

The judgement of main engine performance

Cam 8. 96

SHIP NAME	ANDROMEDA LEADER	KW	15540
ENGINE TYPE	8UEC 60LS II #10	min-1	104

JUDGE	GOOD	NORMAL	CAUTION
MARK	◎	○	×

Judgement for main engine condition

Mark on graph	□	◇	△	×	*	○	+	■	◆	●
Date	22-May-20	22-Jul-20	13-Aug-20	02-Sep-20	-	-	-	-	-	-
Load	67.5	65.6	65.1	67.6	-	-	-	-	-	-
Te1	○	○	○	○	-	-	-	-	-	-
Te2	○	○	○	○	-	-	-	-	-	-
Tc	○	○	○	○	-	-	-	-	-	-
Ps (Mpa)	◎	◎	○	○	-	-	-	-	-	-
Pm (Mpa)	◎	◎	◎	◎	-	-	-	-	-	-
Pc (Mpa)	◎	◎	◎	◎	-	-	-	-	-	-
Rc or LI	○	○	○	○	-	-	-	-	-	-
Nb	◎	◎	◎	◎	-	-	-	-	-	-
Ne	○	○	○	○	-	-	-	-	-	-
Te1-Te2	×	×	×	×	-	-	-	-	-	-
A. C.	×	×	×	×	-	-	-	-	-	-

Result of calculation for main engine output

Standard Output of judgement: Output-Rc

Output (PS) -Rc	14265.9	13862.9	13755.1	14284.3	-	-	-	-	-	-
Output (KW) -Rc	10492.6	10196.2	10116.9	10506.1	-	-	-	-	-	-
Output (PS) -Nb	12314.0	11629.1	11698.5	11831.3	-	-	-	-	-	-
Output (KW) -Nb	9056.9	8553.2	8604.2	8701.9	-	-	-	-	-	-
Output (PS) -Be	13156.2	12121.9	12446.0	12436.9	-	-	-	-	-	-
Output (KW) -Be	9676.4	8915.7	9154.0	9147.3	-	-	-	-	-	-

Rev. margin	1.93%	1.80%	2.07%	0.79%	-	-	-	-	-	-
Feed rate (qP1)	0.73	0.79	0.84	0.78	-	-	-	-	-	-
Feed rate (qA)	0.96	1.05	1.12	1.02	-	-	-	-	-	-
Running hour	113535	114247	114654	115058	-	-	-	-	-	-

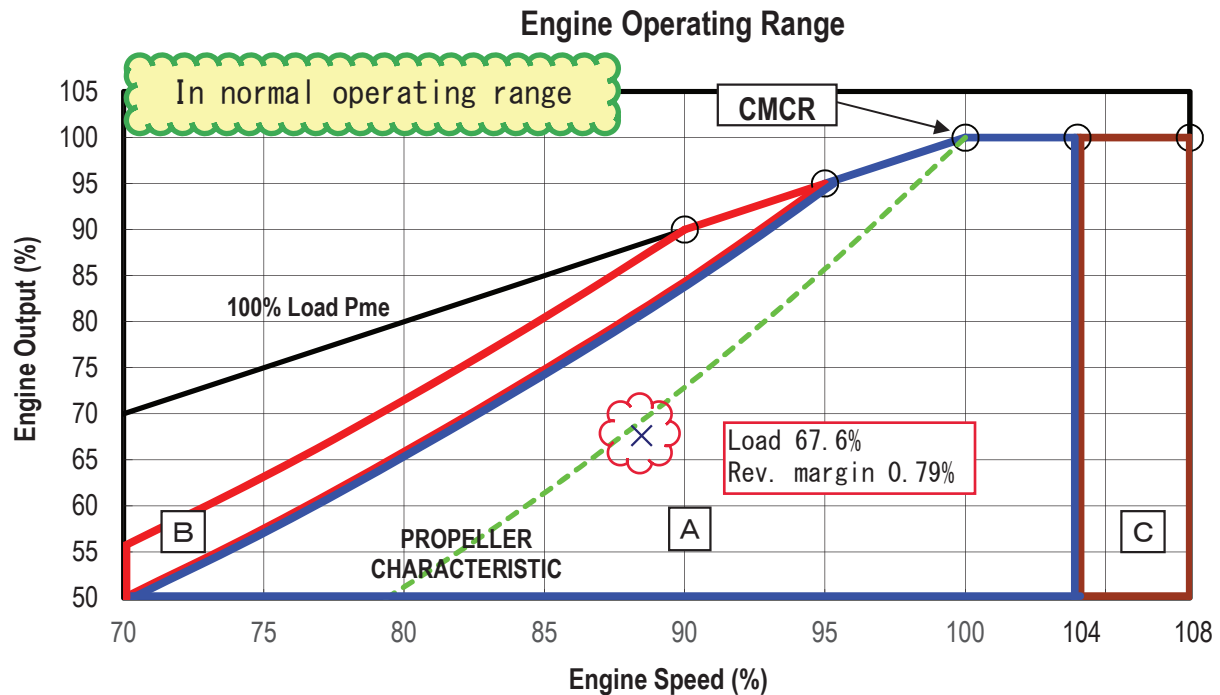
Rev. margin	GOOD	GOOD	GOOD	GOOD	-	-	-	-	-	-
Cyl. oil consump.	NORMAL	NORMAL	MUCH	NORMAL	-	-	-	-	-	-

