	AT STARTING	G	_	G'	
AIR PRESSURE	BEFORE START		2.40		1. 77
(MPa)	AFTER START		2. 01	1. 62	

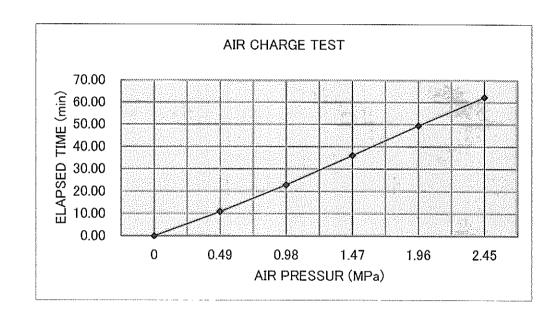


This test to be carried out to confirm the elapsed time to charge an air vessel with compressed air from 0 MPa to 2.45 MPasatisfys the requirement of classification society.

DATE	13-Mar-07
Type of air compressor	C220
Room temp.	26
Capacity of air vessel	$4 \text{ m}^3$

NO. 1 AIR COMP.  $\rightarrow$  NO. 2 AIR RESERV.

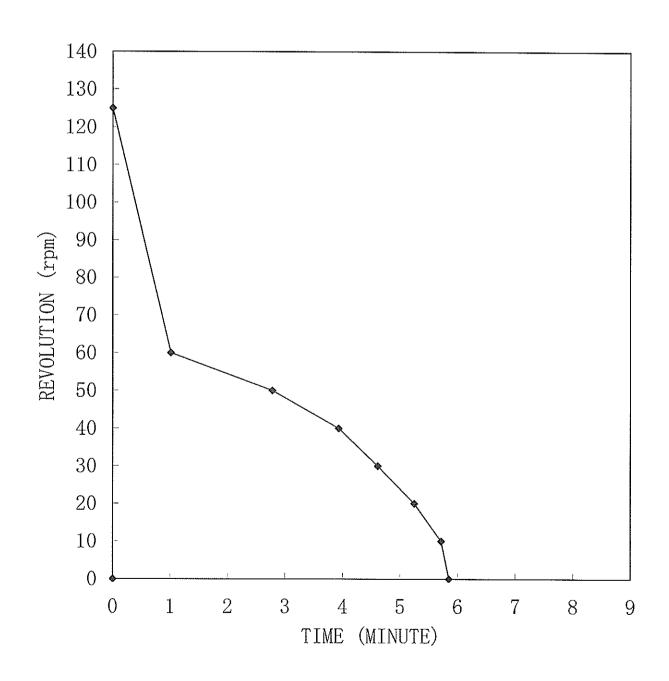
AIR PRESSURE	Elapsed time		
MPa	(min. & sec.)		
0 - 0.49	10	52	
0 - 0.98	22	52	
0 - 1.47	36	5	
0 - 1.96	49	21	
0 - 2.45	62	11	



DATE				14-Ma	ar-07		
DISTILER	TYPE			KE	20	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
DISTILER	RATE OUTPUT	m <sup>3</sup> /24h	<sup>3</sup> /24h 20				
MAIN ENGINE L	OAD (%)			85% (ジャケット)	85% (スチーム)		
	MEASURE. TIME	min		30	15		
DISTILATE	CAPACITY	m <sup>3</sup> /24h		20. 16	20. 54		
	SALINITY	P. P. M.		1.7~5.5	1.6~5.0		
		! <u></u>	EVAPORATOR				
JACKET WATER	IN	°C		85. 5	71.5		
JACKET WATER	OUT	℃		66. 5	62. 5		
DIFF.		$^{\circ}$		19	9		
		· · · · · · · · · · · · · · · · · · ·	CONDENSER	<u> </u>			
SEA WATER IN		°C		15	15		
SEA WATER OUT		$^{\circ}$ C		25	24. 5		
DIFF.		℃		10	9. 5		
SHELL TEMPERA	TURE	℃		46	45. 5		
SHELL VACUUM		cmHg		-68	-68		
EJECTOR PUMP	SUCTION	MPa		0. 085	0. 085		
EJECTOR PUMP	DISCHARGE	MPa		0. 545	0. 55		
WATER EJECTOR INLET MPa				0. 045	0. 05		
DISTILLATE PU	MP DEL	MPa		0.16	0.16		
FEED WATER PR	ESSURE	MPa		0. 41	0. 41		
BY-PASS VALVE	(FROM FULL OPE	N)		4. 5/10			
STEAM PRESSUR	E	MPa		_	0. 56		

COMMENTS

M/E REVOLUTION (min <sup>-1</sup> )	125	60	50	40	30	20	10	0
TIME (MINUTE)	0' 00"	1' 01"	2' 47"	3' 56"	4' 37"	5′ 15″	5′ 43″	5′ 51″
M/E REVOLUTION (min <sup>-1</sup> )								
TIME (MINUTE)			·					



PLACE		· · · · · · · · · · · · · · · · · · ·	TVO	054	
DATE				SEA	
KIND OF LOAD		500		1, 2007	
KIND OF FUEL & CALORIFIRE VALUE		50%	70%	85%	100%
SPEED OF REVOLUTION	min <sup>-1</sup>	HEAVY FU		40670	KJ/kg
BREAKE HORSE POWER (B. H. P. )		105.9	118.4	125. 9	131.9
BREAKE HORSE POWER (B. H. P. )	KW (PS)	4643	6268	7470	8735
SHIP SPEED (knots)	(13)	6313	8522	10157	11877
OHIT OF EED ( MIOCS)		13.86	15. 24	16. 19	16. 72
FUEL CONSUMPTION					
NET PRE HOUR	Kg/h	813.6	1089.6	1207 0	1510 4
NET PRE HOUR (42700 kJ/kg)	Kg/h	774.9	1037.8	1307. 9 1245. 7	1518.4
g/BHP/HOUR (42700 kJ/kg)	g/KW.h	166. 9	165. 6	166.8	1446, 2
g/kW/HOUR (ISO CONDITION)	g/kWh	167. 0	165. 5	166. 7	165. 6 165. 6
g/PS/HOUR (ISO CONDITION)		122. 8	121. 7	122. 6	121.8
FUEL PUMP RACK SCALE	(8/1011/	43.0	52. 2	57.3	
		1 10.0	04.4	01.0	62. 2
PRESSURE (LOCAL)	MPa				
MAX. COMBUSTION PRESS. (MEAN)		9. 59	11. 75	13. 20	13.83
COMPRESSION PRESS. (MEAN)		6. 34	8. 43	10. 18	11. 18
SCAVENG. AIR MANIFOLD		0.09	0. 15	0. 19	0. 23
CYL. COOLING WATER (REMOTE)		0. 28	0. 28	0. 28	0. 28
LUBRICATION OIL		0.21	0. 21	0. 20	0. 20
TURBOCHARGER LUB. OIL		0.13	0.14	0.13	0. 13
FUEL OIL (REMOTE)		0.64	0.64	0.64	0.64
EXH. V. DRIV. OIL		0.39	0.38	0.38	0.38
START. AIR		2. 10	2. 13	2. 10	2. 10
COOL. SEA WATER (REMOTE)		0.19	0.19	0.19	0.18
CYL. OIL. INLET		0.07	0.07	0.07	0.07
BAROMETRIC PRESS.	(hPa)	1014	1014	1014	1014
TEMPERATURE (LOCAL)	°C				
Poor	2ND DECK	24.0	24. 3	24.8	25.0
ROOM	3RD DECK	24.5	25.8	26.8	27.0
PUPI OIL TNI PT	LOWER	24. 3	24. 5	25.0	25.5
FUEL OIL INLET	TAIL DO	125.0	126.0	127.0	127. 0
CYL. COOL. WATER	INLET	78.5	78.0	77.0	75.0
PISTON COOLLING OIL	OUTLET (MEAN)	85.7	85.6	85.8	85, 4
LUBRICATION OIL INLET	OUTLET (MEAN)	53.0	54. 4	55.8	56.9
EXH. GAS AT CYLINDER OUTLET		48.0	48.0	48. 0	48.0
(MEAN)	REMOTE	205.0	00E 7	007.7	050.0
CYL. OIL. INLET	I KEMOTE	325. 3	325. 7	337.7	358. 2
OTE. VIL. INELI		52. 5	52. 0	52.0	52. 0
SCAVENG. AIR MANIFOLD		20.0	97 5	40.0	45.0
TURBOCHARGER		29. 0	37.5	40.0	45.0
SPEED OF REVOLUTION (MEAN)	min <sup>-1</sup>	0600	10500	11500	10000
	INLET °C	8600	10500	11500	12200
EXH. GAS AT TURBOCHARGER	OUTLET °C	354 275	362	379	406
EXH. GAS PRESS. TURBINE OUTLET	mmAg	∠75 51	252	248	259
	HIRELY .	16	112	167	218
LUB.OIL TEMP.	OUTLET °C	58. 3	63. 0	66.5	69. 0
T/C BLOWER INLET TEMP.	°C	25. 0	25. 5	26. 0	26. 5
A APPLIA			٥٠. ت	40. U	۷٥. ن
•					
		<u></u>			

REMARKS

MAIN ENGINE:

