





Troubleshooting Boiler Feed Pump Problems in the Field



Feed pumps are an essential piece of the steam cycle and their performance directly impacts the ability of the plant to produce power. As a complex component moving high-temperature, high-pressure fluid, maintaining critical fits and tolerances during construction and refurbishment is essential. It is equally important to ensure that field assembly and installation is performed with experience and precision.

Using experienced technical field advisors (TFAs) when performing field work is even more critical  as equipment ages. During a typical lifetime, equipment will undergo multiple refurbishments that may change the dimensions of the internal element, casing, and discharge head. For BB5 pumps, commonly referred to within the industry as barrel pumps, the barrel usually remains installed in the system and is not sent out with the internal element and head for refurbishment. As the installation settles, foundation degrades, and components undergo repeated thermal expansion and contraction, this barrel can lose some of its dimensional integrity.

One of the greatest pitfalls in performing a successful field installation is blindly trusting the  installation and operation manual (IOM) supplied with the equipment. While this document provides useful guidance, any component changes that have occurred, both intentional and unintentional, are not reflected here. It is also important not to presume that pumps running in parallel have identical barrels or that internal elements are interchangeable. Instead of falling victim to these assumptions, best practices include completing a field dimensional analysis.

The value of capturing and recording critical data was proven during a complex boiler feed pump project at a coal-fired power plant. This project also highlighted the importance of adaptability and being able to react quickly to changing circumstances when performing fieldwork.

Read the [full case study in Pumps & Systems February 2025 digital edition](#).

Learn more about Hydro's Field Service capabilities [here](#).