



SPM



Marine Solutions

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International Marine User Group meeting



The User meeting in Brussels had participants from Europe and Asia that represent the forefront in modern Condition Based Maintenance (CBM) practices. We all enjoyed interesting discussions combined with the nice Belgium cuisine.

After the official opening and welcome by SPM:s MD Stefan Lindberg the presentations started followed by active discussions and interchange of experience making it a tough challenge to keep the time schedule.

Since the last User meeting Condition Based Maintenance has become more accepted and more ships are equipped with condition monitoring equipment as we have seen from SPM. DNV also confirmed that they expect to almost double the number of ships that will actually go for CM accreditation within the near future.

SPM launched the new SPM HD technology specifically suited to also measure slow speed machinery where traditional vibration techniques not are usable. SPM HD uses advanced algorithms for evaluation of the signal making it specifically suited on complex machinery where disturbances are creating problems using vibration analyses. There are already selected applications where the SPM HD technology is applied and the results look very positive.

Best Regards,
SPM Instrument

Anders Sundberg

On the Marine User Meeting agenda

The conference featured presentations by invited speakers, addressing the driving forces behind industry investments in condition monitoring and covering the technology and successful implementation of Condition Based Maintenance using SPM solutions on board vessels.

MARINE USER GROUP MEETING 2010



Costa Pacifica

Ship Superintendent Martina Gallus from Costa Crociere showed the success of having installed the SPM online condition monitoring system Intellinova on critical machines on the new cruise ship Costa Pacifica.

The CBM program is worked out together with RINA, the Italian Class Society, and SPM for Class notation. Alarms are sent to shore where analysis is conducted online by SPM and Fincantieri. Examples of early detection of unbalance in fans had already allowed for planned maintenance work in port, avoiding secondary damages and saving time and money.

Italian Navy

Lieutenant Luigi Manfreda from the Italian Navy and Project Leader Alessandro Pescetto from Seastema showed the implementation of a fully integrated CBM system with SPM online for all critical machines on the new series of frigates. The CBM system is fully integrated with the MMS system and communicates with an expert system that makes further analysis to provide the correct work

orders. The CBM system also reports to the Ship Management System and supports an Improvement Maintenance Strategy to design out future failures. The Italian navy has taken a big step towards taking full control of ship reliability based on a world class maintenance approach.

Teknè-Finaval

Ship Superintendent Carlo Tranchina from Teknè-Finaval had prepared a presentation showing the implementation of a CBM program in cooperation with RINA and SPM in order to achieve the CM class notation. The CBM program is in the process of being implemented on nine crude oil and product tankers, where two vessels have been running for two years and already shown encouraging results. The key is to have regular training of personnel, so selected crew is sent to the Italian Maritime Academy for a training program set up together with SPM.

The CBM program is supported by a Service and Support Contract from SPM, where alarm reports are sent once a month for additional evaluation.



Van Oord

Maintenance Engineer Wilko Visser from Van Oord described how they are implementing CBM to meet approved class notation. Several of the vessels are running routine measurements with Leonova and Condmaster, which is communicating with the CMMS system. In addition, FFPV Stornes will be equipped with Intellinova online measurements on thrusters. The system will be fully integrated with the CMMS system as well. The motivation to go for CBM have been to predict irregularities in time, avoid unnecessary maintenance, less planned stops, less unplanned costs and Corporate social responsibility.

Thrustmaster

Design engineer Walter Leenes from Thrustmaster explained the ongoing developments together with SPM to measure on the thrusters during normal operation and showed the new facilities in Texas with the capabilities to perform tests in a water basin under controlled forms.

Stork

Design Engineer Mark Snoeij from Stork Technical Services presented case stories of using vibration analysis and showed the capabilities of Stork to renovate and make customer designed gear boxes.

DNV

Principal Surveyor Jan Bühring Andersen from DNV explained how the Class looks at CM notification and also showed the benefits of implementing such an arrangement. According to DNV, the benefits are several:


- Improved spare part control
- Flexible maintenance intervals due to improved knowledge and control of machinery, availability, performance and condition documented.
- Reduced opening up, fewer maintenance-introduced damages and reduced maintenance costs/time
- Improved crew motivation



**Tips
& Trix**

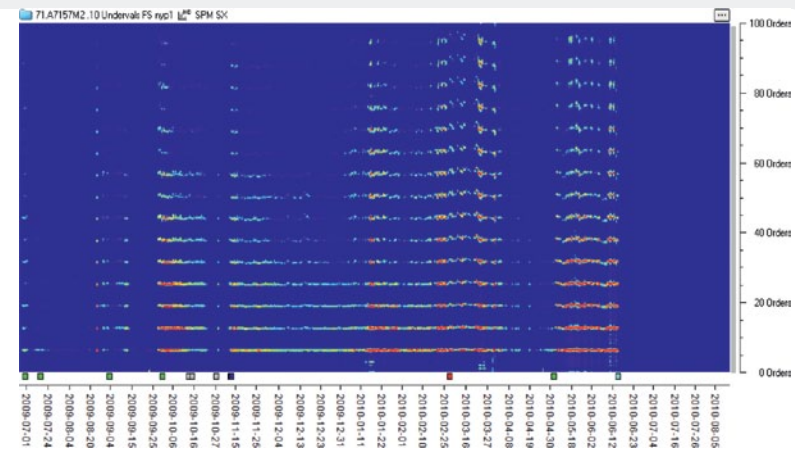
Colored Spectrum Overview enables you to use at multiple spectrums at once to identify patterns and trends indicating possible damage. The function is very useful and can be applied regardless of what measuring devices and measuring techniques you use.

The Colored Spectrum Overview shows multiple spectrums, sometimes thousands, over a longer period of time. It clearly distinguishes between signals which are always present in the machine and signals which are caused by developing damages. This function gives a very good overall picture of machine condition development. There is no need to predefine what symptoms should be highlighted, as the overview displays all symptoms by default. Spectrums can be viewed in orders, CPM or Hz.

To use the function, mark any number of measuring points in the Measuring point tree, then click the Color Spectrum Overview icon:  In the overview, you can toggle

between measuring points using the arrow button at top of the screen, or with Ctrl + <Down>. This way, you can efficiently scan lots of spectrums. One customer using the Colored Spectrum Overview function is Hallsta Papermill

in Sweden, where preventive maintenance engineer *Andreas Bjurman* says: *"Compared to analyzing individual spectrums, we get a much quicker view of the development of a bearing damage using Colored Spectrum Overview."*



VibChecker also as EX approval



VibChecker is a light and compact-sized instrument for vibration measurement in the 10-1000 Hz frequency range. Measurement results are immediately and automatically evaluated against

ISO standards. Green - yellow - red LEDs indicate vibration severity and a real time FFT spectrum is produced for easy pattern recognition. Results can be stored for documentation and follow-up.

With its built-in probe, easy button operation and clear symbols, VibChecker is an all set to go instrument; just point the probe and measure to locate vibration-related problems.



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