KOBE DIESEL-MITSUBISHI 6UEC52LS

 $8670 \text{ kW} \times 127 \text{ min}^{-1}$ 

STOP WATCH: MST 0200

THERMOMETER: MTE 1100

(BAI	A SHEET ( LLAST CO			ENC	SINE LOAD	50%	SNO.	5388	P-	24/
RUN NO.	TIME		NTER . RPM	BHP (PS)	BHP kw				HADLE	F. 0.
GO	6:05	105		6343	4665				DATA 6. 60	RACK 43. 0
RETURN	6:45	105		6282	4620				6, 60	42. 0
MEAN	_	105	5, 9	6313	4643				6.60	42. 5
F. O. RACK	SCALE				OVI NO					
NO.	1	2	3	4	CYL. NO.	6	- <u>                                    </u>	F	1	MEAN
GO	43. 5	43. 5	43. 5	43.5	43. 5	43.0				43. 4
RETURN	43. 0	42.5	42. 5	43. 0	42. 5	42.0				43. 4
					,	1 200		1	<u> </u>	43. 0
RUN					CITY ATO					10.0
NO.	1	2	3	4	CYL. NO.	6	1	I	I	MEAN
GO	<u></u>		_	<u>+</u> 	<u>.</u>			_		
RETURN	_	_	_					_		
							_L	[	J	
	SS. IN CY	<u>L. (M</u> Pa)			OUT 150					
RUN NO.	1	2	3		CYL. NO.		T			MEAN
GO	6. 40	6.40	6. 40	6.40	5 6. 40	6 6. 40				
RETURN	6. 30	6, 30	6. 20	6. 30	6. 30	6.30				6. 40 6. 28
		1		0.00	1 0.00	0.00				6. 34
	. PRESS. I	N CYL. (M	Pa)							0.01
RUN					CYL. NO.		_			MEAN
NO. GO	9. 80	2	3	4	5	6				
RETURN	9. 50	9. 60	9. 80 9. 50	9.80 9.50	9. 70 9. 40	9. 60 9. 50				9. 72
RETORIT	_ <i>0</i> , 00	3.40	9.00	9.00	9.40	9.50			<u>L</u>	9. 47
									ĺ	9.09
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6	ļ <u>.</u> .			MEAN
GO RETURN			-	_					-	
INDIONIA					i	-				
PRESSURE	(MPa) (	REMOTE/LO	OCAL.)						Į.	
I DIM I		TO TE, E						717		
RUN				N. ATR	CYL. C	. F. W.	MA		FIIFI	OTI
NO.	EXH. V. SP	RING AIR	SCAVE	N. AIR	CYL. C	. F. W.	LUB.	OIL	FUEL	. OIL
NO. GO	EXH. V. SP -	RING AIR	SCAVE 0.09		0. 28		LUB. 0. 22	OIL 0.21	0.64	. OIL -
NO. GO RETURN	EXH. V. SP	PRING AIR 0.61 0.65	SCAVE 0. 09 0. 09		0. 28 0. 28	- F. W.	LUB. 0. 22 0. 22	0IL 0. 21 0. 21	0. 64 0. 64	. OIL 
NO. GO RETURN MEAN	EXH. V. SP -	RING AIR	SCAVE 0.09		0. 28		LUB. 0. 22	OIL 0.21	0.64	. OIL 
NO. GO RETURN MEAN	EXH. V. SP - -	PRING AIR 0.61 0.65	SCAVE 0. 09 0. 09 0. 09		0. 28 0. 28 0. 28		LUB. 0. 22 0. 22 0. 22	0IL 0. 21 0. 21 0. 21	0. 64 0. 64 0. 64	
NO. GO RETURN MEAN RUN NO.	EXH. V. SP - - - COOL. SE	PRING AIR 0.61 0.65 0.63	SCAVE 0. 09 0. 09 0. 09 STAR	r. AIR	0. 28 0. 28 0. 28		LUB. 0. 22 0. 22 0. 22 0. 22	0IL 0. 21 0. 21 0. 21	0. 64 0. 64 0. 64 BAROMETE	- - RIC (hPa)
NO. GO RETURN MEAN  RUN NO. GO	EXH. V. SP  COOL. SE 0. 18	PRING AIR 0.61 0.65 0.63	SCAVE 0. 09 0. 09 0. 09	F. AIR	0. 28 0. 28 0. 28 0. 28	DL. AIR	LUB. 0. 22 0. 22 0. 22 0. 22  EXH. V. DF 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39	0. 64 0. 64 0. 64 BAROMETE	- - RIC (hPa) 1014
NO. GO RETURN MEAN RUN NO.	EXH. V. SP - - - COOL. SE	PRING AIR 0.61 0.65 0.63	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62		LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN	EXH. V. SP  COOL. SE 0. 18 0. 19	PRING AIR 0.61 0.65 0.63	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR	0. 28 0. 28 0. 28 0. 28	DL. AIR	LUB. 0. 22 0. 22 0. 22 0. 22  EXH. V. DF 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39	0. 64 0. 64 0. 64 BAROMETE	- - RIC (hPa) 1014
RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN	COOL. SE  0. 18 0. 19 0. 19	PRING AIR 0.61 0.65 0.63	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
RUN MEAN  RUN NO. GO RETURN  RUN NO. GO RETURN  MEAN  RUN  NO.	COOL. SE  0. 18  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER - L. O. IN	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
RUN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN NO. GO GO	COOL. SE  0. 18  0. 19  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER 	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
RUN MEAN  RUN NO. GO RETURN  RUN NO. GO RETURN  MEAN  RUN  NO.	COOL. SE  0. 18  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER - L. O. IN	SCAVE 0. 09 0. 09 0. 09 STAR	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MO. GO RETURN MEAN	COOL. SE  0. 18  0. 19  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER 	SCAVE  0. 09  0. 09  0. 09  START	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT	COOL. SE  0. 18  0. 19  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER 	SCAVE  0. 09  0. 09  0. 09  START	F. AIR 2. 30 1. 90	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62	DL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN	COOL. SE  0. 18  0. 19  M/E CY	0. 61 0. 65 0. 63 A WATER 	SCAVE  0. 09  0. 09  0. 09  START	7. AIR  2. 30  1. 90  2. 10	0. 28 0. 28 0. 28 0. 65 0. 65 0. 62 0. 64	DL. AIR	EXH. V. DF 0. 39 0. 39 0. 39	OIL	0. 64 0. 64 0. 64 BAROMETF	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN TEMPERAT RUN NO.	COOL. SE  0. 18  0. 19  0. 19  M/E CY   URE (°C)  SCAVE	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09  0. 09  START  /LOCAL)  LUB. 0	7. AIR  2. 30  1. 90  2. 10	0. 28 0. 28 0. 28 0. 65 0. 62 0. 64	DL. AIR	EXH. V. DF  0. 39  0. 39  0. 39  CYL. COOL	0.21 0.21 0.21 0.21 RIV. O. IN 0.39 0.39 0.39	0. 64 0. 64 0. 64 BAROMETE	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO GO	COOL. SE  0. 18  0. 19  0. 19  M/E CY  -  URE (°C)  SCAVE  29. 0	O. 61 O. 65 O. 63  CA WATER  CL. O. IN O. 07 O. 07 O. 07 O. 07	SCAVE  0. 09  0. 09  START  /LOCAL)  LUB. 0	7. AIR  2. 30  1. 90  2. 10	0. 28 0. 28 0. 28 0. 65 0. 62 0. 64 FUEL 0	DL. AIR	EXH. V. DF  0. 39  0. 39  0. 39  CYL. COOL	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39 0.39	0. 64 0. 64 0. 64 BAROMETF - - - THRUS	
RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN	COOL. SE  0. 18  0. 19  0. 19  M/E CY  -  URE (°C)  SCAVE  29. 0  29. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09  0. 09  START  /LOCAL)  LUB. 0  48. 0  48. 0	7. AIR  2. 30  1. 90  2. 10	0. 28 0. 28 0. 28 0. 65 0. 65 0. 62 0. 64 FUEL 0 124. 0 125. 0	DL. AIR	EXH. V. DR  0. 39  0. 39  0. 39  CYL. COOL  78. 0  78. 0	OIL	0. 64 0. 64 0. 64 BAROMETF 	T PAD 48.6 48.6
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	COOL. SE  0. 18  0. 19  0. 19  M/E CY  -  URE (°C)  SCAVE  29. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09 0. 09 0. 09  STAR1   /LOCAL)  LUB. 0  48. 0 48. 0 48. 0	F. AIR  2. 30 1. 90 2. 10  IL IN	0. 28 0. 28 0. 28 0. 65 0. 62 0. 64 FUEL 0	DL. AIR	EXH. V. DF  0. 39  0. 39  0. 39  CYL. COOL	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39 0.39	0. 64 0. 64 0. 64 BAROMETF - - - THRUS	
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN	COOL. SE  0. 18  0. 19  0. 19  M/E CY   URE (°C)  SCAVE  29. 0  29. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09 0. 09 0. 09 START  /LOCAL) LUB. 0 48. 0 48. 0 48. 0 48. 0	F. AIR  2. 30 1. 90 2. 10  IL IN  DRIV.	0. 28 0. 28 0. 28 0. 65 0. 62 0. 64 FUEL 0 124. 0 125. 0 124. 5	OL. AIR	EXH. V. DE  0. 22  0. 22  EXH. V. DE  0. 39  0. 39  0. 39  CYL. COOL  78. 0  78. 0  78. 0  78. 0	0.21 0.21 0.21 0.21 RIV. 0. IN 0.39 0.39 0.39 0.39	0. 64 0. 64 0. 64 BAROMETF 	T PAD 48.6 48.6
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	EXH. V. SP  COOL. SE 0. 18 0. 19 0. 19  M/E CY URE (°C) SCAVE 29. 0 29. 0 29. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09 0. 09 0. 09 START	F. AIR  2. 30 1. 90 2. 10  IL IN  DRIV. IN	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62 0. 64 FUEL O 124. 0 125. 0 124. 5	OL. AIR	LUB.  0. 22  0. 22  0. 22  EXH. V. DF  0. 39  0. 39  0. 39  CYL. COOL  78. 0  78. 0  C. F. W. C	OIL	0. 64 0. 64 0. 64 BAROMETF 	T PAD 48.6 48.6
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN NO. GO RETURN RUN NO. GO RETURN RUN NO. GO RETURN MEAN	EXH. V. SP  COOL. SE  0. 18 0. 19 0. 19  M/E CY URE (°C) SCAVE 29. 0 29. 0 29. 0 SEA W 13. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09 0. 09 0. 09 START	IL IN  DRIV. IN 47. 5	0. 28 0. 28 0. 28 0. 65 0. 62 0. 64 FUEL (124. 0 125. 0 124. 5 124. 5	OL. AIR	LUB. 0. 22 0. 22 0. 22 EXH. V. DF 0. 39 0. 39 0. 39 0. 39 0. 39 CYL. COOL 78. 0 78. 0 78. 0 OL 0L	OIL	0. 64 0. 64 0. 64 BAROMETF 	T PAD 48.6 48.6
NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	EXH. V. SP  COOL. SE 0. 18 0. 19 0. 19  M/E CY URE (°C) SCAVE 29. 0 29. 0 29. 0	PRING AIR  0. 61  0. 65  0. 63  CA WATER	SCAVE  0. 09 0. 09 0. 09 START	F. AIR  2. 30 1. 90 2. 10  IL IN  DRIV. IN	0. 28 0. 28 0. 28 0. 28 CONTRO 0. 65 0. 62 0. 64 FUEL O 124. 0 125. 0 124. 5	OL. AIR	LUB.  0. 22  0. 22  0. 22  EXH. V. DF  0. 39  0. 39  0. 39  CYL. COOL  78. 0  78. 0  C. F. W. C	OIL	0. 64 0. 64 0. 64 BAROMETF 	T PAD 48.6 48.6

