



FEHRMANN
Experience Engineering Excellence

Press Release

Ship suppliers and owners benefit from new technique

New technique to measure and to calculate structure-born noise developed. / Successful co-operation between renowned company Fehrmann Metallverarbeitung GmbH and Germanischer Lloyd (GL). / Minimizing structure-borne noise (SBN) one of no. 1 issues at round table at Superyacht Forum in Amsterdam.

Hamburg. Windows bring the outside in and the inside out. No doubt, the use of glass in yacht design has increased and windows in modern super yachts become bigger and bigger and as windows are growing so does the noise. Since windows are like loudspeakers the airborne noise produced by the main engine or propellers propagate throughout the ship as structure-borne noise (SBN). But a new measuring system now allows to calculate the noise radiation of window systems and thus to determine and affect the sound level of windows even before they are produced. Ship window supplier benefit from this new technique as it can verify the sound performance and ship supplier can optimize their products.

The topic of SBN was also discussed at the Global superyacht Forum (GSF) in Amsterdam. Experts from around the world came to exchange experiences, to learn about new techniques and to network. Besides ecological aspects, it was widely agreed that the most important issues in yacht building is security and innovative procedures to minimize noise radiations. In the so called 'noise debate' Henning Fehrmann, chief executive manager of Fehrmann Metallverarbeitung GmbH and Dr. Christof Weißenborn, acoustician at the classification society GL discussed „issues of SBN and its challenges“. Engineers of the two companies developed and validated a measurement system that exactly calculates the acoustic emission of windows due to SBN. For the first time, it now is possible to take noise reduction properties of windows into account. „This allows us to calculate all acoustic characteristics of every window“, explains Christof Weißenborn. Furthermore, the engineers carried out a test on an especially made test plant in order to verify the data. Afterwards a contactless Scanning Laser Vibrometer (SLV) was used to give the most accurate reading of the surface vibration velocity. Finally, they measured the radiated airborne sound power by means of sound intensity. Using the new technique, Fehrmann now produces window systems, including window seals and frames that meet the high demands of super yachts. Hennig Fehrmann says: „Finally, we are able to produce more high quality windows that do reduce the sound radiation aboard.“

The issue has been arousing high interest both among key note speaker and ship owners. For interviews please feel free to contact Rafael Robert Pilszczek, press relation manager of Fehrmann Metallverarbeitung GmbH. Phone + 49 170 / 310 79 72.

Hamburg,
3rd December 2008

Fehrmann Metallverarbeitung GmbH

Headquarter:
Stenzelring 19
D-21107 Hamburg
Phone.: + 49 (40) 75 24 36 – 0
Fax: + 49 (40) 75 24 36 – 11
Email: Info@Fehrmann-Hamburg.de

Managing Shareholders:

Dipl.-Ing. Henning Fehrmann
Dipl.-Ing. Uwe Fehrmann

Press Office:

Rafael Robert Pilszczek M. A., PPR
Sinstorfer Kirchweg 18
D-21077 Hamburg
Phone.: + 49 (40) 32 80 89 80
Fax: + 49 (40) 32 80 89 81
Mobile: + 49 (170) 310 79 72

1 Page

Products:

Yacht- and Naval Architecture
Customized Offshore-Windows and Doors
Building Construction, Protection above or below Ground
Mechanical and Plant Engineering, Environmental Engineering
Light Metal- and Heavy Metal Casting
On-Site Construction, On-Site Processing and On-Site Testing

Customers:

Blohm + Voss, HDW, Lürssen, Devonport, A+R, Tenix, Mazagon, NAF, NAS (all shipyards), Cristina, Abdul Aziz, Lady Moura, Le Grand Bleu, Octopus, Al Said, Al Mirqab (all megayachts)

DGzRS:

Single supplier and manufacturer of ship windows of German Maritime Search and Rescue Service (DGzRS)