दूरभाष: २३०६/ Tele: 2306

सम्मिश्र जांच दल/ Composite Trials Team
द्वारा नौसेना कार्यालय/ c/o Navy Office
मुख्यालय/ Headquarter
अन्डमान एवं निकोबार कमान/
Andaman & Nicobar Command
पोर्ट ब्लेयर ७४४१०२/ Port Blair 744 102

CTT/300/03/13TECH

26 अक्टूबर २३/ Oct 23

प्रधान सेनापति/ The Commander-in-Chief
{कृते कमान तकनीकी अधिकारी (समुद्री)/ for CTO(M)}
मुख्यालय/ Headquarters
अन्डमान एवं निकोबार कमान/ Andaman and Nicobar Command
द्वारा नौसेना कार्यालय/ c/o Navy Office
पोर्ट ब्लेयर ७४४ १०२/ Port Blair 744 102

RUNNING HOUR EXTENSION TRIALS OF DA NO. 3 (350 KW) - *IN* LCU L-55

1. Refer to following: -

   (a) HQANC Fax ANC/42002/EG/13/2 dated 25 Sep 23.

   (b) *IN* LCU L-55 Fax 300/3/6 dated 07 Sep 23.

2. **Background**. Running Hour Extension Trials including SDCs, performance checks, vibration and attenuation checks of DA No. 3 (350kW) onboard *IN* LCU L-55 was undertaken on 19 Oct 23. DA was loaded up to max sustained load of 85% (297 kW) on load bank for a duration of 02 hours. Max load restricted to 85 % (297kW) view high fresh water temperature.

3. **Performance Parameters**. Detailed report of the same is placed at **Enclosure**.The salient parameters are as follows: -

Ser	Parameter	Unit	Range	Remarks
(a)	Lub Oil Presssure	Bar	4.6-3.6	SAT
(b)	Lub Oil Temperature	°C	70-103	
(c)	Fresh Water Temperature	°C	61-91	
(d)	Exhaust Temperature	°C	220-494	

4. **Vibration Analysis**. Vibration trials were undertaken at 60% and 85% of rated load and found SAT.

5. **Observations**.

   (a) **Safety Hazards**.

      (i) Bilge plates not secured as per extant policy.

(ii) Bilge Hygiene – **UNSAT**

(iii) Plastic conduits used for securing of control wiring.

(b) Sea water pressure not available in LCP & IPMS.

(c) **Lub oil pressure alarm and trip not set as per DME Policy EG/3001/DSL dated 22 Sep 23**.

(d) Attenuation across two mounts found **UNSAT** at 60% and 85% of rated load.

(e) SPM of alternator found in **Yellow Zone**.

6. **Recommendations**.

(a) Liquidation of defects/ observations mentioned at para 5 ibid.

(b) 10 % extension of running hours may be accorded for normal exploitation of DA no.3 upto 85% (297kW) post liquidation of above observations by SS.

(एस सी विलियम/ S C William)
कमांडर/ Commander
प्रभारी अधिकारी/ Officer-in-Charge

Encl : - As above

Copy to : -

नौसेना खण्ड सेनापति/ The Naval Component Commander
{कृते वरिष्ठ कर्मचारी अधिकारी (यांत्रिकी)/ for SSO(Tech)}
मुख्यालय नौसेना खण्ड/ Headquarters Naval Component
द्वारा नौसेना कार्यालय/ c/o Navy Office
पोर्ट ब्लेयर ७४४१०२/ Port Blair 744 102

कमान अधिकारी/ The Commanding Officer
आई एन एल सी यू एल५५/ *IN* LCU L55
द्वारा नौसेना कार्यालय/ c/o Navy Office
पोर्ट ब्लेयर ७४४ १०२/ Port Blair 744 102

Enclosure to CTT (Pbr) letter
CTT/300/03/13 dated 26 Oct 23

RUNNING HOUR EXTENSION TRIALS OF DA NO. 3 (350 KW) - *IN* LCU L-55

1. Trial Inspector : (a) Sarv Jeet Singh, ERA-3
   (b) Bharat, LME
2. Date and Time : 18 Oct 23 (0930-1730 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	Designed Value	DA 3 (350 kW)
(i)	Low LO Pr Alarm	Kg/cm^2	2.2	**1.2**
(ii)	Low LO Pr Trip	Kg/cm^2	2.0	**0.8**
(iii)	High LO Temp Alarm	°C	119	119
(iv)	High Cooling Water Temp Alarm	°C	90±2	92
(v)	High Cooling Water Temp Alarm Trip	°C	96±2	96
(vi)	Over speed Trip	RPM	1650	1650
(vii)	Crash stop Local	-	Ops/ Non-ops	Ops
(viii)	Crash stop Remote	-	Ops/ Non-ops	Ops
(ix)	Low Sea Water Pr Alarm	Kg/cm^2	0.1	0.1
(x)	High Exhaust Temp Alarm	°C	575	575

(b) **Performance Parameters at 60% and 85% Load**.

