ESSENTIAL READING FOR SUPERYACHT CAPTAINS AND CREW – DOCKWALK.COM

Dockwalk

Global Order Book issue

January 2024

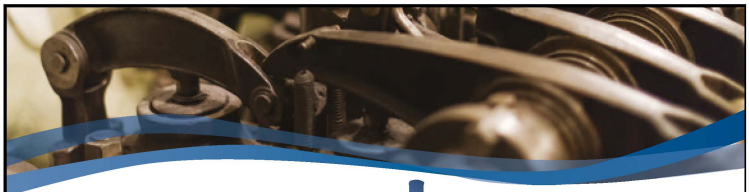
A STEADY PACE
The 2024 Global Order Book

Past Due
Advice for recouping unpaid wages

NEW LAUNCH
Capt. Luca Mosca on 97-meter M/Y *Carinthia VII*



PLUS: Yachting license requirements, and exploring Golfo Dulce, Costa Rica

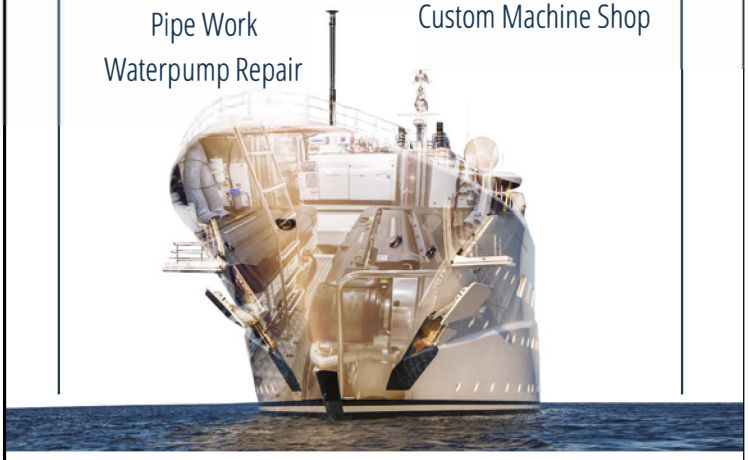


MENDOL USA

WE DEFINE
ENGINEERING SOLUTIONS.

MENDOL USA OFFERINGS

Engine Room Design
Engine Diagnostics
Hydraulic Design
Stabilizing Systems
Bow Thrusters
Pipe Work
Waterpump Repair
Control Panels
Ventilation Systems
Exhaust Systems
Power Generation & Integration
Custom Machine Shop



WINDROSE
COOLING SYSTEMS

PLATE COOLERS
- All makes and models
- Dismantle, clean and replace gaskets
- Assemble and pressure test
- Components used will be genuine OEM

HEAT EXCHANGERS
- Dismantled, cleaned, pressure tested and inspected

AFTERCOOLERS
- Dismantled, cleaned, pressure tested and inspected

WATER PUMPS AND FUEL SPINNERS
- Repair and service
- Rebuild of all makes and models with genuine OEM parts

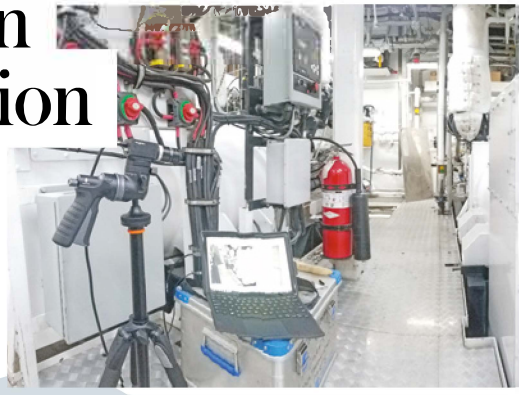
WE ARE ONLY A PHONE CALL AWAY
1-954-321-9375

Call us Now for a Price Estimation!

FREE Pick-Up & Delivery – Broward County Only

Machinery Maintenance and Motion Amplification

By Tony Planamento



Tony Planamento is technical projects supervisor at Advanced Mechanical Enterprises. He is the internal technical trainer and created several vibration condition monitoring programs. +1 954 764 2678; *amesolutions.com*

When it comes to assessing the health of machines or structures on yachts, vibration analysis graphs and charts excel in describing the data. However, deciphering the details and effectively communicating them to operators, superintendents, or vessel owners can be a complicated task for the untrained eye. Fortunately, a groundbreaking solution has emerged: motion amplification.

Developed at the University of Louisville by RDI Technologies, the Iris M Motion Amplification (MA) system introduces an innovative approach to visualizing motion and detecting vibration in the realm of predictive maintenance. By unveiling invisible deflection, displacement, and movement, this technology leverages videography and software algorithms to display precise vibration and movement data. The software amplifies motion in the captured video, empowering maintenance professionals to visually identify problematic areas.

MA offers advanced vibration analysis diagnostics, including resonance testing, orbits, and the ability to apply vectors to regions of interest (ROI). It's great for identifying resonance issues, structural weaknesses, and piping resonances. By visualizing problems through videos, MA simplifies communication and makes it more accessible.

Naturally, we eagerly embraced motion amplification and in April 2020, our newly acquired Iris M system first proved its worth when we detected complex couplingwear and excessive vibration on a sportfisher. Prior contractors were left scratching their heads, unable to pinpoint the root causes of the vessel's problems. Motion amplification, however, exposed the drive end engine brackets as the primary source of structural looseness, which became obvious through the visibly amplified vibration and movement captured in the video. In response, Advanced Mechanical Enterprises engineered and fabricated new mounting brackets that significantly improved the vibration and movement. We've had multiple successes since in identifying loose struts, misalignment, and excessive engine movement among others.

Implementing MA as a regular tool in a maintenance plan ensures the safety and longevity of assets while reducing costs associated with emergency repairs and failures. The ability to detect and visualize movement greatly improves inspection efficiency and accuracy.

Motion Amplification is a game-changer for vibration analysis and troubleshooting. With its ability to detect and amplify subtle movement, MA provides engineers with a valuable tool for machinery health assessment and maintenance planning.