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Basic Project Overview

## Basic list of Operations for Vacuum Furnace

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#### 1 Abstract

Matrix implemented the software, Electrical and SCADA system for a Vacuum Furnace.

#### 2 Machine Assets

- Vessel
- Heating Elements
- Pumps, Thermocouples.

#### 3 Process Function

- Heating of Vessel- To 1200 celcius and above.
- Pumping down of vessel to below 0.1 Pascal.
- Control Of temprature keeping the temprature stable
- Air Admitting back to atmosphere.

#### 4 Software Function

- $\bullet$ Recipie handling via a SCADA system
- Maintence reporting Sensors report state of various critical parts to aid in the maitence process pre-emptively.
- $\bullet$  Part Tracking MES system to ensure a paper trail for batches of product.
- $\bullet$  Reporting for information with respect to how to improve the system.