Te1, Te2 & Tc were converted into shop trial situation.
The final judgement is referred to the comment.

Data 02-Sep-2020
Operational load 67.6% and Rev. margin 0.79% / In normal operating range
Cyl. oil feed rate (P1) 0.78g/PSH / Normally controlled
Performance trend / Normal shape
M/E data sheet / Varied Pc

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A : Service range for normal service

Recommendable operating point of the engine for service should be lie in Range A.

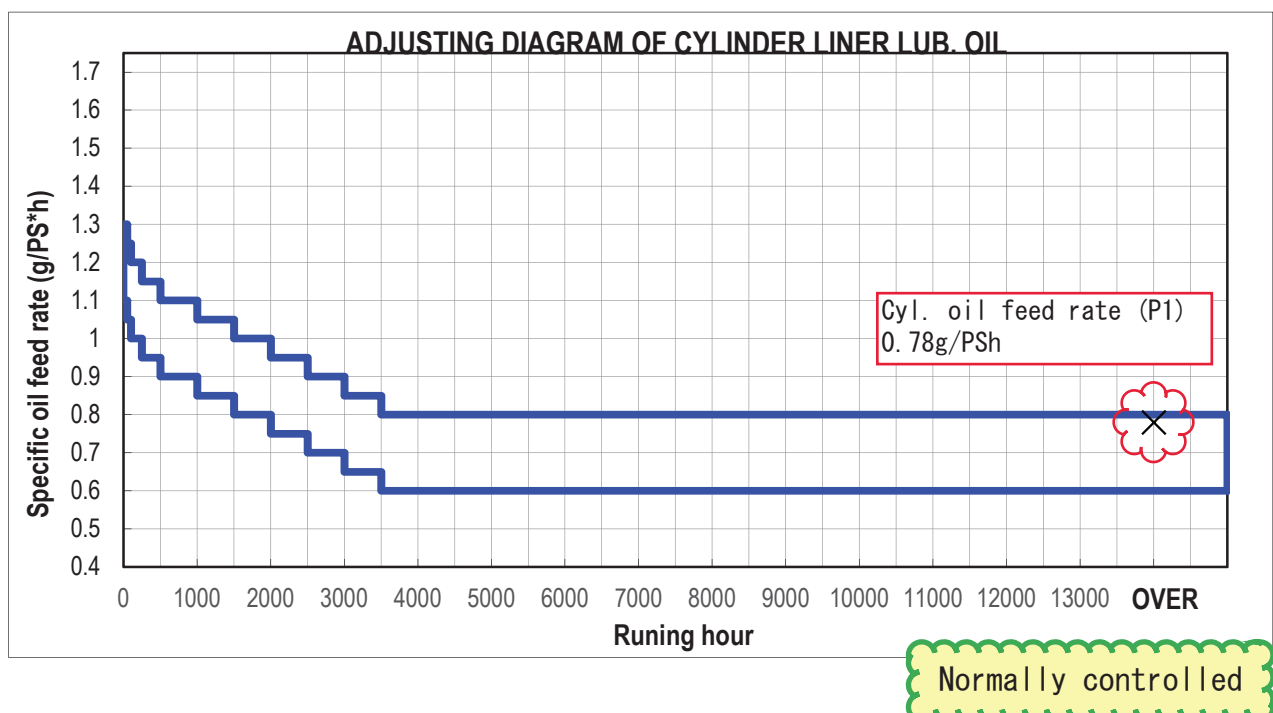
B : Alarm range for service

The engine condition should be always monitored. If it is expected that the operating point enters into Range B, the suitable measures such as cleaning and repainting of ship's hull shall be performed as soon as possible. When the operating point enters this range unwillingly, the operation should be limited to less than 1 hour in every 12 hours.