	OOL. F. W.	CYL. OUT	TMP °C(I	REMOTE)					
RUN CYL, NO.							MEAN		
NO. GO	25.0	2	3	4	5	6			
RETURN	85. 0 86. 0	86. 0 86. 0	85. 0 86. 0	85. 0 86. 0	85. 0 85. 0	85.0			85. 2
RETURN	00.0	00,0	00.0	00.0	85.0	85.0			85.7
	OOL. F. W.	CYL. OUT	<u> MP °C(I</u>	LOCAL)					85.4
RUN			T		CYL. NO.				MEAN
NO.	1	2	3	4	5	6			
GO	86.0	86.0	86.0	85.0	85.0	86.0			85. 7
RETURN	86. 0	86. 0	86.0	85.0	85.0	86, 0			85, 7
PISTON (	COOL. OIL	OUT TMP	°C (REMO)	re)					85.7
RUN		001 1111	C (Hallo)	. 43/	CYL. NO.				T
NO.	1	2	3	4	5	6			MEAN
GO	51.0	52, 0	52.0	53.0	52.0	52. 0			52.0
RETURN	51.0	52.0	52.0	53.0	52.0	52.0			52.0
			0.7. (						52.0
	00L. 0IL	OUT TMP	°C (LOCAI	ر,					
RUN					CYL. NO.	I	1		MEAN
NO.	1 50.5	2	3	4	5	6			
GO RETURN	52. 5 52. 5	53. 0 53. 0	53.0	53.0	53.5	53.0			53.0
KETUKN	ງ⊿. ວ	53.0	53. 5	53.0	53.5	53.0			53. 1
EXH. GAS	CYL. OUT	TMP °C(I	REMOTE)						53.0
RUN					CYL. NO.				105437
NO.	1	2	3	4	5	6			MEAN
G0	323	328	321	323	328	325			324. 7
RETURN	330	328	321	322	329	325			325.8
EVII CAC	CVI OUT	TMP °C(I	OCAT \						325.3
RUN	CIL, UUI	IMP C(I	LUCAL)		CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
GO	_	-	-	<u> </u>					
RETURN		_		_		_			
							<u> </u>	L	
				THRROC	CHARGER				7

	TURBOCHARGER							
RUN	SPEED	BLOW	ER IN	EXH. (	SAS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.
NO.	(min-1)	P(kPa)	T (°C)	IN	(°C)	OUT	(°C)	(mmAq)
GO	8750	0.16	25.0	352	_	273	_	49
RETURN	8450	0.16	25.0	355	-	277		52
MEAN	8600	0.16	25.0	354		275		51

	TURBOCHARGER							
RUN	RUN LUB. OIL (REMOTE/LOCAL)							
NO.	Р	P (MPa) IN (°C) OUT (°C)						
GO	0.14	0.13		58.0	58. 5			
RETURN	0.14	0.13	_	58.0	58.0			
MEAN	0.14	0.13		58. 0	58.3			

RUN	E/R	TEMP. (	°C)
NO.	2ND	3RD	LOW.
GO	24.0	24. 0	24. 5
RETURN	24.0	25.0	24.0
MEAN	24.0	24. 5	24.3

AIR COOL	ER				
RUN	AIR TE	MP. (℃)	C.W. TE	MP. (°C)	PRESS. DROP
NO.	IN	OUT	IN	OUT	kPa
GO	85.0	31.0	21.0	27.0	0.62
RETURN	84, 0	30.0	21.0	27.0	0.60
MEAN	8/1 5	30.5	21.0	27.0	0.61

	S/	T TEMP.(℃)	S/T L.O.(MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	22. 0	39. 5	0.103	27. 0
RETURN	24.0	40.5	0. 103	28. 0
MEAN	23. 0	40.0	0. 103	27. 5

RUN	F. 0.	. CONSUMPT	TION
NO.	ACTUAL	42700	kJ/kg
NO.	kg/h	kg/h	_g/kWh
GO	827. 9	788. 5	169. 0
RETURN	799. 2	761.2	164.8
MEAN	813.6	774. 9	166.9

RUN	SHIP	
NO.	SPEED	
NO.	knots	
GO	14. 49	
RETURN	13. 23	
MEAN	13.86	_

**PUMPS** 

		L. 0.	JACKET	EXH. V.	COOL.	CYL. O.	F. 0.	F. 0.
			C. F. W.	D. 0.	S.W.	CIRC.	SUPPLY	CIRC.
USED NO.		2	2	2	2	2	2	2
SUC. PRESS.	(MPa)		0.13	0. 22	0.02	0, 05	0.08	0.42
DEL. PRESS.	(MPa)	0.31	0.29	0.40	0. 23	0.07	0.42	0.68
CURRENT	(Amp)	70.0	12.0	4.5	65. 0		4.4	5. 2

COOLER

OOOLLIN			
	L. 0.	C. F. W.	
L.O. or F.W. IN (°C)	54.0	85. 0	
L.O. or F.W.OUT (℃)	42.0	27.0	
S.W. or F.W.IN (℃)	21.0	22.0	
S. W. or F. W. OUT (℃)	22. 0	25.0	

HEATER

	F. 0.	
F.O. IN (℃)	111.0	
F. O. OUT (°C)	126.0	

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0.	VISCO.
	(℃)	(cSt)
SET	-	13.0
ACTUAL		12.8
VALVE OPEN	-	7/10

TEMP. CONT. VALVE

		L. 0.	COOL		
			F.W.		
SET	$(^{\circ}\!\mathbb{C})$	48.0	85. 0		
ACTUAL	(°C)	48.0	85.0		
VALVE OF	PEN	B-0.5	B-3.0		

Oligitive				
		L. 0.	F. 0.	
		2ND	2ND	
IN PRESS.	(MPa)	0. 23	0.66	
OUT PRESS.	(MPa)	0. 22	0.64	
DIFF, PRESS.	(MPa)	0.01	0.02	

