



ProCast®

Engineered Replacement Pump Parts  
*New Life for Old Pumps*



**ITT**

ENGINEERED FOR LIFE

# Obsolete Part? Old Part?

Do you have a pump at the center of a critical operation sitting idle because a part just failed and you cannot obtain a replacement because the original equipment manufacturer (OEM) obsoleted the model?

ProCast has the solution for you. We provide reengineered parts that are better than original and we deliver it up to twice as fast.

ProCast performs engineering, foundry and machining services for the production of metal centrifugal pump replacement parts for worldwide industrial markets. Utilizing global engineering center capability, regional manufacturing resources, combined with the latest available technology, ProCast re-engineers parts to improve hydraulic performance and equipment life cycle. Customers requiring rapid supply of replacement parts due to wide variety of performance issues or obsolescence of existing, but critical pumping equipment can count ProCast to provide quick and cost effective solutions.

We achieve that through:

- Rapid quotation
- Data acquisition
- Reengineering
- Rapid manufacturing



Before



After

# Rapid Quotation / Data Acquisition

Our sales and customer service teams are equipped with a quoting tool to provide a quotation for a ProCast part within minutes.

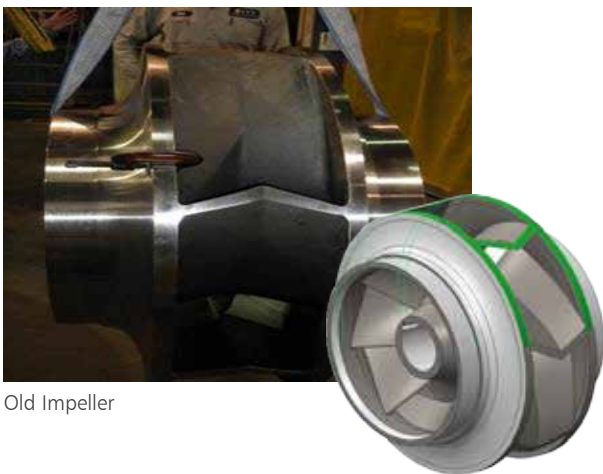
ProCast makes it easy for you to get a quote. Just send us a few photos with rough dimensions / weights and you'll have a rock-solid quote and delivery date in hours. Once you approve the quote, send us the part for us to start the data acquisition process.

If the part is too big to ship, our global data acquisition will come to you. Our laser scanners and engineering technicians are strategically located throughout the world for fast response. The engineering technicians will travel to your location to scan and digitally image your critical parts.

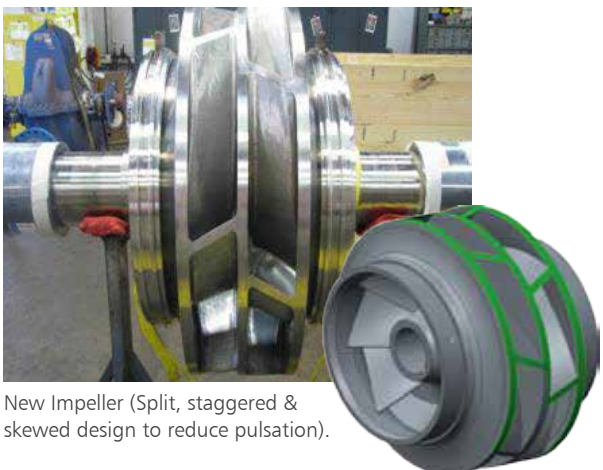
Imaging 24,000 points per second to resolutions within a few thousandths of an inch/centimeter, our technicians will capture every nuance of the original, rendering complex geometries and free-form surfaces to absolute perfection.



Laser Scanning  
Sample Part



Old Impeller



New Impeller (Split, staggered & skewed design to reduce pulsation).



ProCast App



# Data Reengineering

That rich imaging data is then transformed into our 3D modeling software. Drawing on ITT's Aftermarket Engineering Center of Excellence knowledge and support, our ProCast engineers then reengineer the specific part, making the hydraulic, mechanical or material modifications needed to improve on its performance and equipment life cycle. Our advanced casting simulation software and time-proven processes make sure one pour is all it's going to take.