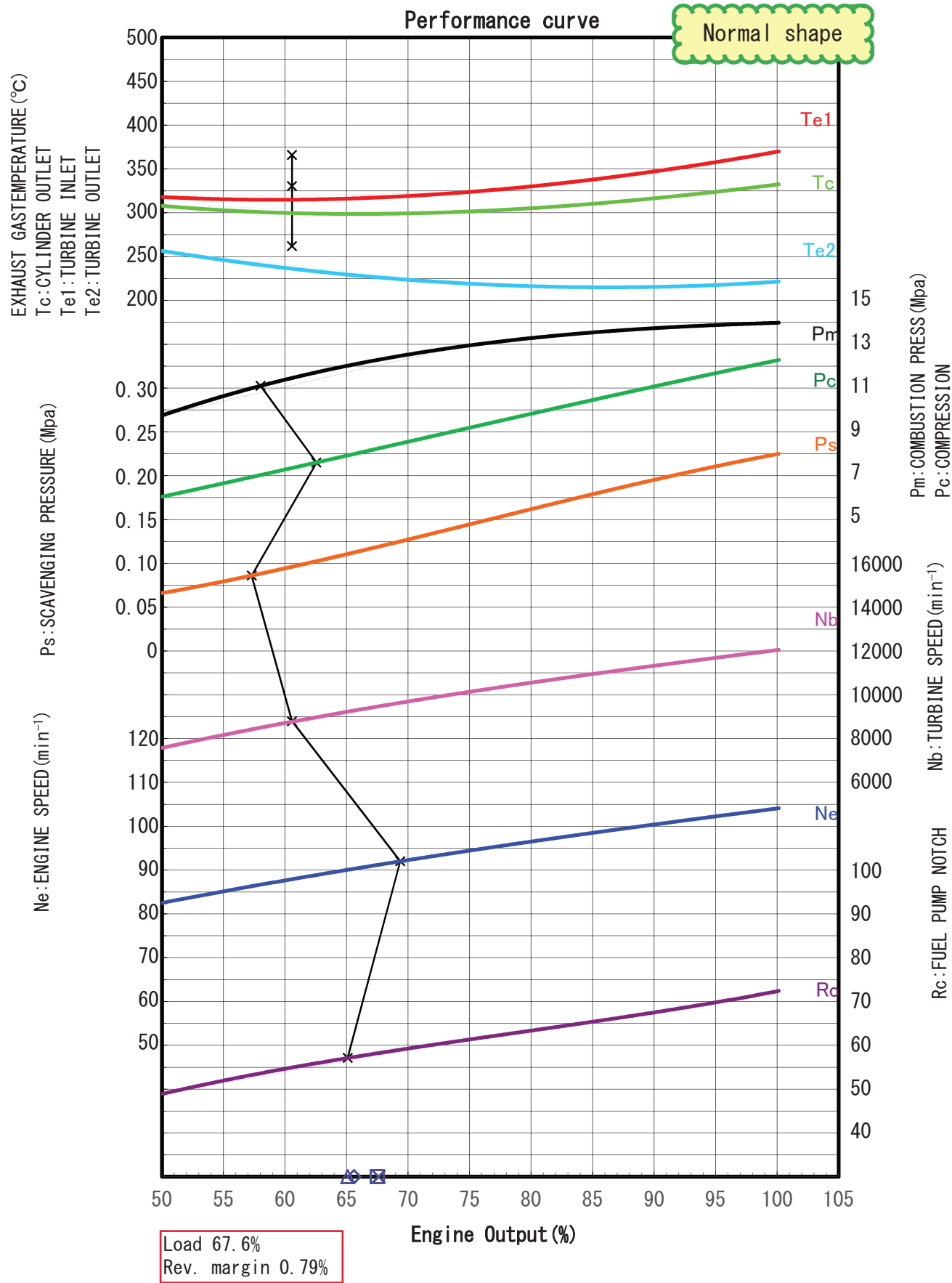
C : Allowable range only at sea trial

Service range with overspeed of 104 to 108% CMCR speed, only permissible during sea trials to demonstrate the CMCR.

CMCR : Contracted Maximum Continuous Rating, i.e. nominal power (100%PS) at nominal engine speed (100%rpm).