ከልጥል	SHEET	ΛE	CEA	TOTAL
DATA	SHEEL	(IH	SHA	IRIAL

ENGINE LOAD 70% SNO. 5388 P- 27/

	DEL OF S	INIII		Litto	TINE LUAD	7 U%	2110.	9900	r-	27/
RUN	TTUE	COUN	VTER	ВНР	BHP				HADLE	F. 0.
NO.	TIME	ENG.		(PS)	kw				DATA	RACK
GO	7:30	118		8641	6355		•		7.7	52. 5
RETURN	8:08	118		8403	6180				7.7	51.5
MEAN		118		8522	6268				7.7	52.0
		.1			, 0200			L	1	02.0
F. O. RACI	SCALE									
RUN					CYL. NO.					
NO.	1	2	3	4	5	6				MEAN
GO	53.0	53. 0	52. 5	53. 0	53.0	52. 0				52. 8
RETURN	52.0	52.0	52.0	51.5	51.5	51.0				51.7
	7.1111111111111111111111111111111111111									52. 2
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MEAN
GO		-				-		_	_	
RETURN	_		****		l. <u>-</u>		<del>-</del>	_		
		4 3								
	SS. IN CY	<u>(L. (MPa)</u>								,
RUN	4	T ~ -		,	CYL. NO.					MEAN
NO.	7	2	3	4	5	6				
GO DETUDM	8.5	8.6	8.5	8.5	8.5	8.5				8.5
RETURN	8. 3	8. 4	8, 3	8.3	8.3	8, 4	<u> </u>			8.3
MAY COM	DDECC T	N CVI (u	Do)							8. 4
RUN	. гквээ, 1	N CYL. (M	ra <i>)</i>		CYL. NO.					
NO.	1	2	3	4		6	1			MEAN
GO	12.0	11.8	12. 0	12.0	5					
RETURN	11.7	11. 5	11.6	11.6	12. 0 11. 6	11.8				11.9
LIKETOKN	11.1	11.0	11. U	11.0	11.0	11.4				11.6
										11.8
RUN					CYL. NO.					
1		I					,			MEAN
1 NO.	1	1 2 1	3	4	5	6				111111111
NO.	<u>1</u>	2 -	3 -	4	5	6			_	11122111
GO					5	6			<u> </u>	MOIN
		_								MDIII*
GO RETURN			_							MOTIN
GO RETURN PRESSURE RUN	- - (MPa) (	- - (REMOTE/L	- - OCAL)						_	
GO RETURN PRESSURE	- - (MPa) (		- - OCAL)					- IN	_	OIL
GO RETURN PRESSURE RUN NO. GO	- - (MPa) (	- - (REMOTE/L	- - OCAL)				44-4	- IN OIL	- FUEL	
GO RETURN PRESSURE RUN NO.	_ - C (MPa) ( EXH. V. SF	- - (REMOTE/L PRING AIR	- OCAL) SCAVE	n. AIR	CYL. C	. F. W.	MA	IN OIL 0. 21	- FUEL 0. 64	OIL
GO RETURN PRESSURE RUN NO. GO	- - (MPa) ( EXH. V. SF	- REMOTE/L PRING AIR 0.65	- - OCAL) SCAVE 0. 15	n. AIR	CYL. C	. F. W.	— MA LUB. 0. 22	- IN OIL	FUEL 0. 64 0. 64	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN	- - (MPa) ( EXH. V. SF	- (REMOTE/L PRING AIR 0.65 0.60	- OCAL) SCAVE 0. 15 0. 14		CYL. C	. F. W.	MA LUB. 0. 22 0. 22	IN OIL 0. 21 0. 20	- FUEL 0. 64	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN	- - - C (MPa) ( EXH. V. SF - -	- /REMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15	N. AIR	CYL. C	. F. W.	MA LUB. 0. 22 0. 22 0. 22	IN OIL 0. 21 0. 20 0. 21	FUEL 0. 64 0. 64 0. 64	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO.	- C (MPa) ( EXH. V. SF - - COOL. SE	- (REMOTE/L PRING AIR 0.65 0.60	- OCAL) SCAVE 0. 15 0. 14 0. 15	N. AIR	CYL. CONTRO	. F. W.	MA LUB. 0. 22 0. 22 0. 22	IN OIL 0.21 0.20 0.21 RIV. O. IN	FUEL 0. 64 0. 64	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO	- - - EXH. V. SF - - COOL. SE	- CREMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CONTRO	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN	FUEL 0. 64 0. 64 0. 64	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN	C (MPa) (EXH. V. SF	- /REMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL 0. 64 0. 64 0. 64	OIL   -   -   RIC(hPa)
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO	- - - EXH. V. SF - - COOL. SE	- CREMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CONTRO	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN	C (MPa) (EXH. V. SF	- CREMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN	COOL. SE 0. 19 0. 19 0. 19	- CREMOTE/L PRING AIR 0.65 0.60 0.63	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN	COOL. SE 0. 19 0. 19 0. 19		- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN  MEAN  RUN NO. GO RETURN  MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN	COOL. SE 0. 19 0. 19 0. 19	CREMOTE/L PRING AIR 0.65 0.60 0.63 CA WATER	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN  MEAN  RUN NO. GO RETURN  MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN NO. GO RETURN	COOL. SE 0. 19 0. 19 0. 19	CREMOTE/L PRING AIR 0. 65 0. 60 0. 63  CA WATER	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN  MEAN  RUN NO. GO RETURN  MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN	COOL. SE 0. 19 0. 19 0. 19	CREMOTE/L PRING AIR 0.65 0.60 0.63 CA WATER	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MEAN	C (MPa)	CREMOTE/L PRING AIR 0. 65 0. 60 0. 63  CA WATER	- - OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 62 0. 54	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL  0. 64  0. 64  0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  TEMPERAT	C (MPa)		- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'	T. AIR  2. 00 2. 25 2. 13	CYL. CO 0. 28 0. 28 0. 28 0. 28 0. 54 0. 58	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37 0. 38	FUEL 0. 64 0. 64 0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  TEMPERAT RUN	C (MPa)	CREMOTE/L PRING AIR 0. 65 0. 60 0. 63  CA WATER	- OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'		CYL. CO 0. 28 0. 28 0. 28 0. 28 0. 54 0. 58	. F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37	FUEL 0. 64 0. 64 0. 64  BAROMETI	OIL   -
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN NO. GO RETURN TEMPERAT RUN NO.	C (MPa) ( EXH. V. SF C (MPa) ( EXH. V. SF C (MPa) ( EXH. V. SF - C (MPa) ( EXH. V. SF - C (MPa) ( EXH. EXH. EXH. EXH. EXH. EXH. EXH. EXH.		-  OCAL) SCAVE 0. 15 0. 14 0. 15 STAR' - - /LOCAL) LUB. 0	T. AIR  2. 00 2. 25 2. 13	CYL. CO. 28 0. 28 0. 28 0. 28 CONTRO 0. 62 0. 54 0. 58	F. W.	MA LUB. 0. 22 0. 22 0. 22 EXH. V. DI 0. 39 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS	OIL
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MO. GO RETURN MEAN  TEMPERAT RUN NO. GO GO	C (MPa) (EXH. V. SF		OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'	T. AIR  2. 00 2. 25 2. 13	CYL. CO. 28 0. 28 0. 28 0. 28 CONTRO 0. 62 0. 54 0. 58  FUEL CO. 125. 0	. F. W	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0	T PAD 49. 4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN MO. GO RETURN MEAN  RUN MO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN	C (MPa) (EXH. V. SF C (MPa) (MPa		OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'	T. AIR  2. 00 2. 25 2. 13	CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 54 0. 58  FUEL CO. 125. 0 126. 0	. F. W	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 CYL. COOI 77. 0 79. 0	IN OIL 0. 21 0. 20 0. 21	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO GO	C (MPa) (EXH. V. SF		OCAL) SCAVE 0. 15 0. 14 0. 15 STAR'	T. AIR  2. 00 2. 25 2. 13	CYL. CO. 28 0. 28 0. 28 0. 28 CONTRO 0. 62 0. 54 0. 58  FUEL CO. 125. 0	. F. W	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39	IN OIL 0. 21 0. 20 0. 21 RIV. 0. IN 0. 38 0. 37 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0	T PAD 49. 4
GO RETURN  PRESSURE RUN NO. GO RETURN  MEAN  RUN NO. GO RETURN  MEAN  RUN NO. GO RETURN  MEAN  TEMPERAT RUN NO. GO RETURN  MEAN				Γ. AIR  2. 00  2. 25  2. 13  IL IN	CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 54 0. 58  FUEL 6 125. 0 126. 0 125. 5	DIL IN  126. 0 126. 0	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 0. 79 0. 79. 0 79. 0 78. 0	IN OIL 0. 21 0. 20 0. 21 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN RUN MEAN				T. AIR  2. 00 2. 25 2. 13  TL IN  DRIV.	CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 54 0. 58  FUEL 6 125. 0 126. 0 125. 5	. F. W	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 0. 79. 0 79. 0 78. 0	IN OIL 0. 21 0. 20 0. 21 RIV. O. IN 0. 38 0. 37 0. 38  2. F. W. IN 78. 0 78. 0 78. 0 78. 0	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN RUN NO. GO RETURN MEAN				T. AIR  2. 00 2. 25 2. 13  IL IN  DRIV. IN	CYL. CO 0. 28 0. 28 0. 28 0. 28 0. 28 0. 54 0. 54 0. 58 FUEL CO 125. 0 126. 0 125. 5	DIL IN  126. 0 126. 0 126. 0	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 0. 79. 0 77. 0 79. 0 78. 0	IN OIL 0. 21 0. 20 0. 21 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 38 0. 37 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN MEAN	C (MPa) (EXH. V. SF)  COOL. SE  0. 19  0. 19  M/E CY  CURE (°C)  SCAVE  38. 0  37. 0  37. 5  SEA VI			T. AIR  2. 00 2. 25 2. 13  TL IN  DRIV. IN 47. 5	CYL. CO. 28 0. 28 0. 28 0. 28 0. 28 0. 62 0. 54 0. 58  FUEL CO. 125. 0 126. 0 125. 5  M/E CYL. CO. 28	. F. W.	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 0. 77. 0 79. 0 78. 0	IN OIL O. 21 O. 20 O. 21 RIV. O. IN O. 38 O. 37 O. 38  C. F. W. IN 78. O 78. O 78. O CYL COM JT 85. O	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4
GO RETURN  PRESSURE RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN MEAN  TEMPERAT RUN NO. GO RETURN RUN NO. GO RETURN RUN NO. GO RETURN MEAN				T. AIR  2. 00 2. 25 2. 13  IL IN  DRIV. IN	CYL. CO 0. 28 0. 28 0. 28 0. 28 0. 28 0. 54 0. 54 0. 58 FUEL CO 125. 0 126. 0 125. 5	DIL IN  126. 0 126. 0 126. 0	MA LUB. 0. 22 0. 22 0. 22 0. 39 0. 39 0. 39 0. 39 0. 79. 0 77. 0 79. 0 78. 0	IN OIL 0. 21 0. 20 0. 21 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 37 0. 38 0. 38 0. 37 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38	FUEL  0. 64  0. 64  0. 64  BAROMETI   THRUS  50. 0  50. 0	T PAD 49.4 49.4

