Application Brief #334

CPI's EMISSIONGUARD™ TR² Rings

The Challenge

A leading petrochemical refinery in France sought solutions to reduce emissions from their reciprocating compressors. These emissions, particularly from the compressor packing cases, are a major contributor to the facility's overall emissions. Industry studies indicate that reciprocating compressors can account for up to 50% of a plant's emissions, with packing cases being a significant source.

The Solution

CPI's EMISSIONGUARD™ TR² Rings have consistently demonstrated their ability to reduce packing case vent leakage by up to 50% compared to traditional segmental packing, significantly lowering overall reciprocating compressor fugitive emissions. Recognizing the potential of CPI's solution, a leading refinery quickly initiated the process of upgrading their compressor packing.

A secondary benefit of implementing EMISSIONGUARD™ TR² Rings is the potential extended run life compared to traditional segmental packing. The refinery was also seeking to extend the Mean Time Between Failures (MTBF) of their packing rings, making CPI EMISSIONGUARD™ TR² Rings the ideal solution. Following a successful initial implementation, the refinery began systematically upgrading the packing on additional compressors. This included Siad, Burton Corblin, Thomassen, Nuovo Pignone, and Dresser-Rand compressors, where the sealing performance showed significant improvement over traditional segmental packing, resulting in extended run times and increased intervals between required maintenance interventions.

CPI's EMISSIONGUARD™ TR² Rings are setting a new industry standard in combating fugitive emissions while offering the potential for increased ring lifetime, aligning with the global drive to reduce atmospheric emissions.