SHIP NAME	ANDROMEDA LEADER	KW	15540
ENGINE TYPE	8UEC 60LS II #10	min ⁻¹	104



MAIN ENGINE LOG - ANDROMEDA LEADER

UEC 60 LSI

Ship name		ROMEDA	Owner	ANZ BANK NEW ZEALAND LTD.				kW×min	15,540			UE - 2583									
Date			2-Apr-20	22-May-20	22-Jul-20	13-Aug-20	02-Sep-20	P.Comp P.Max. (MPa)	1	6.6	11.2	7.6	12.1	7.1	11.2	6.9	11.0	7.5	11.3		
Weather			MODERATE	MODERATE	MODERATE	CALM	CLOUDY		2	7.2	11.1	8.0	11.8	7.6	11.1	7.7	10.7	8.1	11.3		
Wind	Direction		E	S	WSW	WNW	W		3	7.4	10.9	7.9	11.5	7.6	10.7	7.6	10.4	8.1	11.0		
	Force		3	5	3	2	4		4	7.5	11.2	8.0	12.0	7.7	11.0	6.8	10.5	8.0	11.2		
Cargo load			BALLAST	LOADED	BALLAST	LOADED	BALLAST		5	7.1	11.0	7.4	11.7	6.7	10.7	6.7	10.6	7.1	11.4		
M/E Total Running Hours			112,724	113,535	114,247	114,654	115,058		6	7.0	10.6	7.4	11.3	6.6	10.3	6.6	10.4	7.2	10.9		
Ship's speed			18.4	17.3	18.3	17.7	18.4		7	7.4	11.0	7.6	11.6	6.6	10.6	6.7	10.6	7.1	10.9		
M/E Revolution (min ⁻¹)			93	93	92	92	92		8	7.7	11.2	7.6	11.7	7.1	11.0	6.9	10.6	7.5	11.0		
M/E Revolution (min ⁻¹)			93	93	92	92	92		Mean	7.2	11.0	7.7	11.7	7.1	10.8	7.0	10.9	7.6	11.1		
Room Temp. (°C)			39.6	31.4	37.7	42	39	Exhaust Gas Temperature	Cylinder Outlet (°C)	1	383	366.0	367.0	381.0							
Sea Water Temp. (°C)			30.3	21.5	30.3	33.4	32			2	378	366.0	373.0	375.0							
Handle Notch			93	93	92	93	93			3	388	373.0	367.0	379.0							
Governor Notch			61.0	61	62	61	61			4	405	372.0	362.0	394.0							
Pressure (MPa)	T/C LO		0.14	0.13	0.131	0.127	0.129			5	398	384.0	379.0	396.0							
	LO		0.21	0.22	0.213	0.217	0.214			6	383	383.0	384.0	398.0							
	Jacket Cooling Fresh Water		0.20	0.22	0.202	0.22	0.211			7	391	377.0	375.0	384.0							
	Fuel Oil		0.61	0.62	0.61	0.62	0.61			8	397	386.0	383.0	399.0							
	Sea Water (A/C cooling)		0.23	0.19	0.26	0.23	0.25			Mean	389.43	374.43	372.43	388.3							
	SCAV.AIR		0.089	0.100	0.082	0.083	0.086		Inlet	1	426.0	417.0	405.0	423.0							
EXH.V Spring Air		0.71	0.71	0.71	0.7	0.7	2			431.0	420.0	418.0	432.0								
EXH.V Driving Oil		0.45	0.45	0.361	0.37	0.364															
F.O	Inlet Temp.		85.0	80.0	85	83	71	T/C Exh Gas Temp. (°C)	Outlet	1	321.0	297.0	306.0	321.0							
	Viscosity (Actual)		13.0	13.0	10	13	13			2	322.0	305.0	313.0	325.0							