JACKET C	COOL. F. W.	CYL. OUT	TMP °C(	REMOTE)						
RUN					CYL. NO.					
NO.	1	2	3	4	5	6				MEAN
GO	85.0	86.0	85. 0	85. 0	85. 0	85.0				85. 2
RETURN	85. 0	85.0	86.0	85. 0	85. 0	85.0				85. 2
									· · · · · · · · · · · · · · · · · · ·	85. 2
	OOL. F. W.	CYL. OUT	TMP ℃(	LOCAL)						
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MEAN
GO	86.0	86.0	86.0	85. 0	85.0	86.0				85.7
RETURN	86.0	85.0	86.0	85.0	85.0	86.0		<u></u>		85. 5
DIOMON C	1001 071	OTTER TOTAL	00 (000							85.6
	00L.0IL	OUT TMP	°C (REMO	TE)	OTT 110					
RUN	1	0		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CYL. NO.		1	<del></del>	<del></del>	MEAN
NO. GO	E2 0	2	3	4	5	6				
RETURN	53. 0 53. 0	54.0	54.0	54.0	54.0	54.0				53.8
NETORN	33.0	54.0	54.0	54.0	54.0	54.0				53.8
PISTON C	ודה וחסי	OUT TMD	°C (LOCA)	· \						53.8
RUN	OOL. UIL	OOI IMI	C (LUCA	Ļ <i>)</i>	CYL. NO.					
NO.	1	2	3	4	5	6		[	T	MEAN
GO	53. 5	54.0	54. 5	54.0	54. 5	54. 5				54. 2
RETURN	54.0	54. 5	55.0	54. 5	55.0	55.0				54. 7
					,		<u>,,,,</u>		I	54. 4
EXH. GAS	CYL. OUT	TMP °C(	REMOTE)						;	01.1
RUN					CYL. NO.					MENANI
NO.	1	2	3	4	5	6				MEAN
GO	324	328	322	324	328	329				325.8
RETURN	323	329	322	323	328	328				325.5
		0.5 .								325. 7
EXH. GAS	CYL. OUT	TMP ℃(	LOCAL)							
RUN					CYL. NO.					MEAN
NO.	1	2	3	4	5	6				MITALIA
GO DETUDN			_			_				
RETURN	-		_			_				

	TURBOCHARGER										
RUN	SPEED	BLOW	ER IN	EXH. G	AS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.			
NO.	(min-1)	P(kPa)	T (°C)	IN	(℃)	OUT	(°C)	(mmAq)			
GO	10600	0.24	25. 5	362	-	251	_	112			
RETURN	10400	0.24	25. 5	362		253	_	112			
MEAN	10500	0.24	25. 5	362		252		112			

TURBOCHARGER								
RUN		LUB. OIL (REMOTE/LOCAL)						
NO.	Р	P (MPa) IN (℃) OUT (℃)						
GO	0. 15	0. 15   0. 14   -   63. 0   63. 0						
RETURN	0.15	0.14	-	63.0	63.0			
MEAN	0. 15	0. 15   0. 14   63. 0   63. 0						

RUN	E/F	TEMP. (	(°C)
NO.	2ND	3RD	LOW.
GO	24.0	25. 5	24.5
RETURN	24. 5	26.0	24.5
MEAN	24. 3	25.8	24.5

AIR COOL	.ER				
RUN	AIR TEM	ſ₽. (°C) Î	C. W. TE	MP. (℃)	PRESS. DROP
NO.	IN	OUT	IN	OUT	kPa
GO	114.0	41.0	21.5	33. 5	0. 78
RETURN	112.0	39. 5	21.5	33. 5	0. 75
MEAN	113.0	40.3	21.5	33. 5	0. 77

	S/	T TEMP.(℃)	S/T L.O. (MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	27.0	44.5	0.103	29.0
RETURN	27.5	46.5	0.103	29, 5
MEAN	27.3	45.5	0.103	29. 3

ENGINE LOAD 70% SNO.

RUN	F.O.CONSUMPTION				
NO.	ACTUAL	42700 kJ/kg			
NO.	kg/h	kg/h	g/kWh		
GO	1104. 2	1051.8	165.5		
RETURN	1075.0	1023. 9	165. 7		
MEAN	1089.6	1037.8	165.6		

DIM	SHIP		
RUN NO.	SPEED		
NO.	knots		
GO	15. 93		
RETURN	14. 55		
MEAN	15. 24		

PUMPS

		L. 0.	JACKET	EXH. V.	COOL.	CYL. O.	F. 0.	F. 0.
			C. F. W.	D. 0.	S.W.	CIRC.	SUPPLY	CIRC.
USED NO.		2	2	2	2	2	2	2
SUC. PRESS.	(MPa)	_	0.13	0.22	0.02	0.05	0.08	0.43
DEL. PRESS.	(MPa)	0.31	0. 29	0.4	0. 23	0.07	0.425	0.68
CURRENT	(Amp)	70.0	12.0	4.5	65.0	_	4.4	5. 2

**COOLER** 

	L. 0.	C. F. W.	
L.O. or F.W. IN (°C)	55.0	85. 0	
L.O. or F.W.OUT (°C)	43.0	29. 5	
S.W. or F.W.IN (°C)	21.5	24. 5	
S.W. or F.W.OUT (°C)	24. 5	28. 0	

HEATER

	F. 0.	
F.O. IN (°C)	112.5	
F.O. OUT (°C)	127.0	

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0.	VISCO.
	(℃)	(cSt)
SET		13. 0
ACTUAL	_	12. 5
VALVE OPEN	-	7.5/10

TEMP. CONT. VALVE

TDMT CON	1 111111			 	
		L. 0.	COOL		
			F.W.		
SET	(°C)	48.0	85.0		
ACTUAL	(°C)	48.0	85.0		
VALVE OF	PEN	0	B-2. 5		

		L. O. 2ND	F. O. 2ND	
IN PRESS.	(MPa)	0. 23	0.66	
OUT PRESS.	(MPa)	0.22	0.64	
DIFF, PRESS.	(MPa)	0.01	0.02	

D 4 / D 4	OTTODO	AΠ	054	MD T 4 Y
HATA	CHEET	1111	NH A	IRIAI

FINGTHE	LOAD	259

CNIC	E000
SNO	- 5388

-		
Ρ-	-30	/

DATA SHI	BET OF SI	EA TRIAL		ENG	SINE LOAD	85%	SNO.	5388	P-	30/
RUN	TIME	COU	NTER	BHP	BHP				HADLE	F. 0.
NO.	TIME	ENG.	RPM	(PS)	kw	<u> </u>			DATA	RACK
GO	8:45	125		10313	7585				8.3	57. 5
RETURN	9:20	125		10000	7355				8.3	56.0
MEAN	-	125		10157	7470				8.3	56.8
	1	120		10101	1 1110	I		l	j 0. J	00.0
'. O. RACK RUN	SCALE				CYL. NO.					
NO.	1	2	3	4	5 5	6				MEAN
GO	58. 5	58.5	57. 5	58.0	57. 5	57.0				57.8
RETURN	57.0	56. 5	56. 5	57.0	57. 0	56.0				56. 7
				1	1 01.0	1 00.0	.l	I	.I	57.3
RUN					CYL. NO.					
NO.	1	2	3	4	5	6			<u> </u>	MEAN
GO	_			_	<del>-</del>		-			
RETURN			_			_	_		<del>                                     </del>	
	4					l	<u> </u>	<u> </u>	1	
<u>OMP, PRE</u> RUN	ESS. IN CY	<u>L. (MPa)</u>			OVI NO					
NO.	1	2	3	4	CYL. NO. 5	6			<u> </u>	MEAN
GO	10. 2	10.2	10. 1	10. 2	10.2	10.2	<del> </del>			10, 2
RETURN	10. 2	10. 2	10. 1	10. 2	10. 2	10. 2		<u> </u>		10. 2
			<u> </u>	1 10.0	1 10.0	10.0	<u> </u>	L	<u> </u>	10. 2
	. PRESS. I	N CYL. (MI	Pa)							10.2
RUN				T	CYL. NO.					MEAN
NO.	10.4	2	3	4	5	6				
GO	13. 4	13. 2	13.4	13. 3	13.3	13.3				13. 3
RETURN	13. 2	13.0	13. 2	13.0	13.2	12.9				13. 1
										13. 2
RUN					CYL. NO.					
NO.	1	2	3	4	5	6			<u> </u>	MEAN
GO		-	-	-	****		_	_		
RETURN			_				-			
RESSURE	(MPa) (	REMOTE/LO	CAL)							
RUN				NI ATD	OW C	D 117	I MA	IN		
NO.	EXH. V. SP	RING AIR	SCAVE	EN. AIR	CYL. C	. F. W.	1	OIL	FUEL	.OIL
GO	_	0.67	0.19	-	0. 28		0.22	0. 20	0.64	_
RETURN	_	0.65	0.18	_	0.28		0.22	0. 20	0.64	_
MEAN		0.66	0. 19		0. 28		0. 22	0. 20	0.64	
DIDI										
RUN NO.	COOL. SE	A WATER	STAR	T. AIR	CONTR	OL. AIR	EXH. V. DI	RIV. O. IN	BAROMETI	RIC (hPa
GO	0.19			1.80	0.65		0.39	0.38		1014
ETURN	0.13			2.40	0.65		0.39	0.38		
MEAN	0.19			2. 10	0.65		0.39	0.38		1014 1014
		I		2.10	1 0.00		1 0.00	1 0.30	I	1014
RUN	M/E CY	L. O. IN								
NO.		,	ı					<del></del>		
GO	-	0.07			ļ		<u> </u>			
RETURN		0.07			ļ					
MEAN		0.07		1	[		<u> </u>			
	URE (℃)	(REMOTE/	(LOCAL)							
RUN		N. AIR		IL IN	) विशि	OIL IN	CYL COOL	L. F. W. IN	тирис	T PAD
NO.		41. (111)		, TT TI	l					
GO_	40.0	_	48.0		127.0	127.0	75.0	77.0	50.0	49.6
RETURN	40.0	_	48.0		125.0	127.0	76.0	77.0	50.0	49.6
MEAN	40.0		48.0	<u> </u>	126.0	127.0	75. 5	77.0	50.0	49.6
RUN			EXH. V.	DRIV	1		I C E W (	CYL COM	T	
NO.	SEA 1	WATER		, IN	M/E CYL	OIL IN	OI 01			
GO	13. 0			47.5		52.0		85 O		

