



# PROBLEM SOLVED™ PAPER

**SOLUTION:** Martin® Impact Cradles

**INDUSTRY:** Recycling

**LOCATION:** Johnson Controls (Enertec), Nuevo Leon, Mexico

## PROBLEM

Enertec is dedicated to the recycling of car batteries; they triturate and separate the plastic and lead from the batteries, and then re-use it to manufacture new batteries. Their belt suffered from impact damage and misalignment. Smaller batteries (motorcycle batteries) tended to exit the loading chute because the belt didn't have an effective support system. Some of the batteries ran down the back of the chute, which caused damage to the belt and also to the tail pulley. And others fell down the sides and accumulated between the chute and the conveyor. In addition, the failure to have proper support made a high vibration to be transmitted to the weighbridge. This caused a drop in productivity and an increase in maintenance costs for corrective actions due to unscheduled shutdowns for cleaning the chute, maintenance and cleaning staff costs, replacement of conveyor components, etc.

## SOLUTION

A Martin® Impact Cradle was installed. The cradle was custom manufactured to meet specific customer requirements. The cradle had to be manufactured with stainless steel because of the acids that compose the electrolyte solution of the batteries they manage.

## RESULTS

All their problems of misalignment and impact damage were corrected after the impact cradle was installed. The customer is completely satisfied with the results and the work done by Martin's team. They lowered their costs and increased their productivity.



*Enertec's conveyor belt suffered from impact damage and misalignment..*



*The Martin® Impact Cradle stabilizes the belt line to eliminate belt sag and reduce fugitive material.*



*Martin Engineering installed Martin® Impact Cradles on the Enertec conveyor belt used to recycle car batteries.*