

Equipment Modifications to a Pharmaceutical BioProcess

A Major Qualifying Project Report

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Degree of Bachelor of Science

by

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Approved:

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This MQP contains information deemed confidential to the business interest of the industrial sponsor. Please contact Stephen Kmiotek at [sjkmiotek@wpi.edu](mailto:sjkmiotek@wpi.edu) for additional information.

## **ABSTRACT**

This project provides a detailed assessment of the modifications made to a pharmaceutical bioprocess based on data gathered in a previous collaboration. The previous collaborative project demonstrates insufficient cleaning of dead-legs, in a piping system, at a wide range of flow rates. The modifications result in the bioprocess operating with greater predictability and efficiency.