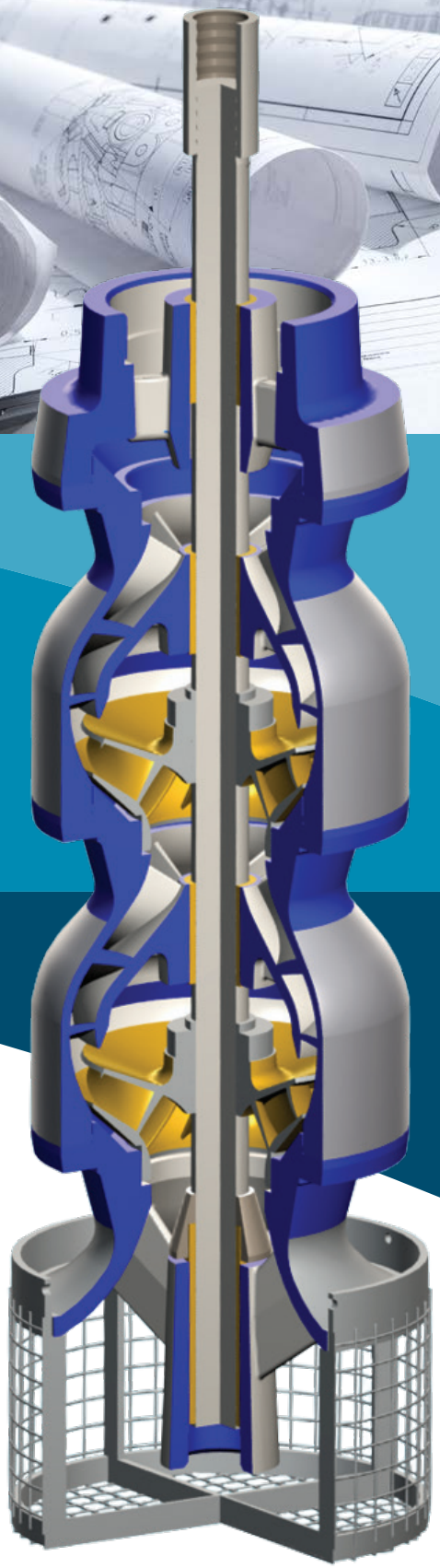
Premium Engineering Expertise



Goulds Water Technology ensures superior performance with premium engineering services focused on your specific goals. Our engineers average 17 years of vertical turbine experience and use the latest advances in design, testing and analysis. Here is a brief look at the services we offer to help you meet your challenges.

Quick-Turnaround Models and Drawings

Goulds Water Technology (GWT) can provide project-specific drawings and 3D models in just one week.

Premium Drawings are to-scale and are available in PDF format. They include critical dimensions and connection point data suitable for most project specification or submittal needs.

3D Models are to-scale pump models ready to drop into a system model, and include all critical dimensions and customer connection point details. They are available in several different file formats (such as .stp, .step and .igs) for compatibility with multiple software packages.

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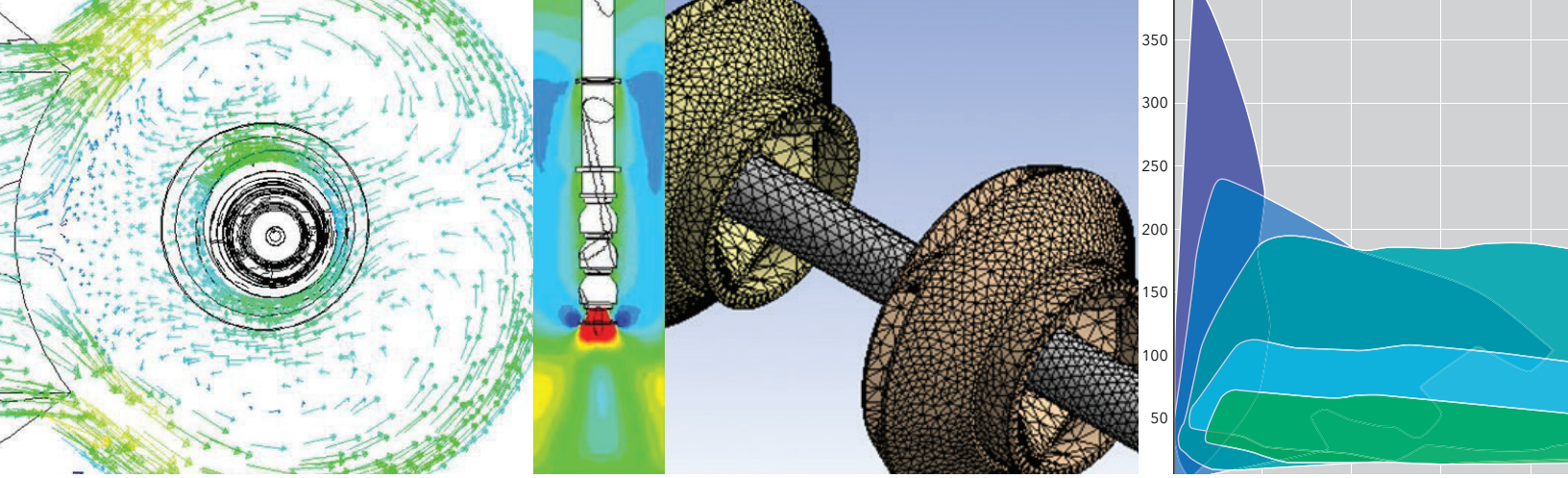

Detailed Component Drawings are model-based drawings, available in PDF format, which include fully rendered views of all internal pump components. Each Detailed Component Drawing includes a Premium Drawing with detailed cross-section.

Critical Speed Analysis

Critical speed calculations include lateral, torsional, and axial critical speed modes as well as the vane pass frequency driver.

Reed Frequency Analysis – Discharge Head

Utilizes finite element analysis (FEA) to determine the reed frequency of the discharge head. A findings report suitable for submission to an approving authority is also included.

Finite Element Analysis (FEA) – Complete Pump

Determines all critical frequencies of all modes, including dampening effects of internal fluid. Includes FEA analysis of all elements included in Critical Speed analysis, and FEA Head analysis. If applicable, an FEA of the column and can will also be provided. A findings report suitable for submission to an approving authority is also included.

Dynamic Load Analysis

Includes analysis of all dead loads supplied by GWT, as well as torque generated by motor, lateral thrust from hydraulic discharge and associated overturning moment.

Seismic Analysis

Goulds Water Technology offers Seismic Analysis for our pump systems. A seismic analysis will describe the loads that will be applied to the pump during a seismic event. These can be external loads on the discharge head and motor, or they can be internal loads on the rotating components of the pump. We offer three different levels of seismic analysis: Basic, Advanced, and Life-Essential. The level of analysis that is selected will determine which loads are provided once analysis is complete. Life-Essential calculations should be considered during the design phase of the project, as it can have a significant impact on the design of the pump. All of GWT seismic analyses are in accordance with ASCE 7 (U.S. design code).

Anchoring Design

Includes determination of anchor bolt size, and embedment. Includes layout sketch. Requires one or more of the seismic load determination services.

To talk to one of our turbine experts and take advantage of these services, call 1.806.763.7687.

http://goulds.com/turbine-pumps/

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