

TODD

SHIPYARDS CORPORATION

San Francisco Division: Foot of Main Street • Alameda, California 94506 • 523-0321 (415)

19 October 1965

Commander
Military Sea Transportation Service, Pacific
Fort Mason
San Francisco, California

Subject: USNS "GENERAL JOHN J. POPE (TAP-110) Job Order No. 45159
"TURBO-GENERATORS AND TURBINE ROTOR REPORTS"

Dear Sir:

In accordance with requirements of Specification Item Nos. 357 & 358 of subject Job Order, enclosed herewith in four (4) copies are reports as listed below:

"TURBO-GENERATORS AND TURBINE ROTOR REPORTS"

Our production schedule is based upon receiving within 7 days regarding your written instructions concerning any additional work on these findings and recommendations. Unless so instructed, original specification work will be continued so as to avoid costly disruptions and to assure timely completion.

Very truly yours,

TODD SHIPYARDS CORPORATION
(SAN FRANCISCO DIVISION)

H. A. Corbett
H. A. Corbett
Assistant General Manager

MAC:JN:ms

Encl. (4)

USNS GENERAL JOHN J. POPE (TAP-11)

TURBO-GENERATORS

#1 - UNIT - DeLAVAL 236631

TURBINE	O.D. JOURNAL	BEARING I.D.	CLEARANCE	CARBON JOURNAL O.D.	CARBON PACKING I.D.	END PLAY	TURBINE ROTOR SETTINGS
Thrust End	2.495	2.500	.005	3.120	3.125		Total Movement of Rotor .084
Coupling End	2.495	2.500	.005	3.120	3.125		Min. From Nozzle .031
Pinion							Oil Clearance in Shoes .017
Turbine End	2.494	2.500	.006				Max. .048
Gen. End	2.494	2.500	.006				
Gear						.010"	
Turbine End	4.495	4.501	.005				
Gen. End	4.495	4.501	.006				

*Service
8/2/68*

NOTE: Overspeed Trip - 1340 RPM.

#2 - UNIT - DeLAVAL 236632

Thrust End	2.494	2.500	.006	3.120	3.125		Total Movement of Rotor .097
Coupling End	2.494	2.500	.006	3.120	3.125		Min. From Nozzle .028
Pinion							Oil Clearance In Shoes .013
Turbine End	2.494	2.500	.006				Max. .041
Gen. End	2.494	2.499	.005				
Gear						.012"	
Turbine End	4.495	4.501	.006				
Gen. End	4.495	4.502	.007				

*Service
8/2/68*

NOTE: Overspeed Trip - 1340 RPM.

#3 - UNIT - DeLAVAL 236634

Thrust End	2.493	2.501	.003	3.119	3.125		Total Movement of Rotor .091
Coupling End	2.494	2.500	.005	3.119	3.125		Min. From Nozzle .040
Pinion							Oil Clearance In Shoes .008
Turbine End	2.494	2.500	.006				Max. .048
Gen. End	2.495	2.500	.005				
Gear						.010"	
Turbine End	4.494	4.500	.006				
Gen. End	4.494	4.4995	.0055				

*Service
8/2/68*

NOTE: Overspeed Trip - 1350 RPM.

#4 - UNIT - DeLAVAL 236633

TURBINE	O.D. JOURNAL	BEARING I.D.	CLEARANCE	CARBON JOURNAL O.D.	CARBON PACKING I.D.	END PLAY	TURBINE ROTOR SETTINGS
Thrust End	2.495	2.502	.007	3.120	3.125		Total Movement of Rotor .121
Coupling End	2.495	2.501	.006	3.119	3.125		Min. from Nozzle .035
Pinion							Oil Clearance in Shoes .013
Turbine End	2.495	2.502	.007				Max. .048
Gen. End	2.495	2.502	.007				
Gear						.007"	
Turbine End	4.494	4.500	.006				
Gen. End	4.494	4.502	.006				

NOTE: Overspeed Trip - 1340 RPM

Readings taken by Harry A. Decker - DeLaval

DeLAVAL UNIT #236601

FORWARD ENGINE ROOM

TURBINE ROTOR	O.D. JOURNALS	I.D. BEARINGS	CROWN THICKNESS	CLEARANCE	O.D. CARBON JOURNAL	I.D. CARBON PACKING	END PLAY
H.P. FWD.	4.988	4.997	.377	.009	5.970	5.984	
HP AFT	4.988	4.999	.375	.011	5.970	5.984	
LP FWD	6.990	7.004	1.000	.014	10.000	10.018	
LP AFT	6.990	7.003	1.000	.013	10.000	10.018	

FIRST REDUCTION PINIONS

HP FWD	6.983	6.995	1.000	.012			
HP AFT	6.983	6.995	1.000	.012			
LP FWD	6.986	7.000	1.001	.014			
LP AFT	6.986	7.002	1.001	.016			
HP 1ST RED.GEAR							.014"
LP 1ST RED.GEAR							.016"
BULL GEAR							.019"

HP TURBINE ROTOR SETTINGS

Total Movement of Rotor-----	.156"
Minimum from Nozzle-----	.035"
Oil Clearance in Shoes-----	.010
Movement in Nut & Housing-----	.007
Maximum or Running Position-----	.052"

LP TURBINE ROTOR SETTINGS

Total Movement of Running-----	.197
Minimum from Ahead Nozzle-----	.100"
Oil Clearance in Shoes-----	.007"
Movement in Nut and Housing-----	.008"
Maximum or ahead running position-----	.116"

Readings taken by: Harry A. Decker - DeLaval

NOTE: Overspeed Trip set at 110 RPM.
Low Oil Trip Set at 7psi.

DeLAVAL UNIT #236602AFTER ENGINE ROOM

TURBINE ROTORS	JOURNAL O.D.	BEARING I.D.	CROWN THICKNESS	CLEARANCE	CARBON JOURNAL O.D.	CARBON PACKING I.D.	END PLAY
HP FWD	4.983	4.999	.874	.011	5.963	5.984	
HP AFT	4.983	5.000	.874	.012	5.967	5.984	
LP FWD	6.983	6.992	.999	.011	9.997	10.018	
LP AFT	6.983	7.000	1.000	.012	9.993	10.013	

FIRST REDUCTION GEARS

HP FWD	6.983	6.993	1.001	.015			
HP AFT	6.983	6.997	1.001	.014			
LP FWD	6.985	6.997	1.001	.012			
LP AFT	6.985	6.993	1.000	.013			
HP 1st RED. GEAR							.012
LP 1st RED. GEAR							.012
BULL GEAR							.019

HP TURBINE ROTOR SETTINGS

Total Movement of Rotor-----	.155
Minimum from Ahead Nozzle-----	.035
Oil Clearance in Shoes-----	.010
Movement in Nut & Housing-----	.006
Maximum or running position-----	.051

LP TURBINE ROTOR SETTINGS

Total Movement of Rotor-----	.202
Minimum from Ahead Nozzle-----	.100
Oil Clearance in Shoes-----	.011
Movement in Nut & Housing-----	.007
Maximum or Ahead Running Position-----	.116

Readings taken by Harry A. Decker - DeLaval

NOTE: Overspeed Trip Set at 112 RPM.
Low Oil Trip Set at 6 psi.