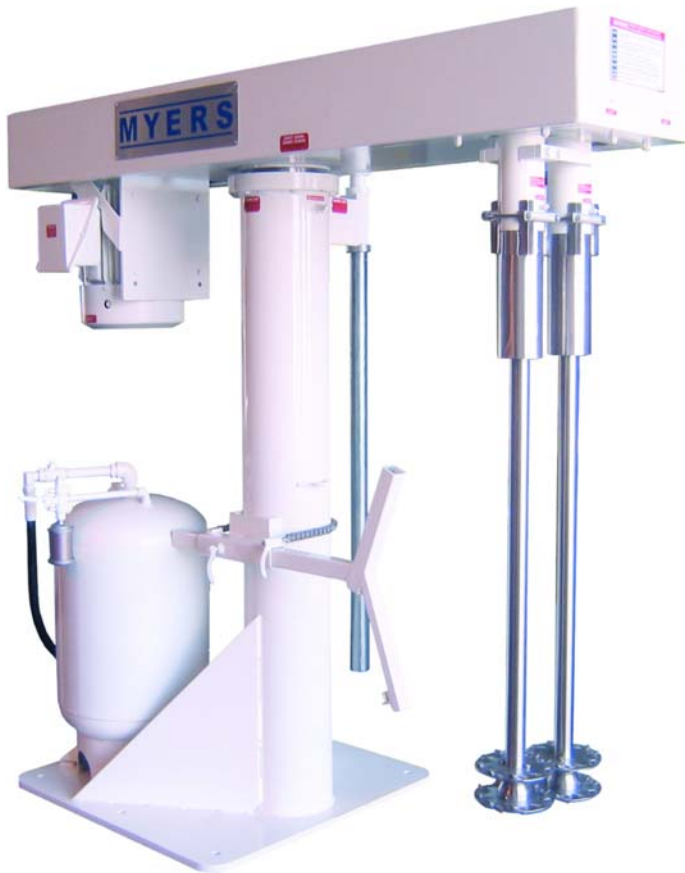




## 850 SERIES CASE STUDY and PERFORMANCE REVIEWS



### CASE STUDY: Titanium Dioxide Slurry

**PROBLEM:** A customer used typical paint processing equipment for mixing and milling of titanium dioxide ( $\text{TiO}_2$ ) white paint base. A single shaft 75 HP high-speed disperser was used to wet out and pre-disperse the pigment followed by milling in a vertical mill.

Mixing time was 3 hours, followed by two passes through a mill; the total production time for a 750 gallon batch was 8 hours.

The slurry contained 60-70%  $\text{TiO}_2$  by weight in a solvent-resin matrix, and had a mass of 12 pounds per gallon.

**SOLUTION:** Myers was able to significantly reduce the customer's batch mixing and milling time for the  $\text{TiO}_2$  slurry by replacing the single shaft high-speed disperser with a Myers Mixers 850 Series dual-shaft high-speed disperser.

The single 75 HP motor drives twin shafts and four overlapping 12" diameter Myers high-shear dispersion blades.

When the mixer was installed, a side-by-side startup trial was performed comparing the dual-shaft high-speed disperser to the single-shaft mixer. Each mixer processed a 750 gallon batch of  $\text{TiO}_2$  simultaneously with the following results: The batch produced using the Myers Mixers 850 achieved a Hegman grind of 7+ after 45 minutes of mixing; the single shaft mixer only achieved a Hegman grind of 5 after 4 hours of mixing.

**RESULTS:** The processing time of  $\text{TiO}_2$  slurry for industrial coating application was reduced by over 90%. In the trial run, the Myers Mixers 850 produced a higher quality product than the single shaft mixer in less than 20% of the time, a significant improvement.



**PERFORMANCE REVIEW: Significant Pre-Mix Time Saving Advantage**

**APPLICATION: Automotive Clear Coat Primer**

**CUSTOMER REPORT:** A single shaft disperser takes approximately 45 minutes to incorporate calcium carbonate and Cab-O-Sil®\* fillers satisfactorily. A 60 HP Myers Mixers 850 Series dual shaft disperser immediately wetted out the fillers, reducing the pre-mix time to a marginal step in the production process.

**PERFORMANCE REVIEW: Grind Performance Improvement and Pre-Mill Step Elimination**

**APPLICATION: Flexographic and Clear Fluid Inks**

**CUSTOMER REPORT:** a 30 HP single motor, dual shaft Myers 850 has reduced production time of the mill base. The increased Hegman scale quality of the product made on the 850 Series has completely eliminated the rotor/stator mixing step. No longer having to transfer the mill base mix tank to another part of the plant has significantly reduced the labor and time required for the entire process. Furthermore, the customer reports that the Myers 850 can handle a larger batch than the single shaft disperser.

In conclusion, this is a reduction of mill base mixing time, the elimination of an intermediate mixing step, and an increase in normal batch capacity.



**ABOVE:** The shaft spacing is adjustable. Having the shafts spread provides the most batch circulation. This is important in pigment loading. Having the shafts closed or overlapping provides the best possible dispersion, while reducing batch circulation; this reduces air entrainment.

\*Cab-O-Sil® is a registered trademark of Cabot Corp.