

COMPONENTS TECHNOLOGY GROUP

Advanced Component Design and Supply

The Flowserve Components Technology Group (CTG) uses sophisticated laser scanning equipment to fully model existing pump components to a high degree of accuracy.

By integrating its powerful scanning technology with advanced modeling software, Flowserve engineers can design a correctly engineered part that can be quickly produced with rapid prototyping techniques. Through the application of this technology, the CTG can upgrade and enhance the effectiveness of the part – whether it is an existing OEM part or an obsolete component. The CTG’s combination of technical expertise and global facilities makes it the ideal technical resource for users of critical pumping equipment and other rotating machinery.

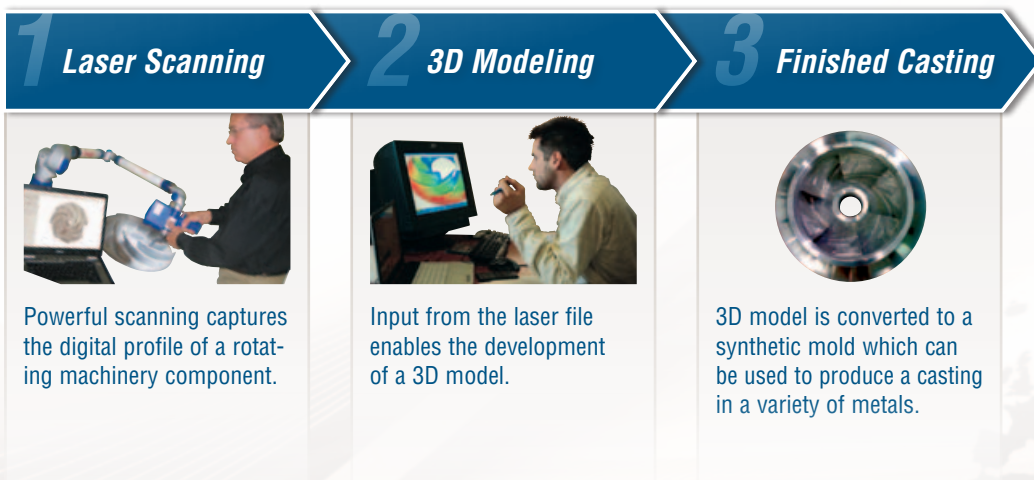
Benefits

Through its rapid prototyping technology, the Components Technology Group leverages the unparalleled pumping industry expertise of Flowserve to deliver added value in every component produced.

With these advanced capabilities, the CTG provides the following benefits:

- Improved operating efficiency
- Improved mechanical and hydraulic performance
- Increased mean time between failure (MTBF)
- Reduced operating and maintenance costs

FROM LASER MODELING TO FINISHED CASTING – 3-STEP PROCESS





Step 1

Brand Independent Engineering

By leveraging its unique engineering capabilities, the CTG can develop solid models for virtually any type and make of rotating machinery components. This includes the manufacturing of components for any pump OEM and all Flowserve pump brands.

Step 2

New Mechanical Designs

During the design process, parts can be evaluated against the latest technological advancements to offer design feature upgrades. New design upgrades include:

- Adding a reservoir to the bottom of existing bearing housing for cooling efficiency including serpentine coil
- Developing a water cooling chamber for wet-end components to control process fluid temperature
- Impeller ring design enhancements

Hydraulic Modifications

Hydraulic modifications made during the modeling process include pump redesigns to achieve less vibration, eliminate cavitation and make flow and head adjustments. Modifications include:

- Altering the number of vanes to optimize design
- Modifying eye diameter to achieve inlet performance

Step 3

Materials Upgrades for Components

Materials upgrades result in significant structural and operational improvements to the original part or component. By analyzing process fluid and component design, Flowserve materials engineers can help mitigate the effects of corrosion and erosion in newly engineered parts. Upgrades include:

- Improved materials of construction to increase life of the part
- Production of parts in light reactive alloys such as titanium and zirconium
- Supply of cavitation-resistant and other special materials

Inventory Management Program

The CTG also offers inventory management services designed to provide short-term operating cost savings as well as longer-term life cycle cost reductions.

- Creating a single database to include all pump part inventory
- Consulting to rationalize quantities to proper materials and critical parts
- Consolidating and controlling vendor and transaction costs

Environmentally Friendly

The CTG endeavors to limit its footprint on the environment. In part, this is accomplished through the elimination of the wooden patterns in the production process. Instead, a new synthetic process uses renewable materials such as corn, soy and sugar cane to name a few. Neither sand-to-landfill processes nor catalysts and binder chemicals are used.

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