



**HOT, COLD, WET OR DRY, GRAPHALLOY®
BEARINGS WORK WHEN OTHERS FAIL.**



GRAPHALLOY® Bearings Excel in Pumping Anhydrous Ammonia

Keeping ammonia pumps running was a problem for fertilizer companies until they installed GRAPHALLOY® self-lubricating bearings

A major pump manufacturer was repairing a large number of vertical pumps in Anhydrous Ammonia (NH₃) service. Their customer serves the fertilizer industry and needs the pumps back quickly, especially during the short growing season. The pumps, with bronze bushings installed, were failing due to running dry.



Anhydrous Ammonia is an efficient and widely used nitrogen fertilizer. When used as an agricultural fertilizer, it is compressed into a liquid. When injected into the soil, the liquid ammonia expands into a gas and is readily absorbed in the soil moisture.

With a boiling point of -28.01° F at a pressure of one atmosphere, Anhydrous Ammonia requires special equipment and technology to transport, store and apply. The refrigeration or pressurization system can fail and

the pumps can flash, run dry and ultimately fail.

The pump manufacturer knew from experience that GRAPHALLOY® is one of the most recommended bearing materials found in Anhydrous Ammonia service and typically includes the stuffing box bushing, line shaft bearing and bearings in the bowl assembly.

The manufacturer, working with GRAPHALLOY engineers, replaced the bronze bushings with GRAPHALLOY Babbitt Bearings. GRAPHALLOY has kept the pumps from seizing during dry-run, low-flow, start up and shutdown.

According to the pump manufacturer, the usual service life of Anhydrous Ammonia pumps fitted with GRAPHALLOY bearings is 5 - 7 years. In one instance, the pump manufacturer said the GRAPHALLOY bearings showed no wear after running dry for over 24 hours.

GRAPHALLOY provides reliable, problem-free solutions for the most difficult applications. Contact us to find out what GRAPHALLOY can do for you.