

3D printed guards reduce lead time by 75%

Sulzer developed a guard for a slurry pump using 3D printing techniques to replace a stainless steel part that was often misplaced. Replacement parts from the OEM were labor intensive to produce and could take 6-8 weeks to procure.

3D scans were used to create the initial design.

The first prototype was checked for fit and finish (below).



The new components installed and ready for shipping

The challenge

Mining operations are particularly challenging for all kinds of equipment and Sulzer provides a pump repair service that includes slurry pumps from other OEMs.

- The original stainless steel guards are manually TIG welded and painted
- Making new parts took a skilled fabricator 4-6 hours
- OEM lead times could be 6-8 weeks
- Downtime for the mining operation needed to be minimized

The solution

Sulzer created a 3D scan of the original components and developed a set of prototype parts to check for fit and finish. The design was optimized for additive manufacturing and put into production.

The new components were manufactured using Acrylonitrile Styrene Acrylate (ASA) material:

- Parts manufactured in yellow – no painting required
- Superior corrosion resistance to stainless steel
- Impact resistance and toughness suitable for the application
- Improved fit and consistency compared to hand-made OEM parts
- Reduced lead time for parts

Customer benefit

The main benefit for these additive manufactured guards is reduced lead time allowing a “faster and better” service to the customer. The AM process also allows optimization of the design for improved performance, fit and finish than would be possible with handmade stainless steel parts.

The benefits achieved by the first customer will be appreciated by all others that are operating this model of pump.

Contact

wangara.service@sulzer.com

www.sulzer.com

A10354 en 11.2020, Copyright © Sulzer Ltd 2020

This study is a general product presentation. It does not provide a warranty or guarantee of any kind. Please contact us for a description of the warranties and guarantees offered with our products. Directions for use and safety will be given separately. All information herein is subject to change without notice.