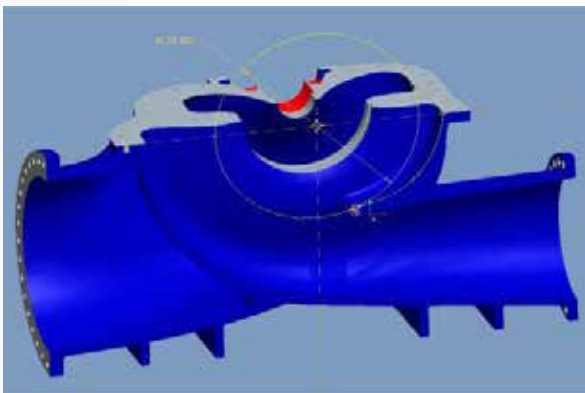
Solutions may be as simple as material upgrades or a completely reengineered component or complete unit. 3D laser scanning and digital imaging is employed by ProCast to reengineer complex cast components with precision.



Old United casing scanned



3D Model after reengineering completed



Lower half – 3D Model at full scale



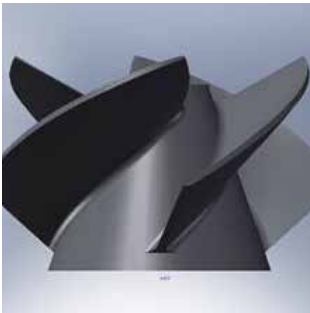
New ProCast casing upgraded from Cast Iron to 316SS



# Rapid Manufacturing

Using "on demand" 3D printing technology for industrial applications, ProCast can significantly reduce manufacturing lead times compared to conventional processes. The new technology also allows for the production of complex castings with precision and accuracy not possible with conventional production methodology and tooling.

Your part is reengineered, cast, machined, balanced and tested, all done at less than half the time with conventional process. Every step is done to the highest standards that meet or exceed OEM standards.



Reengineered 3D Model of Impeller from Laser Scan Data.



3D Printing Machine Makes Sand Mold Pack



3D Printed Sand Mold Pack



3D Printed Wax Melt-Off Models



Pour Metal into Sand Mold Pack and Cast



Finished Machined and Balanced Impeller

# Quality

All parts undergo 100% dimensional inspection. They are quality controlled to ISO requirements.



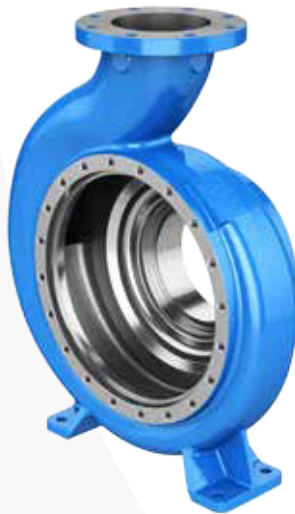
Extensive NDE & Documentation Available



All parts inspected & documented



All Impellers & rotating elements dynamically balanced



All pressure containing parts hydro tested per Hydraulic Institute standards.



# Engineered Replacement Parts

## Customized Replacement Parts or Complete Pumps

With the support of ITT's Aftermarket Engineering Center of Excellence knowledge and support, our ProCast engineers reengineer specific parts and complete pumps, making the hydraulic, mechanical or material modifications needed to improve on its performance and equipment life cycle.

- Multistage Casings, Impellers, Diffusers, Bearing Housings.
- Parts for API 610 & ISO 13709 Process Pumps of Different Designs & Materials
  - OH2 Overhung
  - OH3 Vertical In-line
  - BB1 Axially split single stage
  - BB2 Single & two stage radially split
  - BB3 Axially split multistage
  - BB5 Radial split multistage
  - VS0
  - VS1
  - VS2
  - VS3
  - VS4
  - VS5
  - VS6a-c
  - VS7
- NDE & Documentation
  - PT, MT, UT
  - Radiography



## Engineered Replacement Parts in Inventory

ProCast also offers replacement parts and power ends that fit:

