Newsletter

Atlantic Bearing Services 10.2026



The AEC chain has exceeded 20 months in service and remains operational, surpassing the previous annual preventive replacement interval

AEC
ATLANTIC ENGINEERING CHAIN

An application-driven solution engineered by ABS and manufactured by AEC to improve chain service life in Fertinal's phosphate rock reclaimers.

20+ months in operation

Beyond the previous annual replacement interval.

Optimized materials

Improved wear resistance and reduced premature elongation.

Full compatibility

Designed to fit the existing reclaimer infrastructure.

ABS + AEC

Engineering, manufacturing and technical support.

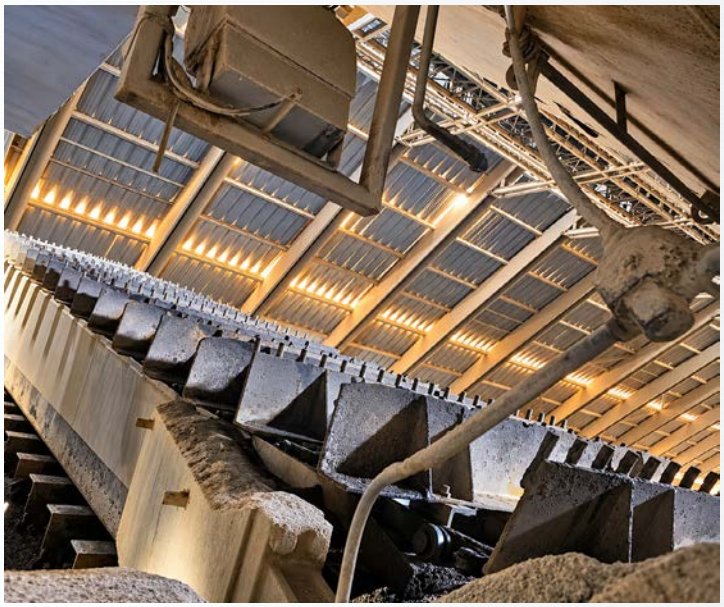
A KEY COMPONENT IN FERTILIZER PRODUCTION

At Fertinal's industrial complex in Lázaro Cárdenas, Michoacán, Mexico, phosphate rock handling is part of the fertilizer production process. This raw material is used to produce phosphoric acid, which is subsequently used to manufacture phosphate fertilizers.

Reclaimers retrieve stored rock and feed it into the conveying system that supplies the process. Their chains drive the buckets that collect and move the material, making chain performance an important factor in maintaining a steady raw material supply.

To address premature wear in the existing chains, ABS analyzed the operating conditions and proposed a solution manufactured by AEC.





THE CHALLENGE: PREMATURE CHAIN WEAR

The original chains experienced premature wear and elongation associated with materials that were not adequately suited to the application's demands. This created recurring replacement and maintenance needs.

The solution had to withstand the abrasive conditions of phosphate rock handling, along with dust, moisture, variable loads, and impact loading. The challenge was to extend chain service life while ensuring dimensional compatibility for every component, without modifying the existing reclaimer infrastructure.



OPTIMIZED MATERIALS FOR LONGER SERVICE LIFE

Based on its analysis of the operating conditions, ABS optimized the chain materials to improve wear resistance and reduce premature elongation. Manufactured by AEC from alloy steel, the solution incorporated heat treatment and zinc-coated links while retaining the chain's existing design and dimensional compatibility with the reclaimers.

The chains were supplied in sections and assembled on site by Fertinal's team, which installed its existing buckets. ABS provided technical support during assembly and startup.



MORE THAN 20 MONTHS IN OPERATION

The chain's good condition at the scheduled annual preventive replacement point led Fertinal to keep it in service and continue monitoring its condition. It has now exceeded 20 months in operation and remains in service. Fertinal holds an additional supply of AEC chains in inventory, ready for the next replacement.



ABS, FROM ENGINEERING TO OPERATION

The project reflects ABS's application-driven approach: addressing an operating problem through a targeted improvement tailored to the requirements of the equipment and the process.

ABS engineering, AEC's specialized manufacturing, and on-site technical support carried the solution from development through startup. For Fertinal, this work translates into longer service life for the installed chain, contributing to equipment reliability and production continuity.