Parameter Readings - Local Control Panel									
Ser	Description	Unit	Range	Idle	25%	50%	60%	85%	85%
(i)	RPM	RPM	1500	1118	1499	1499	1500	1500	1499
(ii)	L.O. Pressure	Kg/cm^2	2.2-2.0	4.8	4.6	4.2	4.0	3.7	3.6
(iii)	S.W. Pressure	Kg/cm^2	-	0.4	0.6	0.6	0.6	0.6	0.6
(iv)	L.O. Temp.	°C	80-116	60	70	86	94	103	103

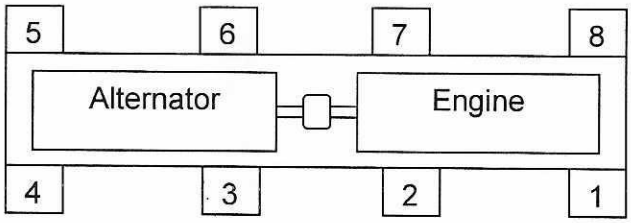
(v)	F.W. Temp	°C	75-96	49	61	79	84	91	91
(vi)	EXHT. Temp	°C	575	101	220	366	450	490	494
(vii)	Load	KW	-	0	85	176	210	297	297
(viii)	Volt	V	-	383	416	415	415	415	415
(ix)	Current	AMPS	-	-	186	305	375	511	510
Parameter Readings – Remote Panel (MCR)									
(i)	RPM	RPM		1118	1500	1499	1500	1501	1500
(ii)	L.O. Pressure	Kg/cm²	2.2-2.0	4.8	4.6	4.1	4.0	3.6	3.6
(iii)	S.W. Pressure	Kg/cm²	-	-	-	-	-	-	-
(iv)	L.O. Temp.	°C	80-116	60	69	85	92	103	103
(v)	F.W. Temp	°C	75-96	49	60	79	83	91	91
(vi)	Exht.Temp	°C	575	101	219	365	427	491	494
Parameters by Non Contact Temperature Gun									
(i)	F.W. Cooler IN Temp	°C	-	55	58	75	79	88	88
(ii)	F.W. Cooler Out Temp	°C	-	46	51	65	70	77	77
(iii)	SW IN Temp to F.W. Cooler	°C	-	30	30	32	32	34	34
(iv)	SW Out Temp FW Cooler	°C	-	33	38	35	48	53	53
(v)	L.O. Cooler IN Temp.	°C	-	54	67	72	76	81	82
(vi)	L.O. Cooler Out Temp.	°C	-	50	62	65	68	76	76
(vii)	FW IN Temp. (L.O. Cooler)	°C	-	47	57	72	76	82	82
(viii)	FW Out Temp. (L.O. Cooler)	°C	-	49	66	80	83	80	86

(c) **Vibration Trials**. Vibration trials of DA was undertaken at 60% (210kW) and 85% (297kW) of rated load. Overall vibration readings of DA at monitoring points found within permissible limit. The details of trials are as follows: -

Ser.	Description	60% Load			85 % Load			Remarks
		H	V	A	H	V	A	
(i)	Engine Free End	5.5	4.3	4.2	8.5	5.9	5.9	SAT
(ii)	Engine Drive End	5.5	5.2	3.1	7.9	6.7	4.0	

Ser.	Description	60% Load			85 % Load			Remarks
		H	V	A	H	V	A	
(iii)	Alternator Drive End	4.9	5.0	3.9	6.9	6.4	6.0	
(iv)	Alternator Free End	4.1	3.5	2.7	5.1	4.4	4.2	

(d) **Attenuation checks**.



Positions	(60 % load)							
	1	2	3	4	5	6	7	8
Top	10.9	6.0	6.2	6.7	9.8	5.7	6.3	6.4
Bottom	3.7	0.3	1.7	1.6	2.7	1.1	2.2	1.7
Attenuation %	**66**	95	72	76	72	80	**65**	73
Remarks	**UNSAT**	SAT					**UNSAT**	SAT

Positions	(85 % load)							
	1	2	3	4	5	6	7	8
Top	4.1	4.6	7.7	9.5	12.3	8.2	7.9	12.3
Bottom	4.1	0.7	1.2	2.2	3.2	1.9	2.8	2.1
Attenuation %	**62**	84	84	76	74	76	**64**	82
Remarks	**UNSAT**	SAT					**UNSAT**	SAT

(e) **SPM Readings**.

Ser.	Description	0 % Load dbm/ dbc	60 % Load dbm/ dbc	100 % Load dbm/ dbc	Remarks
(i)	Alternator Drive End	**31/20**	**30/21**	**27/19**	**Yellow zone**
(ii)	Alternator Free End	**32/9**	**25/10**	**30/14**	**Yellow zone**