

HSHL-D Agitator seals in reduction autoclaves



Autoclaves at Kwinana Nickel Refinery

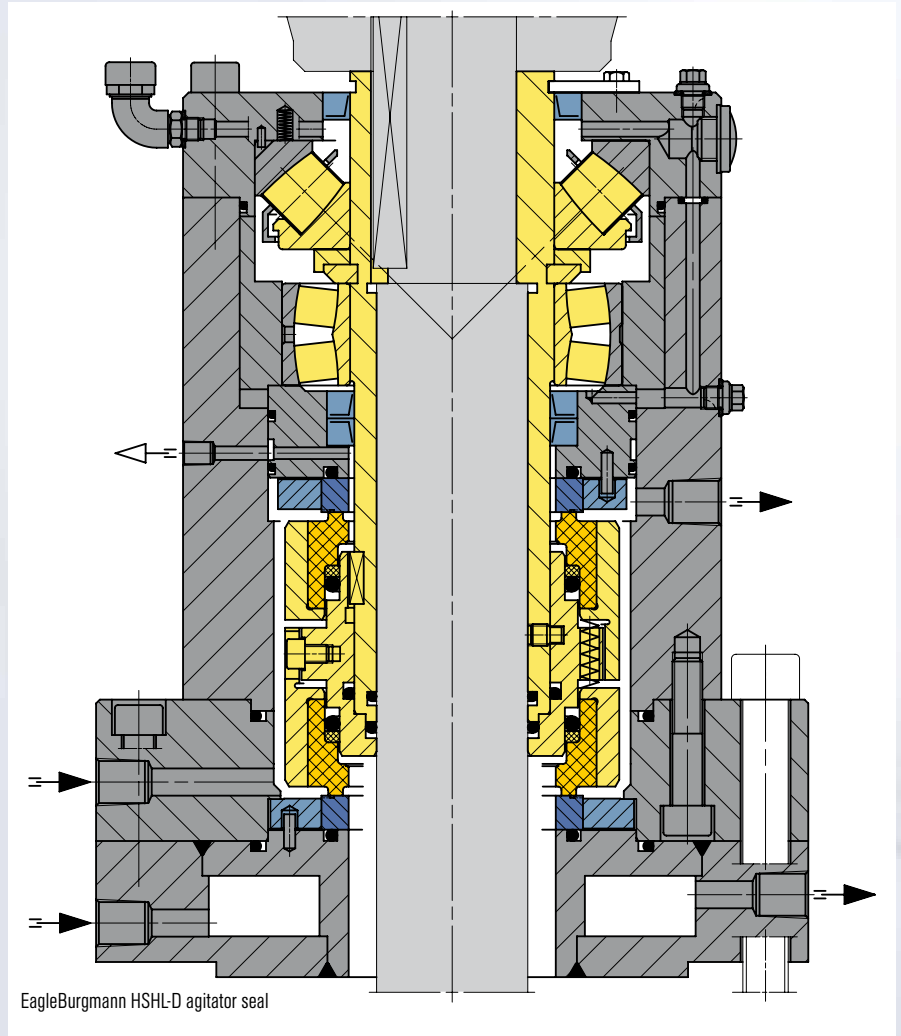
A steady increase in production has been under way at BHP-Billiton – Kwinana Nickel Refinery (KNR) south of Fremantle in Western Australia. In 1991, the company's board agreed to pour \$ 50 million into the facility as part of an overhaul of the WA nickel division.

From a nameplate capacity of 30,000 tonnes per year, the refinery continues to break all records with production currently at over 70,000 tpa. It is rated as one of the most productive nickel refineries in the world.

The first EagleBurgmann agitator seal HSHL-D/5.250" for a batch operated reduction autoclave was fitted into a Lightnin mixer in 1992. The seal proved its worth and over the years the number of seals has increased to seventeen.

Operating conditions

Medium: Nickel ammonium sulphate
and hydrogen gas
Pressure: 38 bar
Barrier water pressure: 44 bar
Temperature: 270 °C



EagleBurgmann HSHL-D agitator seal

The EagleBurgmann seals have replaced more than half the original seals fitted to these mixers and seal maintenance cost/performance analysis over the past five years indicates they out perform the competitors by 25 ... 30 %.

This superiority gap is now increasing due to changing from oil to grease with auto lubricators in October 2001. It was recognized that many seal failures were due to maintenance issues and again with improvements in the barrier water system, the MTBF is well over 1,200 days and most now removed due to compulsory pressure vessel inspections.

A similar pattern has followed with the Philadelphia mixers in the same application. Having lost the initial tender to the OEM some years ago, now a full compliment of EagleBurgmann seals are replacing the original seals as performance and costs, in direct side by side comparison, prove it may have been better to have paid a little more for the EagleBurgmann seals in the first place. An enviable track record of quality products and service for over seventeen years means EagleBurgmann dominates the seal installations in this plant despite aggressive competition.