CPI by Howden

Oxygen Compressor Service

CPI 138 Lead-Free Material in Oxygen Compressor Service

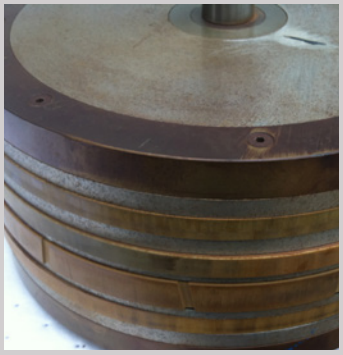
Common compressor piston, rider ring, and packing ring materials, such as CPI 137 material, perform well in oxygen service, but contain lead to achieve such results. With environmental legislation becoming more and more restrictive around the world, companies looking to remove lead from their processes have used lead-free materials, such as CPI 303, at the expense of operating hours, with many only lasting 4,000 hours in typical service.

CPI 138 material now offers a lead-free alternative that has been developed specifically to maximize compressor up-time for piston rings, rider rings and packing. This material represents a solution that is not only BAM-approved for use in oxygen service, but is also qualified by multiple air separation customers and OEMs and provides comparable service life to lead based alternatives.

CPI 138 is also suitable for dry gases which contain oxygen as a constituent, such as bone-dry air and crude argon.

Highlights

- Lead-free material
- Long service life
- BAM-approved for oxygen service



CPI 138 material rings showed no measureable wear at 6 months in service

BAM
Federal Institute for Materials Research and Testing

The Solution

A customer fitted their oxygen compressor with CPI 138 material piston and rider rings in mid-2013. They opened the compressor in January 2014 for a first inspection and found no measurable wear. They placed the compressor back into service for 6 more months and began to work with CPI, part of the Howden group, to propose a technical solution for more of their range of oxygen compressors based on the positive results.