The current trend of digitization in the manufacturing sector, known as Industry 4.0, has the potential to completely change how factories work, introducing concepts such as big data analytics, internet of things, and cloud computing. Process optimization is one of the main applications of this trend. Analyzing real-time data, as well as stored historical data and computational simulations, improves the system's performance by identifying potential issues and predicting outcomes. In the case of heat treating furnaces, this can mean controlling the process to adhere to strict temperature uniformity specifications with standards such as AMS-2750 and CQI-9.