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o/c

सम्मिश्र जांच दल/ Composite Trials Team
द्वारा नेवी कार्यालय/ c/o Navy Office
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अन्डमान एवं निकोबार कमान/
Andaman & Nicobar Command
पोर्ट ब्लेयर/ Port Blair - 744 102

CTT/300/03/12/TECH

17 May 23

The Commander-in-Chief
{for CTO (Marine)}
Headquarters
Andaman & Nicobar Command
Port Blair - 744 102

RUNNING HOUR EXTENTION OF DA NO. 3 (350 KW) - IN LCU L54

1. Refer to HQANC fax ANC/42000/EG/5/3 dated 15 May 23.
2. **Background.** Running Hour Extention Trials including performance, vibration and attenuation checks of DA 3 onboard LCU L54 were undertaken on 16 May 23. DA was loaded upto 73% (256 kW) on load bank and sustained for a duration of 02 hours.
3. **Performance Parameters.** A detailed report w.r.t engineering and performance trial is placed at **Enclosure**. The salient parameters are as follows: -
 - (a) **Lub Oil Pressure.** Lub oil pressure of DA at 73% of rated load was found to be 3.6 bar and is **SAT.**
 - (b) **Lub Oil Temperature.** Lub oil temperature of DA at various loads was found to be in the range of 75°C to 95°C and is **SAT.**
 - (c) **Fresh Water Temperature.** Fresh water temperature of DA was found to be in the range of 73°C to 86°C and is **SAT.**
 - (d) **Exhaust Temperature.** Exhaust temperature of DA found to be 572°C at 73% load (Alarm limit-575°C) and is **SAT.**
4. **Vibration Analysis.** Vibration trials were undertaken at 60% and 73% of rated load and found **SAT.**
5. **Observations.**
 - (a) DA loaded upto 73%(256kW) view limiting exhaust gas temperature.
 - (b) Attenuation across one mount at 60% & 73% found **UNSAT.**
 - (c) Sensor cable not secured properly.
6. **Recommendations.** Following recommended: -

Px/Am

- (a) Liquidation of defects/ observations mentioned at para 5 ibid.
- (b) Torque tightening of unsat mount as per OEM recommendations.
- (c) DA may be cleared for exploitation upto 73% of rated load for independent operation with close monitoring of all critical parameters.

G. Jagannath 17/05

(जगन्नाथ गुरुमूर्ति /Jagannath Gurumurthy)
लेफ्टिनेंट कमांडर / Lieutenant Commander
प्रभारी अधिकारी/ Officer-in-Charge(AOL)

Encl : - As above

Copy to : -

The Naval Component Commander
{for SO (Engineering)}
c/o Navy Office
Port Blair – 744 102

The Commanding officer
/N LCU L54
c/o Navy Office
Port Blair – 744 102

RUNNING HOUR EXTENTION OF DA NO. 3 (350 KW) - IN LCU L54

1. Trial Inspector : (a) Sarv Jeet Singh ERA III
(b) PS Rawat, ERA IV
2. Date and Time : 16 May 23 (1130-1730 Hrs)
3. Equipment used for trials : (a) SPM T-30
(b) Temperature Gun
4. Details of trials are as follows: -

(a) **Safety Device Checks.**

Ser.	Description	Unit	Design Value	DA 3 (350 KW)
(i)	Low LO Pr. Alarm	Kg/cm ²	1.2	1.2
(ii)	Low LO Pr Trip	Kg/cm ²	0.8	0.8
(iii)	High LO temp Alarm	°C	119	118.5
(iv)	High Cooling water temp Alarm	°C	90±2	91
(v)	High Cooling water temp Trip	°C	96±2	97
(vi)	Over speed Trip	RPM	1650	Not Offered
(vii)	Crash stop Local	--	Ops/ Non-ops	Ops
(viii)	Crash stop Remote	--	Ops/ Non-ops	Ops

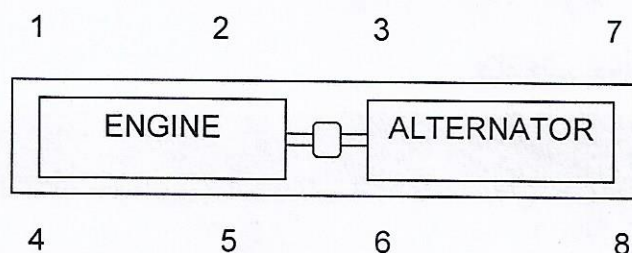
(b) **Performance Parameters at 73% Load.**

Ser.	Description	Unit	Parameters recorded at 256 KW (73% of rated load)
			350 KW DA
(i)	Max sustained Load	KW	256
(ii)	RPM	RPM	1501
(iii)	Lub Oil Pressure	Kg/cm ²	3.6
(iv)	Sea Water Pressure	Kg/cm ²	0.6
(v)	Lub Oil Temperature	°C	95
(vi)	Fresh Water Temperature	°C	86
(vii)	Exhaust Temperature	°C	572

(c) **Vibration Trials.** Vibration trials of DA was undertaken at load 256 kW 73% of rated load. Overall vibration readings of DA at monitoring points found within permissible limit and is SAT. The details of trials are as follows: -

Ser	Description	350 KW DA						Remarks (Limit 16 mm/sec)
		At 60 % load (210 KW)			At 73 % load (256 KW)			
		H	V	A	H	V	A	
(i)	Engine FE	5.8	6.2	6.7	6.3	6.6	7.1	Sat
(ii)	Engine DE	6.8	6.9	4.6	8.3	6.2	4.7	Sat
(iii)	Alternator DE	6.9	6.8	4.2	7.7	8.5	5.9	Sat
(iv)	Alternator FE	7.2	6.9	4.4	8.9	7.9	7.6	Sat

(d) **Attenuation checks.**



Positions	210 KW (60 % load)							
	1	2	3	4	5	6	7	8
Top	11.2	10.2	6.2	10.7	9.5	6.3	7.8	10.4
Bottom	5.7	0.9	1.1	1.1	0.9	0.9	1.1	1.8
Atten.	49	91	82	89	90	85	85	82
Remarks	UNSAT		SAT					

Positions	256 KW (73 % load)							
	1	2	3	4	5	6	7	8
Top	13.1	10.3	6.9	9.7	10.9	8.6	9.9	12.1
Bottom	6.2	1.8	1.3	0.8	0.6	1.0	0.9	1.1
Atten.	52	82	81	96	94	88	90	90
Remarks	UNSAT		SAT					

Note: Attenuation lesser than 70% indicates overloaded/over tightened mounts. All SV mounts to be loosened and torque tightened as per OEM specified values.

(e) **SPM Readings.**

Ser.	Description	0% Load dbm/ dbc	60 % Load dbm/ dbc	73 %Load dbm/ dbc	Remarks
(a)	Alternator Driven End	18/8	15/8	18/9	SAT
(b)	Alternator Free End	16/5	16/5	17/4	SAT