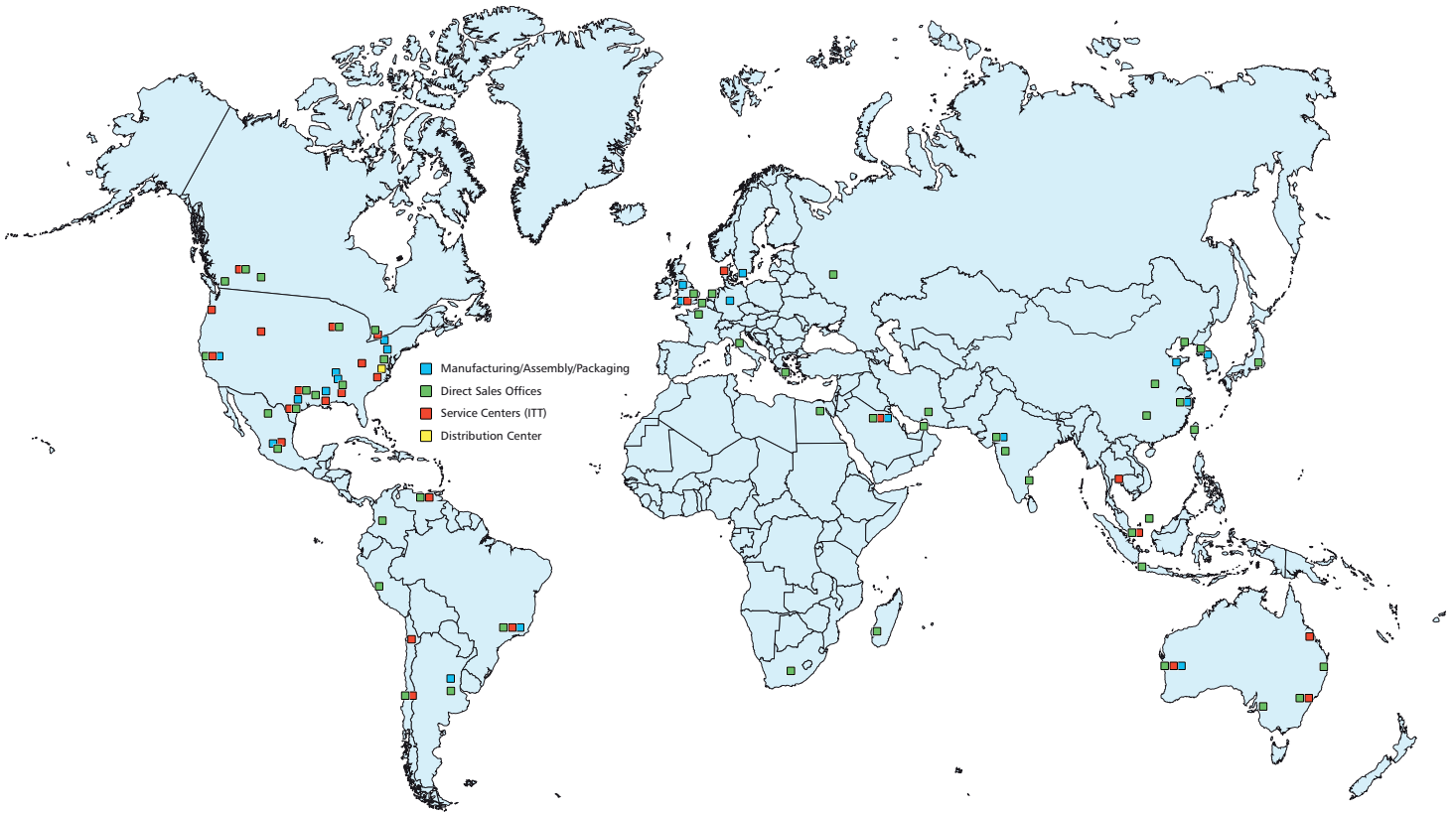
- Flowserve Durco Mark II & Mark III
- Sulzer APT/APP (Ahlstrom) Pumps - stock in ASTM A3890 Grade 3A Duplex Stainless
- Warman® Pumps





For more information on ITT ProCast, go to [procastparts.com](http://procastparts.com)  
 If you have any questions, send us an inquiry at [procastparts.com/contact-us](http://procastparts.com/contact-us)

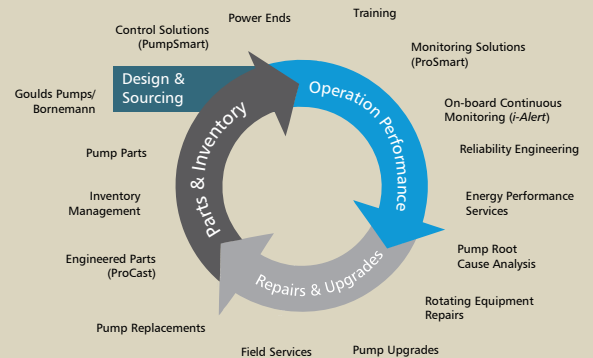
# Wherever you are, we're there too.



Reliability has no quitting time.

Building on over 160 years of Goulds Pumps experience, PRO Services provides an array of services focused on reducing equipment total cost of ownership (TCO) and increasing plant output, including predictive monitoring, maintenance contracts, field service, engineered upgrades, inventory management, and overhauls for pumps and other rotating equipment.

## Your Total Solution For Equipment Life Cycle Optimization



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