

Timken Gets Tough on Brick Maker's Problem

Hammer mills crush aggregate into material later used in brick production. These mills face some of the harshest operating environments in the industry. Housed units and other components must be rugged enough to endure these tough conditions and deliver high performance for the long haul.

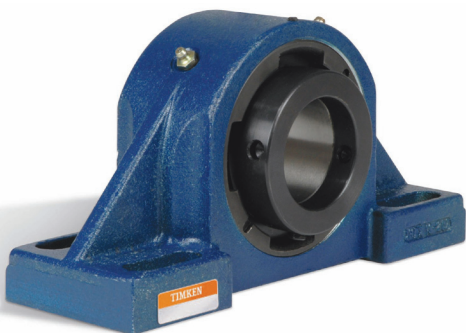
Hanson Brick, North America's largest brick maker, learned first-hand how Timken solutions improve operations. With an annual volume of 1.7 billion bricks, Hanson's hammer mills need to run reliably at full capacity. However, a competitor's split-block housed units kept failing at the brickmaker's Mooringsport, LA. facility. Maintenance personnel replaced one of these units every two weeks because of severe contamination and shock loads.

Two factors contributed to the units' failures. First, the seals did not protect the bearings from the extreme dust and debris present in the application. Second, the cast-iron housing material became deformed under severe shock loads, leading to bearing fit issues and, ultimately, shortening the bearing's life.

The facility's productivity dropped, and Hanson Brick faced mounting costs for replacement bearings.

Switching to Timken® Solid-block Housed Units

To fix the issue, a Timken sales representative, along with Hanson's bearing distributor, suggested replacing the split-block housed units with Timken® spherical roller bearing solid-block housed units.



CUSTOMER

Hanson Brick
Mooringsport, La., U.S.A.

MARKET

Aggregate

SOLUTION

Timken® spherical roller bearing solid-block housed units

THE TIMKEN ADVANTAGE

The Timken solution provided an easy fix for Hanson Brick through:

- "Drop in" units that fit the hammer mill's existing design envelope;
- Bearing life that is longer than the competitor's housed units;
- Pre-assembled, solid-block design that helps keep contaminants out; and
- Steel housings that withstand severe shock loads and vibration.

The solution delivered improved mill uptime and lower maintenance costs.



The Timken housed unit displaced a competitor's product (above) in a hammer mill operated by Hanson Brick.

Timken spherical roller bearing solid-block units feature cast-steel housings and durable seals. They provide robust protection from particulate contaminants and severe shock loads, while handling up to ± 1.5 degrees of misalignment.

The solid-block housed units also are pre-assembled. This means it can be installed right out of the box, unlike split-block designs that must be assembled on the shaft. Pre-assembly means there is no reason to open the housed units in the field, keeping them protected from contaminants.

"When we presented the Timken solid-block solution, Hanson Brick's team was impressed with the product and willing to trial and test the results," said the Timken sales representative. "So, we supplied one 'drop-in' unit, which was fully interchangeable with the competitor's split-block product. The Timken unit easily surpassed the competitor's two-week operating period. After two months with no problems, we converted all four housed unit positions in the hammer mill to the Timken brand. After nine months in operation, the bearings are still going strong with no signs of failure."

THE BEST OF BOTH WORLDS – INTERCHANGEABLE AND CUSTOMIZABLE

While the interchangeability of the Timken solution with other brands offered convenience to Hanson Brick, the ability to configure the product features was also important. Timken spherical roller bearing solid-block units are available in seven basic housing styles offered with 26 dimensional configurations, six locking configurations, and six primary and seven secondary sealing options to fit a variety of application needs.

Hanson Brick specified a four-bolt pillow block. For additional protection against contaminants, it added Timken® steel auxiliary covers with through-shaft seals to each housed unit. Treated with black oxide for enhanced corrosion protection, these end caps are specifically designed for applications where particulates present major challenges.

Being able to specifically configure the housed units definitely contributed to improved performance. The Timken spherical roller bearing solid-block housed units used by Hanson Brick remain in operation more than a year after installation compared to the competing units that lasted two weeks.

Hanson Brick is headquartered in Charlotte, N.C., and provides architects and builders with more than 1,000 styles of brick in four regional brick collections. It is owned and operated by Hanson Building Products North America, a HeidelbergCement company.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets high-performance steel as well as mechanical components, including bearings, gears, chain and related mechanical power transmission products and services.

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