

Case Studies

Field Reports from Windrock

Scenario

Windrock installed compressor monitoring systems on 6 new engine-driven compressor packages being built at a US packager for a customer in the Middle East. The Windrock systems were installed on the packages during manufacture at the packager's facility prior to the packages being shipped overseas.

The Windrock On-Guard monitoring systems were designed using the C-Guard™ modules. These provide monitoring of:

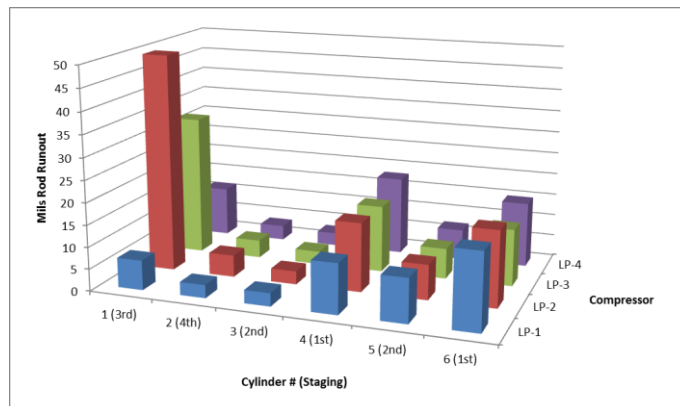
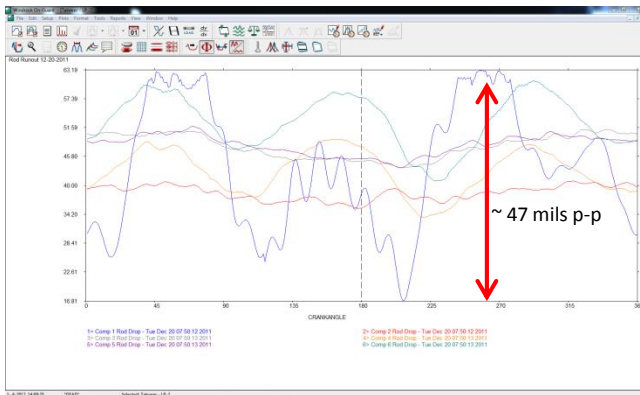
- Head & Crank-end Pressures
- Suction/Discharge Temperatures
- Rod Drop/Rod Runout
- Cross Head Impacting
- Cylinder Head Velocity



Windrock personnel were onsite during the initial startup of the compressors to complete the commissioning of the online systems. All of the data from the compressor monitoring systems looked good except for excessively high rod runout on two of the 32 cylinders. Based on these measurements, it was decided to shut down the unit and evaluate the cause.

Results

After examination of the compressor, it was determined that crosshead lubrication lines had been left disconnected on the two cylinders that exhibited the high Rod Runout values on the Windrock Monitoring system. The compressor commissioning mechanic found that the babbit surfaces on the two affected cylinders' crossheads were damaged. Had the unit not been shutdown in time the likely result would have been a damaged crankshaft resulting in over \$US 1,000,000 in repairs.



For more details and information about reciprocating machinery analysis equipment and monitoring systems, contact your Windrock representative or visit www.windrock.com.