52. 0 52. 0 52. 0

85. 0 85. 0 85. 0

47. 5 47. 5 47. 5

GO

RETURN MEAN 13. 0 14. 0 13. 5

RUN		<u> </u>	<u>rmp°C(F</u>	(Linote)	CYL. NO.		
NO.	1	2	3	4	5	6	<del> </del>
GO	85. 0	85.0	85. 0	86. 0	86.0	85.0	85. 3
RETURN	85. 0	85.0	85.0	85.0	85.0	85. 0	 85. 0
			· · · · · · · · · · · · · · · · · · ·				 85. 2
ACKET CO	<u>OL. F. W. </u>	CYL. OUT	ľMP °C(I	LOCAL)			
RUN					CYL. NO.		 MEAN
NO.	1	2	3	4	5	6	MEAN
GO	86.0	86.0	86.0	86.0	85.0	86.0	85.8
RETURN	86.0	85. 0	86.0	86.0	85.0	86.0	 85.7
TOROL GO	OF OT	011m mm	00 (000				85.8
PISTON COO RUN	JL. UIL	JUI TMP	°C (REMOT	上)	OIL NO		
NO.	1		0	4	CYL. NO.		 MEAN
GO	<u> </u>	2	3	4	5	6	
RETURN	54. 0 54. 0	55. 0	<u>55. 0</u>	<u>55. 0</u>	56.0	55.0	55.0
KETOKN	54.0	55.0	55. 0	55.0	55. 0	55.0	 54.8
PISTON CO	ודח זר	OHT TMD	°C (LOCAL	١			54. 9
RUN	OL. OIL	JOI IIVII	C (LOCAL	4)	CYL. NO.		 
NO.	1	2	3	4	5	6	 MEAN
GO	55. 0	56.0	56. 0	56. 0	56. 5	56.0	 55. 9
RETURN	55. 0	55. 5	56.0	56. 0	56.0	56.0	 55.8
<u> </u>							 55.8
XH. GAS CY	L. OUT	TMP °C(F	REMOTE)				
RUN					CYL. NO.		 MEAN
NO.	1	2	3	4	5	6	MEAN
GO	339	345	334	337	341	342	339.7
RETURN	332	340	331	334	339	338	335.7
							 337.7
XH. GAS CY	(L. OUT	IMP °C (I	LOCAL)		2444		 
RUN					CYL. NO.		 MEAN
NO.	1	2	3	4	5	6	MISAIV
GO DETUDNI	_	-					
RETURN	-						
							r

	TURBOCHARGER								
RUN	SPEED	BLOW		EXH. G	SAS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.	
NO.	(min-1)	P(kPa)	T (°C)	IN	(°C)	OUT	(°C)	(mmAq)	
GO	11600	0.33	26.0	380	-	248		166	
RETURN	11400	0.32	26.0	378	_	248	_	167	
MEAN	11500	0.33	26.0	379		248		167	

	TURBOCHARGER							
RUN		LUB. OIL (REMOTE/LOCAL)						
NO.	P	(MPa)	IN (°C)	OUT	(°C)			
GO	0.14	0.13	-	66.0	66. 5			
RETURN	0.14	0.13	-	66.0	66.5			
MEAN	0.14	0.13		66.0	66.5			

RUN	E/R TEMP. (°C)					
NO.	2ND	3RD	LOW.			
GO	24. 5	26. 5	25.0			
RETURN	25. 0	27.0	25.0			
MEAN	24.8	26.8	25, 0			

AIR COOLER

		2,22.4				
	RUN	AIR TEMP. (°C)		C.W. TE	MP. (°C)	PRESS. DROP
	NO.	IN	OUT	IN	OUT	kPa
-	GO_	129.0	47.0	21.5	31.0	0.82
	RETURN	127.0	44.0	22.0	31.0	0.80
	MEAN	128.0	45.5	21.8	31.0	0.81

	S/	T TEMP. (°C)	S/T L.O. (MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. °C (LOCAL)
NO.		SEAL TK		NO. 1
GO	28.0	48.0	0. 103	30.0
RETURN	29.0	48.5	0. 103	30.0
MEAN	28. 5	48.3	0. 103	30.0

RUN	F. 0.	. CONSUMPT	CION
NO.	ACTUAL	42700	kJ/kg
NO.	kg/h	kg/h	g/kWh
GO	1325.0	1262.0	166.4
RETURN	1290.8	1229.5	167. 2
MEAN	1307. 9	1245.7	166.8

RUN	SHIP
NO.	SPEED
NO.	knots
GO	16.67
RETURN	15.71
MEAN	16. 19

PUMPS

		L. 0.	JACKET	EXH. V.	COOL.	CYL. O.	F. 0.	F. 0.
			C. F. W.	D. 0.	S.W.	CIRC.	SUPPLY	CIRC.
USED NO.		2	2	2	2	2	2	2
SUC. PRESS.	(MPa)		0.13	0.2	0.02	0.05	0, 08	0.42
DEL. PRESS.	(MPa)	0.31	0, 29	0.40	0.23	0.07	0.42	0.68
CURRENT	(Amp)	70.0	12.0	4, 5	65.0		4.4	5. 2

**COOLER** 

	L. 0.	C. F. W.	
L.O. or F.W.IN (°C)	56.0	85.0	
L.O. or F.W.OUT (°C)	44.0	31, 0	
S.W. or F.W.IN (°C)	22.0	26.0	
S.W. or F.W.OUT (°C)	26.0	31. 0	

HEATER

	F. 0.		
F.O. IN (°C)	112.0		
F.O. OUT (°C)	127.0		
			· · · ·

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0.	VISCO.
	(℃)	(cSt)
SET	-	13.0
ACTUAL	_	12.5
VALVE OPEN		8/10

TEMP, CONT, VALVE

TEMI . CONT	TALTE				
		L. 0.	COOL		
			F. W.		
SET	(°C)	48.0	85.0		
ACTUAL	$(\mathbb{C})$	48.0	85.0		
VALVE OF	PEN	C=0.5	B-2.5		

