

CASE STUDY

Critical Process Vessels
Provide Large Capacity Solution
in Microelectronics
CMP Applications

FURON®

Pure Performance

www.processsystems.saint-gobain.com

ASK AN ENGINEER

The Challenge

Our customer was seeking an alternative tank solution to replace its existing tanks, which were limited in size. The customer required over 100 gallons of capacity as well as compatibility with slurries used in the microelectronics Chemical Mechanical Polishing process. Additionally, due to the bulky size of the tanks, special logistics were needed in order to deliver the product to the customer in a timely manner while minimally impacting the overall cost of the solution.

Combined Premium Product & Custom Transportation Service Solution

Ultimately, not only did the customer need 14 large tanks, but it needed them within five weeks. Additionally, they required that the tanks offered chemical resistance and inertness for shared slurries, were black spot free and were lightweight for ease of transportation and installation.

Saint-Gobain's critical process vessels, which are created with specified raw materials and a rotation molding process, were identified as a perfect fit for this application. Not only would the tanks meet the customer's specific requirements, but they are also designed with no-corner thinning to prevent slurry agglomeration, which can negatively impact a tank's efficiency as well as lifetime.

With a wide range of product capacities - from 10 to 500 gallons - providing the exact size tank (150 gallons) the customer required was easy. What was not as easy was optimizing the transportation process to meet the customer's critical delivery timeline and transportation cost ratio needs.

Saint-Gobain's standard lead time for manufacturing tanks is two weeks. But since the factory is close to the eastern US seaboard, if the order was transported from this location by sea, it would add a minimum six weeks and not meet the customer's five-week target date. If delivered by air, the order would meet the customer's delivery date but not pricing requirements given the size and number of products would severely impact the transportation costs.

In the end, we were able to meet the customer's five-week delivery requirement with a hybrid transportation solution that took three weeks and contained transportation costs by trucking the 14 tank order from our US factory to a seaport on the west coast and then shipping to Asia.

Customer Experience

Not only were we able to meet the customer's specific product and delivery requirements through our critical process vessels product offerings as well as a creative logistics solution, but Saint-Gobain's optimum tank design also enabled the customer to reduce the risk of slurry agglomeration in their CMP application - potentially increasing the overall efficiency and life of the tanks.



An example of a conical-bottom tank (left).

Saint-Gobain's rotational-molded vessels feature generous rounded corners with prevent slurry agglomeration, make them less likely to crack and ensure a long, reliable life (bottom).



Other Tanks

Saint-Gobain
Critical Process Vessels

SAINT-GOBAIN