

Problem Objective Statement

The goal of this project is to design a system capable of wirelessly transmitting strain data from gauges installed on operating impellers to a user interface of our choice. Impellers are submerged in water during operation, meaning all transmission systems must be fully protected from the environment in order to function properly. Also, since our design will be used strictly for impeller testing, the ability for the system to be frequently installed and removed is required. By the end of MSDII, we are to deliver a system to SPX capable of wirelessly transmitting accurate strain data from an underwater impeller to an operator nearby. Assembly, installation, and operation manuals will all be provided, as well as full documentation on gauge and telemetry system choices. This package serves as our final deliverable, and will demonstrate completion of the SPX Data Acquisition project.