

WATCHMAN ONSITE™ LINESHAFT ALIGNMENT SERVICES

WATCHMAN Onsite™ expert lineshaft testing assures successful alignment of large critical shafting systems. Quality alignment assures long life for reduction gears and shaft bearings.

Successful design and installation of a shafting system is necessary for long bearing life and proper reduction gear tooth contact. Good shaft alignment starts with an accurate analysis of the shaft weight and stiffness as well as careful selection of bearing locations. The marine and mechanical engineers at Azima DLI have many years of experience in the most modern techniques for computing bearing loads and selecting optimum bearing heights.

Azima DLI has performed shaft alignment analyses for many ships ranging from single shaft fish boats with three bearings to aircraft carriers with four shafts and more than 30 bearings. Azima DLI designed software can handle virtually any arrangement. Analysis results delivered by Azima DLI include bearing reaction influence numbers corrected for bearing wear down and thermal growth, detailed instructions for alignment, and instruction for slope boring of stern tubes.

In addition to new construction alignment, Azima DLI assists shipbuilders and ship owners with bearing reaction measurements for installed shafting. Using traditional jack and load cell method or more versatile strain gauge methods, Azima DLI can provide highly



accurate alignment measurements with minimum impact on construction or sailing schedules.

Because direct measurement of reduction gear bearing reactions is virtually impossible with the traditional jack method, Azima DLI has refined the new strain gauge measurement techniques for those previously troublesome jobs. In addition to reducing both cost and time of measurement, strain gauges yield valuable lateral alignment data, which cannot be obtained from jack measurements. Bearing reactions in resiliently mounted reduction gears and lateral bearing reactions are now measured routinely by Azima DLI with its strain gauge method.

DYNAMIC ALIGNMENT TESTING

In addition to static measurements on either cold or hot stationary shafting systems, Azima DLI has developed and refined techniques for obtaining alignment data from rotating shafting with radio telemetry. This allows alignment tests to be made underway and under normal ship operating conditions. In this way, the effects of ship hog and sag on the propulsion system alignment and reduction gear bearing reactions can be assessed.

Successful alignment of your ship's critical propulsion shafting is assured with Azima DLI's engineering and measurement support during design, installation or repair.

ONSITE SERVICES OFFERED:

- Onsite data collection
- Vibration analysis
- Infrared thermography
- Lube oil analysis
- Motor and battery testing
- Reciprocating engine and compressor analysis
- Machine rotor balancing and coupling shaft alignment
- Precision geometrical, roll and line shaft alignment
- Advanced fault troubleshooting
- Engineering consulting
- Specialized test and measurement of dynamic phenomena

CALL US TODAY!

Azima DLI is transforming how companies perform maintenance, and we can help you too. To learn more about how WATCHMAN Onsite™ can deliver outstanding value to your company through our machine condition monitoring services, contact us at toll free in the U.S. at 800.482.2290 or international at (+1) 781.938.0707, or visit us online at www.AzimaDLI.com.

KNOWING WHATS AHEAD™