

A steel mill achieves a 96% cost savings in just one year with the GPM-Eliminator.

The GPM-Eliminator Handles Mill Scale With Ease. A “Two For One” Success Story

THE CUSTOMER

One of the largest domestic steel producers and recyclers in the United States.

THE SITUATION

The customer was using a \$4,500 lighter duty pump in the scale pit of the mill. This pump, in this extreme application, the mill was getting approximately one week out of work out of it before failure and it would have to be replaced. Over the course of one year costing the mill \$234,000 on just this pumping application alone. Additionally, the mill would bring in an average of five to six vacuum trucks per week to clean the sump of excess scale, the pump was unable to keep agitated in the sump. Causing an average monthly cost of \$50,000. This added an additional \$600,000 cost to this single application alone, each year.

THE SOLUTION

After one year the mill was tired of production halting, and the extensive costs associated with their failing pump, so they reached out to GPM for some help. Once the application was reviewed and the specifications were calculated, GPM decided SBLH3S15-4T4-9.84-S would be the best fit for the application. By replacing their current pump with the GPM-Eliminator, the mill had a 96% cost savings, and just like that, the mill's reoccurring issues with pump failure and extensive costs, vanished.

For six months, the GPM-Eliminator ran flawlessly, never skipping a beat. Another successful application for the GPM-Eliminator, and a great story for GPM. That is... until a clevis that was holding a kettle of 2,750°F molten steel broke and dumped right into the sump housing the GPM-Eliminator.

Quickly the next day, the Account Manager from our local GPM-Eliminator Distributor arrived at the plant. The mill was not allowing employees or guests into the area where the spill occurred for safety precautions. The Account Manager, viewing the area from afar, noted that 24hr. later, the floor was still glowing red with molten metal.

Over the course of the next 11 days the plant allowed the molten metal to cool and harden. They then attempted to remove the pump with an excavator they had lowered into the sump. After extreme pulling, twisting and prying, the pump was removed from the sump.

THE OUTCOME

Once the pump was brought to the local service shop, Regional Sales Manager, Chad Bowen arrived to the scene and asked, before they disassemble the pump to take a pressure test of the mechanical seal chamber. Low and behold, the seal chamber held pressure, and the seal was fully intact and still in working condition.



GPM-Eliminator in Mill Scale Sump



GPM-Eliminator After Being
Removed From the Molten Steel

Once the pump was fully broken down the service team megged (a motor winding insulation test) and ohmed (a current flow test to describe how power is distributed) the motor. Both test readings came back with perfect results, meaning the motor was also still in working condition.

With the wet end of the pump removed, the shaft and rotor spun freely. The grease in the lower bearing had been burnt up by the molten steel, but since the pump had not been running after the steel was poured into the sump there was no significant damage on the rotating assembly (the rotor, shaft, and impeller).

THE CONCLUSION

The GPM-Eliminator submersible pump proved its worth in handling the demanding mill scale sump pumping application for a solid 6 months, far surpassing the performance of the previous light-duty pump which required replacement every week. However, an unexpected mishap occurred when molten steel from a kettle poured into the sump, damaging the pump during removal.

Despite this setback, a minor repair involving the replacement of bearings, seals, O-rings, cable assembly, and a stator baking and dipping process would have essentially restored the pump to its original equipment manufacturer (OEM) specifications and tolerances. Upon dismantling the pump, it was evident that its internals had held up admirably against the harsh scale, suggesting that it would have likely continued operating smoothly for many more months, if not over a year.

Recognizing the necessity of an industrial slurry pump for such a demanding scale application, the end user promptly decided to purchase another GPM-Eliminator to replace the one that was unfortunately rendered out of commission due to the steel incident.

