

# AGGREGATE

# WILFLEY®

DURABLE. WATERLESS SEALING. INDUSTRIAL PUMPS.



**Market:**  
**Crush Stone  
for construction  
materials**

**Product:**  
**Wilfley K Pump,  
Maxalloy 5 and  
Maxalloy 5A**

**Application:**  
**Limestone, Dolomite,  
and Sand Slurries**

**Country:**  
**United States**



## BACKGROUND

The processing of aggregates and quarry products has evolved in response to technology, capabilities, and demand. Increase demand in construction and infrastructure projects has led to increased demand on production and processing facilities. Budgetary constraints and aging infrastructure have struggled to keep pace with increased demand.

## CHALLENGE

The processing for aggregates and quarry products often involves movement of material in slurry form. Additionally, there are washdown and screen cleaning applications which also include suspended solids and abrasives. The nature of the slurried product is that it is very hard and abrasive, leading to wear and erosion within the pumps. Traditional pump sealing arrangements require additional seal flush lines. These seal flush lines are often difficult to maintain as the pump installations are remote and in inhospitable operating environments.

In a quarry in the Central US, a producer of construction grade aggregate was pumping a very abrasive slurry of limestone, dolomite, and other fine particles. They had tried rubber lined pumps, but the sharp edges of the slurried products cut and degraded the pump internal liners after only a very short period of time. Additionally, these pumps used traditional packed stuffing box sealing arrangement, and required considerable flush water.



## **SOLUTION:**

The Wilfley team reviewed the quarries various applications and selected several sizes of the Wilfley Heavy Duty Slurry Pump Model K in the Maxalloy 5A material of construction. This material provides superior hardness and erosion resistance, and is standard material used by Wilfley in abrasive applications. The sealing arrangement for the pumps uses the Wilfley Dynamic Sealing technology and allows the pumps to operate without external seal or packing flush requirements.

## **THE RESULTS:**

The customer is very pleased with the reliability and pump component wear life they have experienced with the Wilfley products installed at their plant. The flushless shaft sealing arrangement has also contributed to ease of operation and maintenance, and reduced utility requirements. They have seen considerably longer time between pump failure, and this has created operating cost saving in reduced spare parts consumption, labor, and plant utility requirements.

## **MODEL K**

Wilfley Model K eliminates downtime and reduces maintenance to almost zero on this medium abrasive application.

### **Key features/benefits**

- Waterless sealing technology
- A maintenance engineer's delight
- Case can be easily removed without disturbing suction or discharge piping
- Wear resistance materials



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