

Industry: Forest Products

Application: Reduced Labor/Installation/Downtime by Replacing Bearings

Solution: DODGE® GRIP TIGHT™ Bearings

DOCUMENTED SAVINGS

CASE STUDY NO. 10

The Challenge

A local Oriented Strand Board (OSB) manufacturer was having problems with the second pass outfeed roll on their saw line. They were using a competitor's setscrew bearings and experiencing considerable shaft wear. The shafts were wearing in such a way that they created heavy vibration during operation. Not only did the shafts have to be replaced about every six months, but the bearings had to be replaced every four months.

The Baldor Solution

Eight DODGE® GRIP TIGHT™ bearings were installed in September 2004 and, as of May 2005, are still running—and running very well at that! The intent was to eliminate shaft wear and significantly reduce the maintenance time required for the customer to replace their bearings (it takes an average of 180 minutes to replace the competitor's bearings versus 60 minutes for the DODGE GRIP TIGHT bearings). With GRIP TIGHT bearings, not only will the customer save money on downtime and maintenance costs, but also on shaft replacement as well.

* See back page for details of data analysis.

The Savings

The original Total Cost of Ownership (TCO) analysis (for just the DODGE GRIP TIGHT bearings) calculated a projected annual cost savings of more than \$39,000—even using three downtime events per year like the customer had been experiencing. However, within the last six months, there have been NO downtime events using the GRIP TIGHT bearings—yielding a significantly increased savings potential over the original analysis. In addition to the application's projected downtime savings, an additional \$8,540 has been saved due to the elimination of downtime occurrences and the cost of shaft replacement.

The Conclusion

Taking advantage of reduced downtime and material costs associated with GRIP TIGHT bearings, a savings potential of more than \$60,000 in the first year has made this equipment change an obvious solution. After six months of use, it is clear that almost \$48,000 in savings has already been realized due to NO downtime events occurring since the install!



TOTAL COST SAVINGS OF: \$47,780

Total Cost for Existing Material/Downtime: \$60,860

Total Cost for Baldor: \$13,080

Step 1 —

For each product that was analyzed, Baldor asked the following questions:

- What was the amount of time required to perform each of the following activities?
 - Lock out conveyor drive and belt
 - Remove the existing drive
 - Select and purchase new components
 - Install a new drive
- What was the number of employees required for each activity?
- What was the labor rate for each activity?
- What was the cost of parts for each activity?
- What was the replacement frequency of each component?
- What were the downtime costs (\$ per hour)?

Step 2 —

We calculated annual shaft replacement downtime and material cost for the existing solution using specific formulas:

Downtime Cost = Downtime Cost (\$ per Hour) x Time Spent on Activity x Replacement Frequency

Material Cost = Replacement Frequency x Unit Cost

RESULT:**Existing Shafting Material Cost**

\$ 2,000

Proposed Shafting Material Cost

\$ 0

SAVINGS**\$ 2,000****Step 3 —**

We calculated annual downtime costs for existing and proposed bearings using specific formulas:

Downtime Cost = Downtime Cost (\$ per Hour) x Time Spent on Activity x Replacement Frequency

RESULT:**Existing Downtime Cost**

\$ 58,860

Proposed Downtime Cost

\$ 13,080

SAVINGS**\$ 45,780****Step 4 —**Based on these calculations, we were able to discover
a **TOTAL DOCUMENTED SAVINGS OF:**

+

\$ 47,780



World Headquarters

P.O. Box 2400, Fort Smith, AR 72902-2400 U.S.A., Ph: (1) 479.646.4711, Fax (1) 479.648.5792, International Fax (1) 479.648.5895