SIO Portable MCS Update

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Topics

- Streamer Status Updates
- Acquisition System Status Updates
- Sound Source Status Updates
- Portable Compressors Status Updates

Streamer Updates

- Streamer sections and birds damaged have been repaired or components replaced
- We still see some unusual behavior in some sections and/or connectors, but we have enough streamer sections to meet current and near-term project needs
- The capability to to tow a SeaSPY2 magnetometer from the end of the streamer off the tail buoy and modulate the data up the streamer during acquisition has been added and tested. It is currently being deployed on current MCS cruise (Hannah Mark JQZ Project, R/V *Sikuliaq*)

Acquisition and Sound Source Updates

Acquisition

- Computing hardware funded through an NSF Oceanographic Instrumentation Grant has been purchased and commissioned

Sound Source

- During preparation for the current project a near-field hydrophone and a depth sensor has been installed on each 2-GI Gun sound source array
- We are very grateful for the collaboration via loan of GI Guns from LDEO and USGS

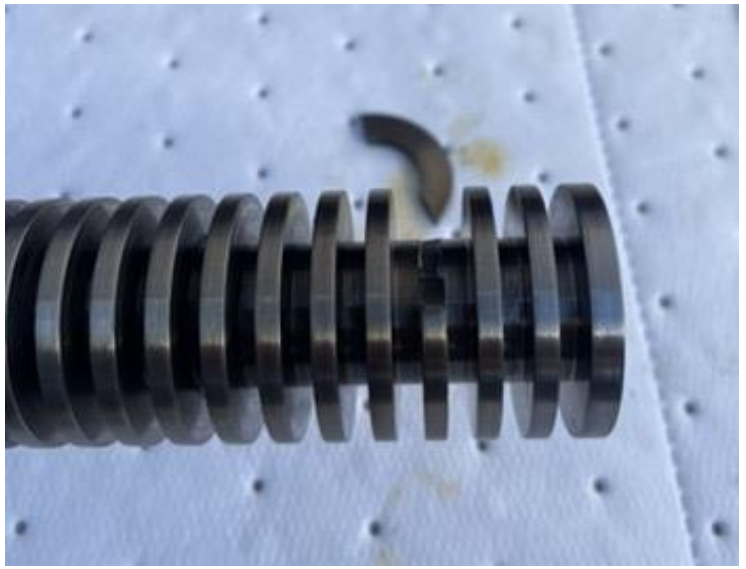
Portable Compressor Updates

Project Status LMF 11s 385 cfm Compressors

- Previous issue reported was 4th stage piston rings were of the incorrect temperature specification. New piston rings were manufactured and installed

Recommissioning

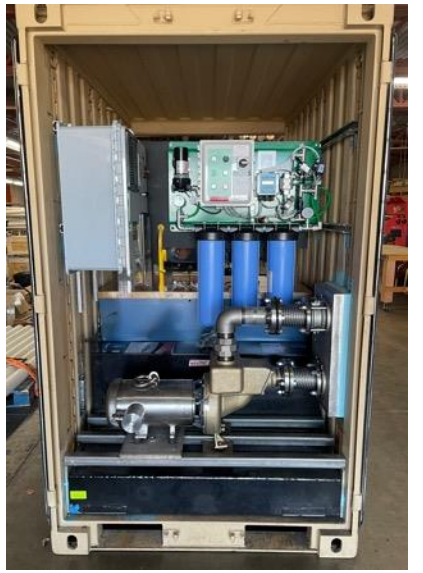
- Consists of operating each compressor for 72 hours at maximum pressure and output (3000psi, 385 CFM)
- After 72 hour run of first compressor it was discovered that the fourth stage piston was cracked and had failed

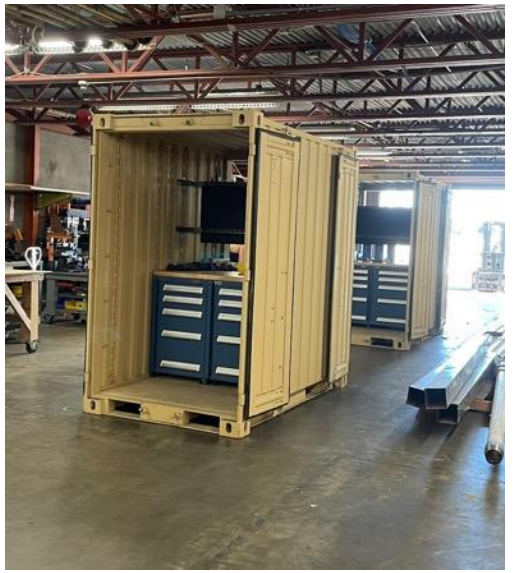


Portable Compressor Updates

Recommissioning

- The root cause was discovered to be insufficient heat treatment of the piston material, new pistons were manufactured, and installed
- Due to time limitations and potential risks the compressors were recommissioned at 2000psi
- 72-hour 3000psi commissioning for each compressor will occur after the current project on R/V *Sikuliaq*





Current Operations

Overview and system deck configuration for the current project for Hannah Mark, Resolving the Origin of the Jurassic Quiet Zone