



Headworks' MS® Bar Screens As the Ideal Solution for Leading Frozen Food Company in China

Introduction

McCain Foods, a multi-billion dollar, multinational leader in frozen food products worldwide, established a French fry and potato specialties facility in the northern Chinese city of Harbin in 2005. McCain Foods China has grown rapidly to become the largest producer and supplier of both domestically produced and imported frozen potato and appetizer products in China. Since 2005, the Harbin facility has produced a wide range of frozen French fry and potato products that are used by the quick service restaurant industry and food service channels.

In 2007, the year of McCain Foods Limited 50-year anniversary, the Harbin facility managers decided modifications were necessary to protect their pump system, and sought a solution from the engineering firm of AMEC Geomatrix, a specialist in the industrial and food processing industry. AMEC learned that McCain wanted to prevent Quality Control's large off-cuts (the unusable potato pieces) from entering the pump system, and the engineering firm recommended installing a bar screen to precede the pumps.

Customer: McCain Foods Co Ltd
Industry: Food Processing

KEY FACTS

One MS® Bar Screen

- **Screen:** 5.34 m long (17.52 ft)
0.76 m wide (2.49 ft)
1208 kg heavy (2663 lb)
- **Bar Spacing:** 25 m (82 ft)
- **Channel:** 0.76 m wide (2.49 ft)
3 m deep (10 ft)
- **Bar Spacing:** 25 m (82 ft)
- **Specific Flow:** max. 0.07 m³/s (1109 GPM)

Headworks was considered, and won the project based on price, quality of product, and their flexibility. McCain also liked the pivoting design for easy inspection, and the fact that the screen could be supplied optionally with no lower bearings.

Design

Headworks installed a MS® Bar Screen with a 1.7 foot screen field and 1” bar spacing into a ten-foot channel preceding the pumps. Right off the bat, the screen performed beyond expectations.

Bill Malyk, principal engineer on the project, received a call from the plant manager reporting that the screen was removing too many French fry pieces and even 1 cm cubes of off-cuts from the spuds, which could safely go through the pumps.

Thanks to the variable frequency drive on the rotating rakes, and the patented, individually replaceable bars on the screen, onsite modifications made for a simple solution. Every other bar in the screen was removed, then the rotation of the rakes was slowed to allow just the larger unusable potato pieces to be captured and removed via a discharge chute. “To date, the MS Bar is tirelessly removing spuds at the facility and has no issues with operation,” reported Mr. Malyk.

“To date, the Headworks MS® Bar is tirelessly removing spuds at the facility and has no issues with operation.

- Bill Malyk ”

Principal Project Engineer



Installation of Headworks MS® bar Screens for McCain in China



After slowing the rakes and removing bars, McCain captured just the intended larger pieces



Original speed setting and bar spacing removed fries and cuttings

