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 ७४४ १०२/ Port Blair 744 102

CTT/300/02/06/TECH

25 अक्टूबर २३/Oct 23

प्रधान सेनापति/ The Commander-in-Chief
{(कृते कमान तकनीकी अधिकारी (समुद्री)/ for CTO (Marine)}
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 L2 DA – INS KESARI

1. Refer to following: -

   (a) HQANC Fax ANC/42000/EG/5/3 dated 17 Oct 23.

   (b) INS Kesari Fax 300/0/6 dated 04 Oct 23.

2. **Background**. Running Hour Extension Trials including SDCs, performance parameters, vibration and attenuation checks of L2 DA (350kW) onboard INS Kesari was undertaken on 19 Oct 23. L2 DA was loaded up to max 95% (335kW) on load bank and sustained for duration of two hours.

3. **Performance Parameters**. A detailed report w.r.t engineering and performance trial is placed at **Enclosure**. The salient parameters are as follows:

Ser	Parameter	Range	Value	Remarks
(i)	Lub Oil Pressure	5.0 - 3.5 bar	5.0 - 4.4 bar	SAT
(ii)	Lub Oil Temperature	75 - 95 °C	76 - 89 °C	
(iii)	Fresh Water Temperature	65 - 87 °C	67 - 78 °C	
(iv)	Exhaust Temperature	300 - 500 °C	300 - 440 °C	

4. **Vibration Analysis**. Vibration trials were undertaken at 60% and 95% of rated load and found SAT.

5. **Observations**.

   (a) **Safety Hazards**: -

      (i) Plastic conduits used for securing control wiring.

      (ii) 'Abort Starting' lamp of LCP non-ops.

(iii) Hot lagging missing in exhaust drain pipeline and valve.

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

(c) LCP temperature sensing channel erratic.

(d) Manual operating valve wheel not fitted in exhaust drain valve.

(e) Sea Water pump greasing cup not fitted.

(f) Fuel floating tank breather knob not fitted.

(g) **Gauges calibration certificate not held**.

(h) Mount no. 1 & 2 rusted.

(j) Fresh water cooler inlet thermometer not fitted.

(k) Starting air pressure gauge non-ops.

(l) Mounts not preserved.

6. **Recommendations**.

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

(a) 10% extension of running hours may be accorded for normal exploitation of L2 DA up to 95% (335kW) load.

25/10

(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 ७४४ १०२/ Port Blair 744 102

कमान अधिकारी/ The Commanding Officer
भा. नौ. पो. केसरी/ INS Kesari
द्वारा नौसेना कार्यालय/ c/o Navy Office
पोर्ट ब्लेयर ७४४ १०२/ Port Blair 744 102

Enclosure to CTT (Pbr) letter
CTT/300/02/06 dated 23 Oct 23

RUNNING HOUR EXTENSION TRIALS OF L2 DA - INS KESARI

1. Trial Inspector : (a) Paras Kumar, CH MECH
   (b) P S Tomar, LME
2. Date and Time : (a) 19 Oct 23 (1115 - 1600 Hrs)
3. Equipment used for Performance trials : (a) SPM T-30
   (b) Unit Camera
   (c) Leonova Diamond
   (d) Stroboscope

4. Trial details are as follows: -

(a) **Safety Device Checks**

Ser	Description	Unit	Designed Limit	L2 DA
(i)	Low L.O Pressure Alarm	KG/CM^2	2.2	**1.2**
(ii)	Low L.O Pressure Trip	KG/CM^2	2.0	**0.89**
(iii)	High F.W. Temp Trip	^{0}C	89-93	91
(iv)	High F.W. Temp Trip	^{0}C	95-99	97
(v)	Over-speed Trip	RPM	1650	1650
(vi)	High Exhaust Temp	^{0}C	495-505	500
(vii)	Low F.W. Level Warning		50% of Volume of tank	SAT

(b) **PERFORMANCE TRIALS**.