		L. 0.	F. 0.	·
		2ND	2ND	
IN PRESS.	(MPa)	0. 22	0.66	
OUT PRESS.	(MPa)	0. 21	0.64	
DIFF, PRESS.	(MPa)	0.01	0.02	

n	ለጥለ	SHEET	$\Omega$	CEA	TOTAL
11	A ( A	SHELL	UP	>FA	INTAL

ENGINE LOAD 100%

CNIO	E200
SNO.	-5388

D_	23	1
P-	.5.5	/

RIN		ET OF SI	311 11111111111111111111111111111111111		LINO	SINE LOAD	100%	SIYU.	5388	P-	33/
NO.   1-20   131.9   1206   8830   8.9   62.5   62.5   63.1.0   1207   8830   8.9   62.5   63.1.0   131.9   131.9   13748   8840   8.9   63.1.0   63.0   63.1.0   63.0   63.1.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0   63.0	RUN	TIME	COU	NTER	BHP	BHP				HADLE	F. O.
REPUIN   10:35   131.9   11748   8840   8.9   61.0   MEAN											
MEAN											62. 5
F. O. RACK SCALE    RIN   NO.		10:35									
RETURN	WICAIN		131	. 9	1 11877	8735				8.9	61.8
RETURN	F. O. RACK	SCALE									
NO.   1						CYL. NO.					· · · · · · · · · · · · · · · · · · ·
RETURN   62, 0   62, 0   61, 5   61, 5   61, 6   61, 0   61, 6   62, 2		1			4		6				MEAN
RUN											62.8
RUN	RETURN	62.0	62.0	61.5	61.5	61.5	61.0				
NO.   1											62. 2
NO.   1	RUN					CYL NO					
GO	1 .	1	2	3	4		6				MEAN
COMP. PRESS. IN CYL. (MPa)  RUN NO. 1 2 3 4 5 6		-	_	_			_	_	_		
RUN	RETURN	_	-	-	_	-		-	-	_	
RUN	COND DDE	CC TN CV	ar (mp.)								
NO.   1   2   3   4   5   6		SS. IN CY	L. (MPa)			CVI NO					
GO		1	2	3	4		6				MEAN
RETURN   11.1   11.1   11.1   11.1   11.1   11.1   11.0	GO									<u> </u>	11.3
MAX. COMP. PRESS. IN CYL. (MPa)    NO.   1   2   3   4   5   6	RETURN	11.1	11.1								
RUN NO.	MAY COUR	DDBGG ==	M 0377 4	- \							
NO.   1   2   3   4   5   6		. PKESS. I	<u>n Cyl. (Mi</u>	<u>'a)</u>		CVI NO					· · · · · · · · · · · · · · · · · · ·
RETURN   13.8   13.6   13.9   13.8   13.6   13.7     13.8   13.8   13.8   13.6   13.8   13.8   13.6     13.8   13.8   13.8   13.6     13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8		1	2	3	Ι /		Γ 6				MEAN
RETURN   13.8   13.6   13.9   13.8   13.6   13.6   13.8   13.6   13.8   13.8   13.8   13.6   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8   13.8											13 0
RUN NO.   1   2   3   4   5   6											
NO.   1   2   3   4   5   6										1	
NO.   1   2   3   4   5   6	DIM										
RETURN   -   -   -   -   -   -   -   -   -		1	0	2	1 1	7		1	í <u></u>		MEAN
RETURN			<u> </u>		4						
RUN NO.   EXH. V. SPRING AIR   SCAVEN. AIR   CYL. C. F. W.   MAIN LUB. OIL		_	-	_	_			_			
RUN NO.   EXH. V. SPRING AIR   SCAVEN. AIR   CYL. C. F. W.   MAIN LUB. OIL											
NO.   EXH. V. SPRING AIR   SCAVEN. AIR   CYL. C. F. W.   LUB. OIL   LUB. OIL		(MPa) (	REMOTE/LO	OCAL)						,,,,,,	
CO	1	EXH. V. SP	RING AIR	SCAVE	N. AIR	CYL. C	. F. W.			FUEL	. 011.
RETURN   -			0.67	<u> </u>							
MEAN		-			-		_				
RUN NO.         COOL. SEA WATER         START. AIR         CONTROL. AIR         EXH. V. DRIV. O. IN         BAROMETRIC (hPa)           GO         0. 18         —         —         1.80         0.70         —         0.39         0.38         —         1014           RETURN         0. 18         —         —         2.40         0.62         —         0.39         0.38         —         1014           MEAN         0. 18         —         —         2.40         0.62         —         0.39         0.38         —         1014           RENN         M/E         CYL. O. IN         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —         —											
NO.   COUL. SEA WATER   START. ATR   CONTROL. ATR   EXH. V. DRIV. O. IN   BAROMETRIC (hPa)											
NO.   NO.	RUN									<u> </u>	
RETURN   0. 18	170	COOL. SE	A WATER	STAR	 Γ. AIR	CONTRO	OL. ATR		RIV. O. TN	1	RIC (hPa)
MEAN   0.18   2.10   0.66   0.39   0.38   1014							DL. AIR	EXH. V. DF		1	
RUN NO. M/E CYL. O. IN  GO - 0. 07  RETURN - 0. 07  MEAN 0. 0. 07  TEMPERATURE (°C) (REMOTE/LOCAL)  RUN NO. SCAVEN. AIR LUB. 0IL IN FUEL 0IL IN CYL. COOL. F. W. IN THRUST PAD  GO 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 8  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  MEAN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 45. 0 - 48. 0 - 125. 0 127. 0 74. 0 75. 0 50. 0 49. 9  RETURN 14. 0 47. 5 - 52. 0 - 85. 0  RETURN 14. 0 47. 5 - 52. 0 - 85. 0	GO	0.18		_	1.80	0.70	_	EXH. V. DF	0. 38	1	1014
NO.       M/E CYL. 0. IN       GO       -       0. 07       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       -       - <td>GO RETURN</td> <td>0. 18 0. 18</td> <td></td> <td>_</td> <td>1.80 2.40</td> <td>0. 70 0. 62</td> <td>_</td> <td>EXH. V. DF 0. 39 0. 39</td> <td>0. 38 0. 38</td> <td>1</td> <td>1014 1014</td>	GO RETURN	0. 18 0. 18		_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
NO.   GO	GO RETURN MEAN	0. 18 0. 18		_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
RETURN         -         0.07	GO RETURN MEAN	0. 18 0. 18 0. 18		_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
MEAN         0.07         FUEL OIL IN         CYL. COOL. F. W. IN         THRUST PAD           RUN NO.         SCAVEN. AIR         LUB. OIL IN         FUEL OIL IN         CYL. COOL. F. W. IN         THRUST PAD           GO 45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.8           RETURN 45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.9           MEAN 45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           RETURN 45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         O	GO RETURN MEAN RUN NO.	0. 18 0. 18 0. 18	L. O. IN	_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
TEMPERATURE (°C) (REMOTE/LOCAL)           RUN NO.         SCAVEN. AIR         LUB. 0IL IN         FUEL 0IL IN         CYL. COOL. F. W. IN         THRUST PAD           GO         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.8           RETURN         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.9           MEAN         45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         C. F. W. CYL COM OUT         OUT           GO         14.0         -         -         47.5         -         52.0         -         85.0         -           RETURN         14.0         -         -         47.5         -         52.0         -         85.0         -	GO RETURN MEAN RUN NO. GO	0. 18 0. 18 0. 18 M/E CY	L. O. IN	_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
RUN NO.         SCAVEN. AIR         LUB. 0IL IN         FUEL 0IL IN         CYL. COOL. F. W. IN         THRUST PAD           GO         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.8           RETURN         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.9           MEAN         45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         OUT         OUT         OUT         SEA WATER         A7.5         -         52.0         -         85.0         SEA WATER         A7.5         -         52.0         -         85.0         -         A7.5         -         52.0         -         85.0         -         A7.5         -         52.0         -         85.0         -         -         A7.5         -         52.0         -         85.0         -         -         -         A7.5         -         52.0         -         85.0         -         -         -         -         -	GO RETURN MEAN  RUN NO. GO RETURN	0. 18 0. 18 0. 18 M/E CY	L. O. IN  0. 07  0. 07	_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
NO.         SCAVEN. ATR         LUB. OIL IN         FUEL OIL IN         CYL. COOL. F. W. IN         THRUST PAD           GO         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.8           RETURN         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.9           RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         C. F. W. CYL COM OUT         OUT           GO         14.0         -         -         47.5         -         52.0         -         85.0           RETURN         14.0         -         -         47.5         -         52.0         -         85.0	GO RETURN MEAN  RUN NO. GO RETURN	0. 18 0. 18 0. 18 M/E CY	L. O. IN  0. 07  0. 07	_	1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
RO.       45. 0       -       48. 0       -       125. 0       127. 0       74. 0       75. 0       50. 0       49. 8         RETURN       45. 0       -       48. 0       -       125. 0       127. 0       74. 0       75. 0       50. 0       49. 9         MEAN       45. 0       48. 0       125. 0       127. 0       74. 0       75. 0       50. 0       49. 9         RUN NO.       SEA WATER       EXH. V. DRIV. OIL IN OUT       M/E CYL. OIL IN OUT       C. F. W. CYL COM OUT       OUT         GO       14. 0       -       -       47. 5       -       52. 0       -       85. 0         RETURN       14. 0       -       -       47. 5       -       52. 0       -       85. 0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERAT	0. 18 0. 18 0. 18 M/E CY	L. O. IN  0. 07  0. 07  0. 07		1.80 2.40	0. 70 0. 62	_	EXH. V. DF 0. 39 0. 39	0. 38 0. 38	1	1014 1014
RETURN         45.0         -         48.0         -         125.0         127.0         74.0         75.0         50.0         49.9           MEAN         45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         C. F. W. CYL COM OUT         OUT           GO         14.0         -         -         47.5         -         52.0         -         85.0           RETURN         14.0         -         -         47.5         -         52.0         -         85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI	0.18 0.18 0.18 M/E CY - - - URE (°C)	L. O. IN  0. 07  0. 07  0. 07  (REMOTE	- - /LOCAL)	1.80 2.40 2.10	0.70 0.62 0.66		EXH. V. DF 0. 39 0. 39 0. 39	0. 38 0. 38 0. 38	BAROMETF	1014 1014 1014
MEAN         45.0         48.0         125.0         127.0         74.0         75.0         50.0         49.9           RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         C. F. W. CYL COM OUT         OUT           GO         14.0         -         -         47.5         -         52.0         -         85.0           RETURN         14.0         -         -         47.5         -         52.0         -         85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATURN NO.	0.18 0.18 0.18 M/E CY - - URE (℃) SCAVE	L. O. IN  0. 07  0. 07  0. 07  (REMOTE/	- /LOCAL) LUB. 0	1.80 2.40 2.10	0.70 0.62 0.66	DIL IN	EXH. V. DF 0. 39 0. 39 0. 39	0. 38 0. 38 0. 38	BAROMETE	1014 1014 1014 1014
RUN NO.         SEA WATER         EXH. V. DRIV. OIL IN OUT         M/E CYL. OIL IN OUT         C. F. W. CYL COM OUT           GO 14.0         -         -         47.5         -         52.0         -         85.0           RETURN 14.0         -         -         47.5         -         52.0         -         85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI RUN NO. GO	0.18 0.18 0.18 M/E CY 	L. O. IN  0. 07  0. 07  0. 07  (REMOTE)  N. AIR	/LOCAL) LUB. 0	1.80 2.40 2.10 2.10	0. 70 0. 62 0. 66	OIL IN	EXH. V. DF 0. 39 0. 39 0. 39 CYL. COOL	0. 38 0. 38 0. 38	BAROMETF THRUS	1014 1014 1014 1014 T PAD 49.8
NO.         SEA WATER         OIL IN         M/E CYL. OIL IN         OUT           GO         14.0         -         -         47.5         -         52.0         -         85.0           RETURN         14.0         -         -         47.5         -         52.0         -         85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI RUN NO. GO RETURN	0.18 0.18 0.18 M/E CY - - URE (°C) SCAVE 45.0 45.0	L. O. IN  0. 07  0. 07  0. 07  (REMOTE)  N. AIR	/LOCAL) LUB. 0 48. 0 48. 0	1.80 2.40 2.10 2.10	0. 70 0. 62 0. 66 FUEL 0	OIL IN 127.0 127.0	CYL. COOI 74. 0	0. 38 0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9
NO.     OIL IN     OUT       GO     14.0     -     -     47.5     -     52.0     -     85.0       RETURN     14.0     -     -     47.5     -     52.0     -     85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI RUN NO. GO RETURN MEAN	0.18 0.18 0.18 M/E CY - - URE (°C) SCAVE 45.0 45.0	L. O. IN  0. 07  0. 07  0. 07  (REMOTE)  N. AIR	/LOCAL) LUB. 0 48. 0 48. 0	1.80 2.40 2.10 2.10	0. 70 0. 62 0. 66 FUEL 0	OIL IN 127.0 127.0	CYL. COOI 74. 0	0. 38 0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9
RETURN 14.0 47.5 - 52.0 - 85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI RUN NO. GO RETURN MEAN  RUN MEAN	0.18 0.18 0.18 M/E CY - - URE (°C) SCAVE 45.0 45.0 45.0	-   -     -	/LOCAL) LUB. 0 48. 0 48. 0 48. 0	1.80 2.40 2.10 DIL IN	0.70 0.62 0.66 FUEL 0 125.0 125.0	OIL IN 127. 0 127. 0 127. 0	CYL. COOI 74. 0 74. 0 74. 0	0. 38 0. 38 0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9
	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATU RUN NO. GO RETURN MEAN  RUN MEAN  RUN MEAN  RUN MEAN	0.18 0.18 0.18 M/E CY 	-   -     -	-  /LOCAL) LUB. 0 48. 0 48. 0 EXH. V.	1.80 2.40 2.10 DIL IN	0.70 0.62 0.66 FUEL 0 125.0 125.0	OIL IN    127. 0   127. 0   127. 0	CYL. COOL 74. 0 74. 0 74. 0 74. 0	0. 38 0. 38 0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9
MLGAY   14.0     47.0     52.0   85.0	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATURN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN  RUN MEAN	0.18 0.18 0.18 0.18 M/E CY 		-  LUB. 0 48. 0 48. 0 EXH. V. OIL	1.80 2.40 2.10 DIL IN DRIV. IN 47.5	0.70 0.62 0.66 FUEL C 125.0 125.0 M/E CYL	OIL IN 127. 0 127. 0 127. 0 . OIL IN 52. 0	CYL. COOL 74. 0 74. 0 74. 0 74. 0	0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9
	GO RETURN MEAN  RUN NO. GO RETURN MEAN  TEMPERATI RUN NO. GO RETURN MEAN  RUN NO. GO RETURN MEAN	0.18 0.18 0.18 0.18 M/E CY 		-  LUB. 0 48. 0 48. 0 EXH. V. OIL	1.80 2.40 2.10 2.10 DRIV. IN 47.5 47.5	0.70 0.62 0.66 FUEL C 125.0 125.0 M/E CYL	OIL IN 127. 0 127. 0 127. 0 . OIL IN 52. 0 52. 0	CYL. COOL 74. 0 74. 0 74. 0 74. 0	0. 38 0. 38	BAROMETF  THRUS  50. 0 50. 0	1014 1014 1014 1014 T PAD 49.8 49.9