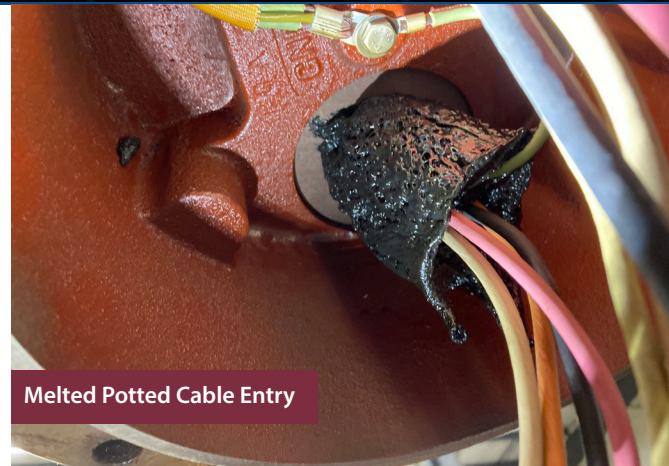
This experience highlights the importance of not only selecting the right pump for the job but also considering potential unforeseen challenges in the operating environment. Moving forward, the end user plans to implement additional safeguards to prevent similar incidents, such as installing protective barriers around equipment or implementing regular inspections to identify potential hazards before they escalate. By learning from this experience, they aim to optimize efficiency and minimize downtime in their operations

THE GPM DIFFERENCE

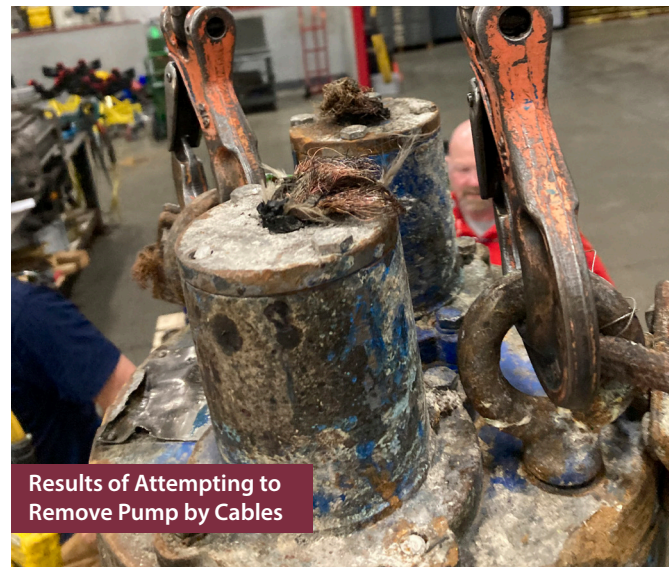
This success story depicts two key differences about GPM:

- The GPM-Eliminator's durability, and reliability in a mill scale pumping application and the overall toughness of the pump and it's internal components.
- The GPM team's dedication and collaboration in the field and on site with customers, additionally finding the most cost effective repair solution.

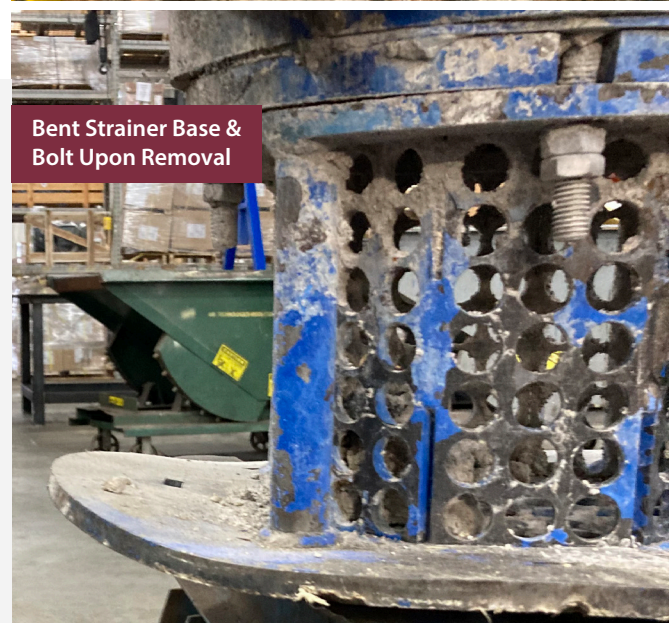
We don't just define ourselves as experts; we're dedicated collaborators. Our mission is to work hand in hand with you and your team to ensure we deliver the correct pump or pump system. Whether it's one of our renowned GPM-Eliminator pumps or another quality brand we distribute, we're committed to minimizing downtime for our customers. Our customer-first approach sets us apart in the industry. We're happiest when our customers and their operations are running at peak capacity, with downtime reduced to the bare minimum.



Melted Potted Cable Entry



Results of Attempting to Remove Pump by Cables



Bent Strainer Base & Bolt Upon Removal