Synchrophasing
Everllence Asset+

Today's high-powered two-stroke engines pose a challenge for hull designers and shipyards in their efforts to comply with stricter vibration limits. Synchrophasing has been shown to reduce vibration by 50 – 70 %.

Highly effective vibration reduction

Syncrophasing is a solution for vibration control targeted at twin propulsion design. Besides effectively reducing the vibration levels and, thereby the fatigue loading of vessel structures, the system eliminates so-called vibration beating, known to cause discomfort for the crew.

Synchrophasing is one of many Everllence Asset+ solutions which provide ship owners with added functionality and hence, add value to the particular vessel and its purpose/task. It can be added to any Everllence B&W two-stroke engine used in a twin-engine configuration.

Reduces vibration levels

The average vibration reduction in normal sea conditions is in the range of 50 – 70 % depending on sea state and vessel roll / pitch. Synchrophasing thereby reduces the fatigue loading of vessel structures.

Eliminates vibration beating

Vibration beating is an interference pattern between the two engines where starboard and portside shaft speeds are slightly different (non-synchronized). The synchrophasing software prevents vibration beating. Vibration beating is known to cause discomfort for the crew.

Solution for twin-propeller vessels

Synchrophasing is available for twin-propeller vessels with two-stroke Everllence B&W electronically controlled engines installed.

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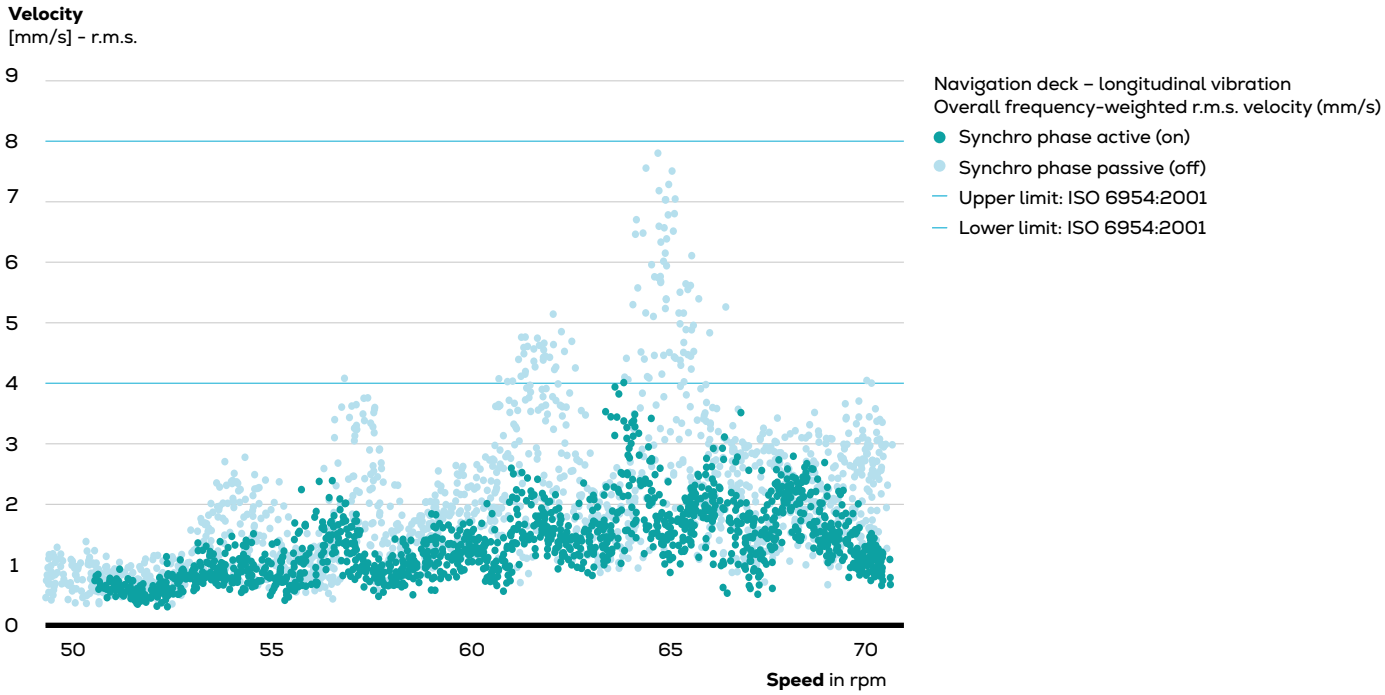
ISO standards on ship vibration have become stricter and particularly affect the design of two-stroke engines. Synchrophasing can be specified by the shipyard when ordering engines in twin propulsion configuration as the “tool in the box” for vibration control.

Synchrophasing
helps make your engine more …

Available

Efficient

Vibration reduction by synchrophasing for 5G70ME-GI engines on an LNG carrier



Engine Synchronization for Vibration Control

The vibration reduction is achieved by synchronizing the port and starboard shafts’ speeds, thereby out-balancing forces / moments from the starboard engine / propeller with the same forces / moments from the portside engine / propeller. Basically, the opposite engine is transformed into a highly effective vibration compensator.

More information

Contact your local Everllence office for more information about the product and how it can improve your specific engine.

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