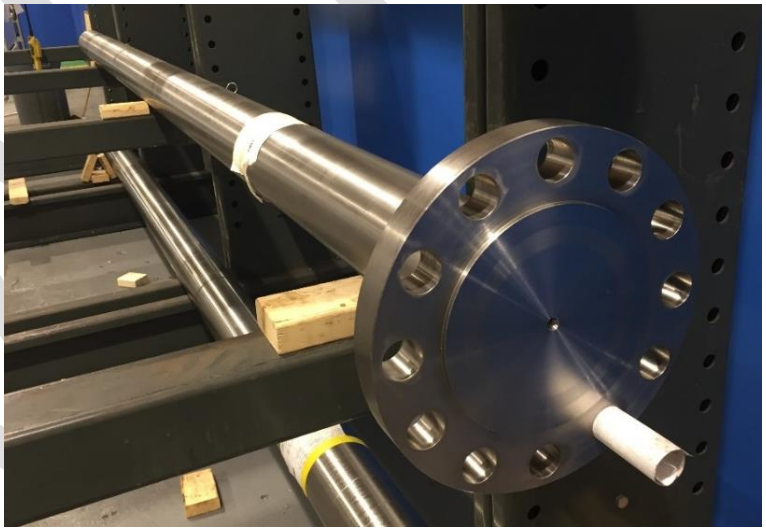
'Buying OEM Parts - Less Hassle, Better Performance' **4/19/2019**
Evan Burley – Aftermarket Engineer

Over many decades, SPX Flow – Lightnin Mixers has designed, and manufactured thousands of mixers to provide fluid agitation solutions across numerous industries. As customers demand critical performance in both batch and continuous operation processes, it is imperative that they receive replacement parts in a timely fashion and of the highest quality. Purchasing Aftermarket parts through the original equipment manufacturer (OEM) ensures component interchangeability and consistent machine performance. It also guarantees that any subsequent engineering improvements that have been made since original delivery will be incorporated on the new equipment.

Response Time

As the owner of our proprietary part drawings, we can ensure a prompt response to inquiries for both standard and engineered components. Competitors and third-party vendors rely on primitive reverse engineering and inspection techniques that may only capture general dimensions.

Quality Parts



When it comes to rotating equipment, shaft straightness and runout play a significant role in operating performance. Part manufacturers with poor straightness and runout control may provide components that are susceptible to additional centrifugal loading. Additive loads can hinder seal performance, increase vibration, and reduce bearing life. Throughout Lightnin's manufacturing process, no matter the shaft size, we guarantee that the straightness of the shaft is maintained. When purchasing shaft components, consider that for every .001" of runout over the length of a 10-foot shaft, there can be an additional 220 in-lbs. of bending on the shaft. Unforeseen loading leads to increased deflection and bearing reactions; thus, reducing the life of the agitator.

In addition, Lightnin utilizes bar stock that exceeds standard mill finishes; providing a more precise diameter tolerance, uniform surface finish, and a truly straight shaft. Thanks to the quality of our raw bar, we can ensure proper bearing fits, mechanical seal performance, and impeller connections.

SPX Flow – Lightnin also has years of experience with quality materials processing. We understand the importance of thermal stress relief (heat treatment) and we take the necessary steps to control surface radii to mitigate stress concentrations in areas with severe torsional and bending loads.

AGMA Gearing – Utilizing OEM gearing guarantees mating parts have been match-lapped and ground to ensure proper meshing, quiet operation, and less backlash for improved operational longevity.

It is important to understand that seemingly minor changes in bearing spacing, shaft diameter, and overhung mass can have major implications on the critical speed (natural frequency) of the agitator. Depending on the size of the unit, as critical speed ratios (operating speed/critical speed) approach 90%, the impeller lateral loading can be increased by 10x or more. Operating in this 'danger-zone' can lead to immense machine vibration and a wide-array of premature mixer failures.

Furthermore, impeller formation and manufacturing consistency is critical to both flow performance (solids suspension/blending) and predictable fluid forces on the shaft. Controlling the blade tip chord and twist angle from blade-to-blade on the same impeller assembly is imperative to ensure proper mixer performance. Throughout Lightnin's history, we have invested in forming dies and inspection processes in order to control the fabrication of impeller components.

Support

Working with OEM representatives and engineers allows access to original design specifications and calculations; providing real-time equipment support and diagnosis. With original equipment bills of material (BOMs) and internal design calculations, Lightnin can work to predict and mitigate failure of specific components, potentially avoiding shut-downs.

Value and Lifespan

When parts in your machine are replaced, you expect to have consistent performance and throughput. Purchasing OEM components ensures an exact duplicate which means no degradation in fluid mixing or equipment durability. If anything, our process engineers can offer potential upgrades and retrofits which may improve on output and reduce power consumption. Lightnin OEM parts will often last longer than 'cheaper' replacement parts due to the high quality and standard operating procedures through which we manufacture.

Warranty

Buying Lightnin OEM parts and equipment gives you the peace of mind that your assets will perform as they were intended and that should any defects or issues arise, we are willing and able to provide support.

Return on Investment

Purchasing OEM parts will guarantee that they are designed and manufactured to fit and perform to the original specifications, ultimately increasing the reliability of your mixer. Over the life of the equipment, this will reduce costly downtime, maintain operational performance, and ultimately save money.