



DEPARTMENT OF THE NAVY
NAVAL SURFACE WARFARE CENTER
PHILADELPHIA DIVISION
5001 SOUTH BROAD STREET
PHILADELPHIA PA 19112-1403

IN REPLY REFER TO:

9243

Ser 427/014

MAY 21 2018

Mr. Zac Schramm
Strain Gage Project Engineer
LamaLo Technology, Inc.
6645 Oakridge Road,
San Diego, CA 92120

Dear Mr. Schramm:

SUBJECT: STRAIN GAGE SHAFTING ALIGNMENT CERTIFICATION OF LAMALO TECHNOLOGY INC. PERSONNEL

Naval Ships' Technical Manual Propulsion Shafting, NAVSEA S9086-HM-STM-010 Chapter 243 requires that shaft alignment strain gage assessments only be accomplished by representatives from Naval Surface Warfare Center, Philadelphia Division (NSWCPD), South West Regional Maintenance Center (SWRMC), Mid-Atlantic Regional Maintenance Center (MARMC), or by personnel trained or certified by NSWCPD using approved procedures and practices. For ships with resiliently-mounted reduction gears, the strain gage method is the only acceptable method for measuring main propulsion shafting system alignment. Email from LamaLo Technology Inc. personnel Zac Schramm to NSWCPD Code 427, Greg Dobbs of 26 September 2017 requested the certification of individuals from shaft alignment contractor LamaLo Technology Inc. as strain gage installers and strain gage project engineers utilizing strain gages in the measurement of bearing reactions.

During 4 – 6 November 2017, Mr. Dobbs visited Naval Station Mayport in order to witness and certify specific Zac Schramm and Keith Sampson as strain gage installers and Zac Schramm as a strain gage project engineer. Both individuals demonstrated the required knowledge and skills required to be certified as strain gage installers in accordance with Naval Ships' Technical Manual Propulsion Shafting, NAVSEA S9086-HM-STM-010 Chapter 243, while aboard USS Milwaukee (LCS 5). These personnel have previously conducted alignment on USS Freedom (LCS 1) Class vessels both during new construction and in-service as well as numerous commercial vessels.

LamaLo Technology Inc. personnel demonstrated the capability to properly apply gages for the measurement of bearing reactions in accordance with Naval Ships' Technical Manual Propulsion Shafting, NAVSEA S9086-HM-STM-010 Chapter 243 and Handbook, Bearings, Measurement of Load, NAVSEA S6420-AC-HBK-010.

LamaLo Technology Inc. personnel certified as Strain Gage Installer are Mr. Zac Schramm and Mr. Keith Sampson.

Mr. Dobbs witnessed Mr. Z. Schramm perform the role of strain gage project engineer by utilizing the measurement of bearing reactions taken aboard USS Milwaukee (LCS 5). He demonstrated the ability to be proficient in analyzing measured bending strains and converting to bearing reactions, analyzing measured Hydraulic Jack Load Cell (HJLC) data and comparing to strain gage bearing reactions for validation, and analyzing bearing reactions and determining potential bearing moves for USS Milwaukee (LCS 5). Mr. Schramm has previously performed the function of analyzing shaft alignment using the strain gage method of analysis on numerous occasions on LCS 1 Class vessels. Mr. Dobbs considers Mr. Schramm to be qualified and certified as a strain gage project engineer.

LamaLo Technology Inc. personnel, Mr. Schramm demonstrated the capability to be a strain gage project engineer in accordance with Naval Ships' Technical Manual Propulsion Shafting, NAVSEA S9086-HM-STM-010 Chapter 243 and Handbook, Bearings, Measurement of Load, NAVSEA S6420-AC-HBK-010.

Sincerely,



B. MICHAEL ZEKAS
Acting Department Head
Propulsion, Power and Auxiliary Machinery Systems
By direction
of the Commanding Officer

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