



A custom-designed grinder keeps waste in its place on the world's deepest moored semi-submersible oil platform.

PROBLEM:

Weak food waste macerator causes safety and operations problems

SOLUTION:

3-Shred MARPOL Grinder

CUSTOMER:

BP

Considered one of BP's largest and most technically challenging projects, the Atlantis platform sits nearly 200 miles south of New Orleans and reaches down over 7,000 feet deep into the Gulf of Mexico. Part of the larger Atlantis oil field, the platform has produced nearly 200,000 barrels of oil a day since production began in 2007. Each process aboard the platform must be done in a precise order to maintain productivity and efficiency, and the crew has no time for unscheduled maintenance or equipment headaches. However, that's precisely what they were going through in 2013 with their onboard food waste system, and the hassle was costing them valuable time and money.

The original food macerator aboard the Atlantis was vastly underperforming and unable to keep up with both the type and the amount of waste that the crew needed to shred. Laura Quinn, Atlantis process engineer, recalls the daily struggle the grinder was causing her team.

"Since it wasn't strong enough to grind down bones, a group of us had to presort the garbage before putting it through the grinder," says Quinn. "It almost defeated the purpose of having a grinder since we were doing so much of the work."

Quinn began looking for another option that didn't require any of these preparatory steps for disposal. She began a search online and came across the Monster product videos on the JWC Environmental YouTube page. Seeing the variety of solids that the Muffin Monster® and Monster Industrial® dual-shafted grinders could take care of so cleanly and easily was impressive to Quinn and the rest of the crew.

"It was a huge selling point for me, especially seeing the grinders cut through things like whole chickens and apples," says Quinn. "Those specific foods were the ones we had to deal with by hand before putting them into the grinder. If we didn't, we would have to deal with a clog."

After Quinn contacted JWC Environmental to get more information on their waste reduction solutions, she was put in contact with Tom Smith, industrial mid-market manager for the Monster Industrial product lineup.

"The Atlantis had some interesting challenges to contend with, both from a waste reduction standpoint and a regulatory standpoint," says Smith. Because the Atlantis is an ocean-based platform, all operating procedures must comply

BP ATLANTIS SHREDS TOUGH FOOD DEBRIS WITH MONSTER DUAL-SHAFTED GRINDER

with MARPOL regulations including food waste disposal. Pieces must be under 1-inch in diameter in order to be discharged legally into open water. "Our food grinders are MARPOL-compliant, which makes them ideal for this very specific oil and gas application."

Smith recommended the Monster Industrial 3-SHRED grinder, which uses two rows of sharp steel cutters that rotate slowly with incredibly high torque to cleanly and effectively shred troublesome food waste. The 3-SHRED offers tremendous cutting force with an energy-efficient 5-horsepower (3.7 kW) motor, keeping energy consumption low for long-term cost savings. For added versatility, the 3-SHRED easily retrofits into an existing facility, and custom hoppers and tooth cutter sizes are available depending on the type of waste.



Once the grinder was installed, Quinn discovered it was almost a perfect fit with the exception of an outlet piece that was a little too narrow. "We were having some clogging issues on the discharge of the grinder before the water flush point," says Quinn. "So I emailed JWC to see how we could redesign the outlet."

Smith responded quickly and worked with a group of JWC engineers to redesign the discharge chute to eliminate the clogging problems. The team modeled some concept options and sent them to Quinn for final approval. After a new concept was chosen, JWC sent the updated discharge flange to Quinn and her team. Since the installation of the new outlet piece in August 2014, the Atlantis hasn't had any instances of food waste clogging, and the crew hasn't needed to presort the waste before putting it into the grinder.

"JWC Environmental was so easy to work with," says Quinn. "We had a great experience and we would absolutely work with them again in the future."

To learn more about JWC's MARPOL solutions and marine food waste reduction, visit www.jwce.com/applications.

About JWC Environmental

JWC Environmental (JWC), a Sulzer Brand, is a world leader in solids reduction, removal systems and product destruction for municipal and industrial applications. JWC Muffin Monster® sewage grinders are the first choice to protect vital sewage pumping stations and sludge system equipment, and JWC headworks screens are proven performers to protect essential treatment plant equipment from debris and wastewater. Plants globally turn to JWC systems like Auger Monsters® and Screening Washer Monsters® for unique all-in-one packaged solutions for solids separation and dewatering. JWC provides industrial wastewater treatment equipment through its IPEC screens and separation equipment. JWC industrial screening equipment is used in a variety of food and beverage, oil and gas, general manufacturing and industrial wastewater applications. JWC Monster Industrial shredders and grinders are uniquely designed to cut through the toughest solids and bring them down to size. Monster Industrial products are working every day, protecting pumps and destroying debris. They are found in applications like recycling, waste-to-energy, commercial facility sewage, food processing, agriculture, and oil and gas. Founded in 1973, the company has built and shipped more than 40,000 Monster grinders, shredders and screens to customers worldwide.