F.O Pump Rack	1		58.0	58.0	58	56	57		Scavenging Air Temperature (°C)	A/C Inlet	1	120.0	120.0	116.0	120.0						
	2		57.0	57.0	57	57	57				2	115.0	114.0	118.0	115.0						
	3		58.0	58.0	57	56	58			A/C Outlet	1	42.0	43.0	46.0	46.0						
	4		56.0	57.0	57	57	57				2	44.0	40.0	46.0	45.0						
	5		58.0	58.0	56	57	57			Scav. Air Trunk	1	52.0	50.0	52.0	52.0						
	6		57.0	57.0	56	56	57				2	52.0	50.0	52.0	52.0						
	7		58.0	58.0	57	57	57			T/C Blower Inlet Temp.(°C)	1	39.0	37.0	38.0	41.0						
	8		58.0	58.0	57	56	57				2	39.0	37.0	38.0	41.0						
	Mean		57.5	57.6	56.9	56.5	57.1			A/C Manometer (kPa) 1.75/1.5 1.75/1.5 1.75/1.25 1.77/1.25 1.75/1.25											
Turbo Charger Revolution (min ⁻¹)	1		8,730	9,000	8700	8750	8820	Inlet Temp.(°C)		1	39.0	37.0	38.0	41.0							
	2		8,760	9,010	8670	8690	8760			2	39.0	37.0	38.0	41.0							
	Mean		8,745	9,005	8,685	8,720	8,790	A/C Manometer (kPa) 0.35/0.4 0.3/035 0.3/035 0.30/0.35 0.3/035													
F.W TEMP (°C)	In		72.4	72.1	69	70.6	70.1	T/C LO TEMP (°C)	In		43.1	42.0	43.0	43.0							
	Out		85.0	85.0	81	81	82		Out		60.0	60.0	60.0	60.0							
P.LO TEMP (°C)	In		42.1	42.1	42.5	42.1	42	Economizer Manometer (mm)	65.0 60.0 60.0 60.0 60.0												
	Out		48.0	48.0	49	49	49														
Sea water Temp (°C) (A/C cooling water)			In	33/34	33/35	37/38	37/37	37/38	Fuel Oil	Gravity		0.9330	0.9273	0.9257	0.9257						
			Out	46/48	46/44	48/49	51/49	52/50		Sulfur		0.36	0.49	0.32	0.32						
Thrust Temp (°C)			45.0	45.0	45	45	45	Viscosity			30.2	43.8	40.3	40.3							
			42.4	42.5	42.5	45	42	Calorific value			42	42	42	42							
Consumption	F.O Mt / Day		42.8	43.8	40.59	41.64	41.56	Stuff.B. Leak Oil (l / Day)		40.0	40.0	40.0	40.0								
	L.O l / Day		60.0	60.0	60	60	60	Last Bunker Port		JAPAN	NEWARK	JAPAN	JAPAN								
	Cyl. Oil l / Day		360.0	360.0	384	408	384	Cylinder Oil Adjustment	Handle												
	Exh. V.Oil l / Day		0.0	0.0	0	0	0		Stroke or	1.25	1.25	1.25	1.25								
* Fill in all items								Oil Brand	System Oil		JXTG Nippon Oil - MARINE S30										
									Cyl.Oil		JXTG Nippon Oil - MARINE C405										
								Last Dry Dock								01-Jul-20					

* Fill in all items

Varied Pc