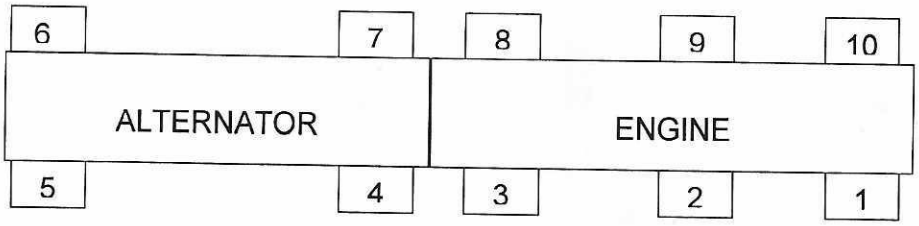
L2 DA								
Parameter Readings - Local Control Panel								
Ser	Description	Unit	Idle	25%	50%	60%	75%	95%
(i)	RPM	RPM	1100	1490	1490	1480	1490	1480
(ii)	L.O. Pressure	Kg/cm²	5.0	5.0	5.0	4.8	4.6	4.4
(iii)	S.W. Pressure	Kg/cm²	1.8	1.9	1.9	1.9	1.9	1.9
(iv)	F.W. Pressure	Kg/cm²	0.7	0.7	0.7	0.7	0.7	0.7
(v)	L.O. Temp.	°C	76	78	80	86	89	95
(vi)	F.W. Temp	°C	67	68	72	75	78	81
(vii)	Exht. Temp	°C	220	300/300	345/340	400/400	450/440	480/480

(viii)	Load	kW	-	80	185	220	267	348
(ix)	Voltage	V	-	414	413	415	413	413
(x)	Current	AMPS	-	112	255	360	456	550
(xi)	RPM (by Strobe)	RPM	-	1485	1485	1485	1483	1485
Parameter Readings – Remote Panel (MCR)								
(i)	RPM	RPM	1490	1490	1504	1500	1500	1500
(ii)	L.O. Pressure	Kg/cm²	4.7	4.7	4.5	4.4	4.3	4.1
(iii)	L.O. Temp.	°C	72	76	79	83	85	91
(iv)	F.W. Temp	°C	65	68	70	72	75	78
Parameters by Non-Contact Temperature Gun								
(i)	F.W. Cooler IN Temp	°C	62	65	67	68	75	76
(ii)	F.W. Cooler Out Temp	°C	44	48	49	51	58	58
(iii)	SW IN Temp to F.W. Cooler	°C	30	31	30	31	30	30
(iv)	SW OUT Temp FW Cooler	°C	34	36	36	37	41	41
(v)	L.O. Cooler IN Temp.	°C	74	79	81	83	93	93
(vi)	L.O. Cooler OUT Temp.	°C	71	72	74	75	83	84
(vii)	FW IN Temp. (L.O. Cooler)	°C	62	64	64	66	71	71
(viii)	FW Out Temp. (L.O. Cooler)	°C	64	62	65	67	72	72

(c) **Vibration trials**. Vibration trials of L2 DA were undertaken at load 210 kW & 335 kW. Overall vibration readings of DA at monitoring points found within permissible limit. The details of trials are as follows: -

L2 DA								
Ser.	Measuring Points	At 60% (210 kW) load			At 95% (335 kW) load			Remarks (Limit 16 mm/sec)
		V	A	H	V	A	H	
(i)	Engine Free End	3.0	3.3	3.4	3.9	8.4	3.5	SAT
(ii)	Engine Drive End	3.4	2.5	3.8	4.8	3.6	12.6	
(iii)	Alternator Drive End	3.7	3.2	5.3	3.5	5.0	6.5	
(iv)	Alternator Free End	3.3	2.3	2.7	3.8	3.4	4.7	

5. **Attenuation Checks**.



L2 DA										
Position	Attenuation of SV mounts at 60 % Load									
	1	2	3	4	5	6	7	8	9	10
Top	8.6	8.0	4.2	3.2	6.9	11.4	8.5	5.3	3.2	5.8
Bottom	0.5	0.3	0.4	0.1	0.2	0.5	0.1	0.7	0.07	0.09
Attenuation %	93	96	90	94	97	95	98	81	97	98
Remarks	Sat									

L2 DA										
Position	Attenuation of SV mounts at 95 % Load									
	1	2	3	4	5	6	7	8	9	10
Top	11.2	15.0	5.3	7.0	12.7	9.3	14.3	5.9	4.0	7.6
Bottom	0.8	0.4	0.5	0.2	0.3	1.2	0.1	1.1	0.08	0.09
Attenuation %	92	96	90	97	97	87	98	80	98	98
Remarks	Sat									

6. **SPM Readings**.

L2 DA				
Ser.	Description	0 % Load dbm/dbc	60 % Load dbm/dbc	95 % Load dbm/dbc
(a)	Alternator Driven End	19/8(Green)	17/7(Green)	17/8(Green)
(b)	Alternator Free End	2/9(Green)	1/9(Green)	3/9(Green)