

GENERAL AVERAGE

Expert Investigates Marine Engine Failure

A 173 meter General Cargo vessel broke down while transiting Pentland Firth on a voyage from St. Petersburg, Russia to Houston, Texas. The breakdown was caused by a failure of the turbocharger. Robson Forensic marine engineering expert, Arthur Faherty, was retained to determine the likely cause of the turbocharger failure and if the actions/inactions of the shipping company were a factor in the casualty.

Analysis of operating and maintenance records showed that the cargo vessel arrived in St. Petersburg, Russia with a main engine vibration damper (de-tuner) that was well out of specification, with all the spring packs broken. Knowing this, the shipping company nonetheless ordered the cargo ship to depart St. Petersburg after plugging the spring packs and eliminating any value of the de-tuner to the engine. Absence of damping of the inherent peak vibrations from operation of the main engine resulted in the failure of the lubrication boundary on the turbocharger and the subsequent loss of power and ultimate shutdown of the engine while transiting Pentland Firth.

Our marine engineering expert opined that this course of events was the foreseeable result of the decision to sail without repairing the damper. Once the condition of the torsional vibration damper became known, any prudent and reasonable ship owner should have affected repairs to the vessel before embarking on a winter North Atlantic passage. The turbocharger was adversely affected by loss of the torsional vibration damper and was a cause of the failure of the main engine. The actions/inactions of the shipping company resulted in the reasonably foreseeable failure of the vessel's turbocharger and main engine.

The shipping company sued under General Average, but the case settled favorably for the cargo owners.