



Tailored engineering solutions to enhance equipment reliability and effectiveness

# **Reverse engineering capabilities**

Sulzer is your global partner with reliable and sustainable solutions for your key operations. We offer repair and maintenance services for turbines, compressors, pumps, generators and motors. We also offer OEM and aftermarket parts. With one of the largest service networks in the industry, we are close to our customers with over 180 production facilities and service centers worldwide. Our cutting-edge engineering services provide unique and innovative solutions customized to your equipment needs.

## World-class scanning technology

Sulzer has made significant investment in reverse engineering technology. We have the latest world-class technology scanners in our inventory to provide the best solution to create a quick, textured and accurate 3D model.

Based on safe-to-use structured light scanning technology, our scanning technology offers light, fast and versatile operation to deliver excellent all round solution for capturing objects of almost any kind, including objects with black and shiny surfaces.

Another line of our world-class scanning technology offers increased accuracy (0.0012) and resolution. It is the most versatile 3D scanner on the market for inspection and demanding reverse engineering.

Reverse Engineering Department works closely with Sulzer Engineering where before and after drawings are submitted to ensure 100% accuracy.



#### **Before**

# After



66" impeller for dewatering service



Circulating water pump impeller for power station

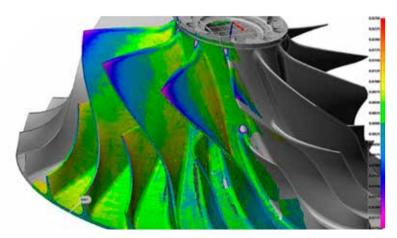
# Dealing with obsolescence

- Sulzer is the leading provider of engineered solutions since 1834
- Each reverse engineering solution is carefully reviewed by a team of experienced field engineers to meet the customer demands
- Create take-off drawings from customer supplied parts as a direct replacement (like-in-kind) of "as found" data using portable scanners and 3D software with accuracy to +/- 0.0012"
- Pattern construction or prototype modeling: provide one use patterns and printed sand cores which can save money on low volume casting requirements, or provide wood patterns needed for multiple casting requirements
- Full line of testing facilities to ensure performance parameters are met

# Performance improvement through improved design

- Hydraulic and performance recommendations
- Material upgrades for prolonged life
- Re-rating for changes in production
- Finite element analysis
- Elimination of recirculation and vortexes
- Reduction of vane pass issues
- Recommendation for non-metallic inserts for improved performance and reliability
- Assess unusual wear areas and recommendation for corrective action

Damaged or worn part reconstruction



Sulzer provides cutting-edge services and solutions for rotating equipment dedicated to improving customers' processes and business performances. When pumps, turbines, compressors, generators and motors are essential to operations, customers need a service partner they can trust. With our technically advanced and innovative solutions, we give our customers the assurance they need to focus on their operations.

### For more information, please contact AMEparts@sulzer.com

#### www.sulzer.com

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