TACKET COO	I E W	CVI OUT	run % (ı	DEMOTE)					
RUN I	L.F.W.	CYL. OUT	IMP C(I	(EMUTE)	CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
	85.0	85. 0	85. 0	85.0	85. 0	85. 0			85. C
	84. 0	85. 0	84. 0	85. 0	84. 0	84.0			84. 3
				, , , , , , ,	, 01.0	, 01.0			84. 7
	L.F.W.	CYL. OUT	ΓMP °C(I	LOCAL)					1 01.1
RUN					CYL. NO.				MEAN
NO.	11	2	3	4	5	6			MEAN
	85.0	85.0	86.0	86.0	85.0	86.0			85. E
RETURN	85.0	85.0	86.0	85.0	85.0	86.0			85. 3
TOWON OCO		oum mus	00 /ppv	nn\					85. 4
<u>ISTON COO</u> RUN	L. UIL	OUT TMP	°C (REMO	IE)	OVI NO				
		0			CYL. NO.				MEAN
NO. GO 5	<u>1</u> 56, 0	2 57. 0	3	<u> 4</u>	5	6			
	55. 0	56.0	57. 0 57. 0	57. 0 56. 0	57.5 57.0	57. 0 56. 0			<u>56. 9</u>
AETOMY   6	JO. U	50.0	57.0	1 50.0	<u> </u>	[ 56.0 ]		<u>l</u>	56. 2
ISTON COO	I OII	OUT TMP	°C (LOCAI	``					56.5
RUN	L. UIL	001 1011	C (LOCAL	<i></i>	CYL. NO.				
NO.	1	2	3	4	5	6			MEAN
	56.0	57.0	57.0	57.0	57. 5	57.0			56.9
	56.0	57.0	57.0	57.0	57. 5	57.0			56.9
		***************************************							56.9
KH. GAS CY	L. OUT	TMP °C(I	REMOTE)						
RUN					CYL. NO.				MEAN
NO.	1	2	3	4	5	6			
GO	356	364	354	356	364	362			359. 3
RETURN	354	367	355	353	354	359			357.0
// CAC CT	r our	TUD 00 /*	0041						358. 2
KH. GAS CY RUN	L. OUT	IMP C(I	JUCAL)		CVI NO				
<del></del>	1	0	0	T 4	CYL. NO.				—— MEAI
NO. GO	1	2 -	3	4	5	6			
RETURN			<del></del>						
VETOWN		<u> </u>					L_		
				ጉርጀር፤፤ፐ	משיאם אשי		·		

	TURBOCHARGER							
RUN	SPEED	BLOW		EXH. G	AS TEMP.	(REMOTE/	LOCAL)	BACK PRESS.
NO.	(min-1)	P(kPa)	T (°C)	IN	(°C)	OUT	(°C)	(mmAq)
GO	12250	0.40	26.5	408	_	260	]	211
RETURN	12150	0.40	26.5	404	ļ <u></u>	257	_	224
MEAN	12200	0.40	26.5	406		259		218

TURBOCHARGER							
RUN		LUB. OIL (REMOTE/LOCAL)					
NO.	Р	(MPa)	IN (℃)	OUT	(°C)		
GO	0.14	0.13	_	69.0	69.0		
RETURN	0.14	0.13		69.0	69.0		
MEAN	0.14	0.13		69. 0	69.0		

RUN	E/R TEMP. (℃)				
NO.	2ND	3RD	LOW.		
GO	25.0	27.0	25.5		
RETURN	25.0	27.0	25.5		
MEAN	25.0	27.0	25, 5		

AIR COOL	ER				
RUN	AIR TEM	ÆP. (℃)	C. W. TE	MP. (℃)	PRESS. DROP
NO.	IN	OUT	IN	OUT	kPa
GO	144.0	48.0	22.0	35. 0	0.83
RETURN	142.0	48.0	22, 0	35.0	0.82
MEAN	143 0	48 N	22 0	35.0	0.83

	S/	T TEMP. (°C)	S/T L.O.(MPa)	INTERM. SHAFT BRG.
RUN	L. 0.	FWD		TEMP. ℃ (LOCAL)
NO.		SEAL TK		NO. 1
GO	29.5	50.0	0. 103	31.5
RETURN	30.0	50.0	0. 103	31.5
MEAN	29.8	50.0	0. 103	31. 5

	RUN	F.O. CONSUMPTION					
ı	NO.	ACTUAL	42700 kJ/kg				
١	110.	kg/h	kg/h	g/kWh			
Į	G0	1536. 3	1463.3	165.7			
	RETURN	1500.4	1429. 1	165, 4			
	MEAN	1518.4	1446 2	165 6			

RUN	SHIP		
NO.	SPEED		
NO.	knots		
GO	16. 74		
RETURN	16.70		
MEAN	16. 72		

PUMPS

		L. O.	JACKET C. F. W.	EXH. V. D. O.	COOL. S.W.	CYL. O. CIRC.	F.O. SUPPLY	F.O. CIRC.
USED NO.		2	2	2	2	2	2	2
SUC. PRESS.	(MPa)	_	0.13	0. 21	0.02	0.05	0.08	0.43
DEL. PRESS.	(MPa)	0.31	0.29	0.40	0. 215	0.07	0.43	0.67
CURRENT	(Amp)	70.0	12.0	4.5	65.0	-	4. 4	5. 2

**COOLER** 

	L. 0.	C. F. W.	
L.O. or F.W.IN (°C)	57.0	85.0	
L.O. or F.W.OUT (°C)	44.0	32.0	
S.W. or F.W.IN (°C)	22.0	26.5	
S.W. or F.W.OUT (°C)	26. 5	32.0	

HEATER

	F. O.	
F. O. IN (°C)	112.0	
F. 0. OUT (°C)	127.0	

TEMP. CONT. VALVE & VISCO. CONT. VALVE

	F. 0.	VISCO.
	(°C)	(cSt)
SET	_	13.0
ACTUAL		12. 5
VALVE OPEN	_	8.5/10

TEMP. CONT. VALVE

TOWN COLLET					
	L. 0.	COOL			
		F.W.	1	ļ	
SET (°C)	48.0	85.0			
_ACTUAL (°C)	48.0	85.0			
VALVE OPEN	C-1. 0	B-2.0			

STRATNER

OTHITINE				
		L. 0.	F. 0.	
		2ND	2ND	
IN PRESS.	(MPa)	0. 22	0.66	
OUT PRESS.	(MPa)	0.21	0.64	
DIFF, PRESS.	(MPa)	0.01	0.02	