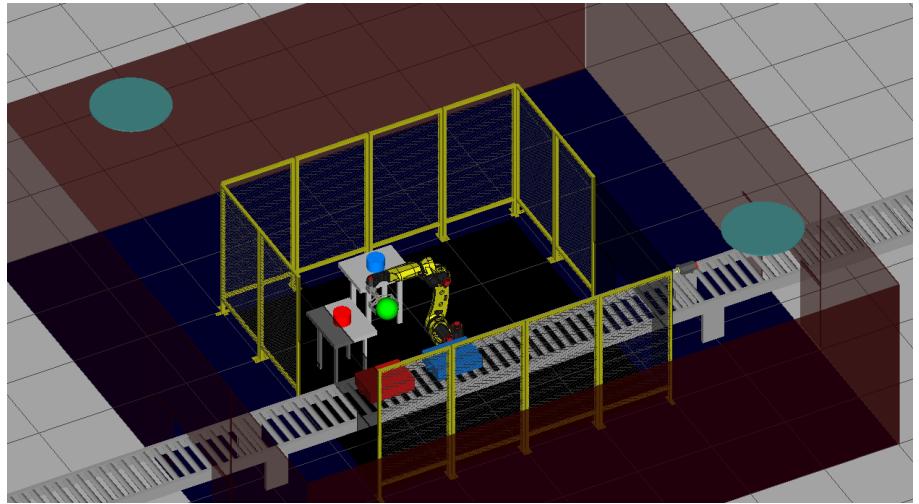
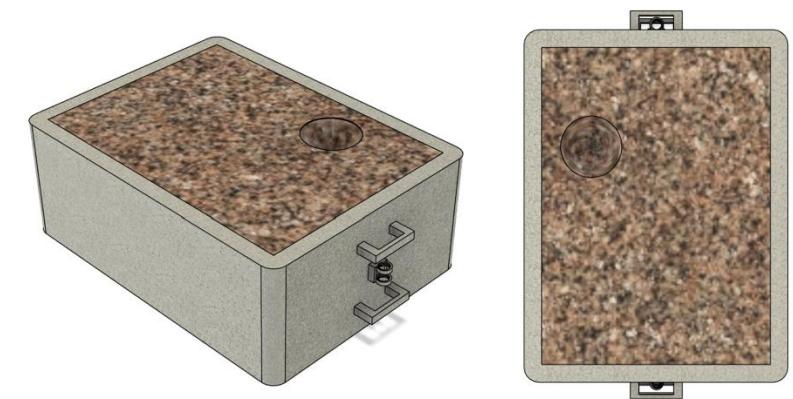


FANUC Robot-Based Casting Optimization

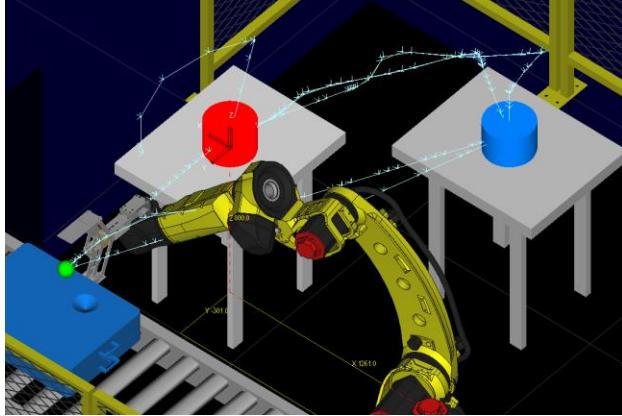
Research Project



the robotic cell



CAD model of the casting mold



Robot path simulation in Roboguide



Alloy pouring performed at school and its simulation in Roboguide

Objective :

Improve the efficiency of an industrial casting operation by automating the pouring process using FANUC robots.

- Identified improvement opportunities in the casting process following a practical foundry lab session.
- Designed a complete mold in CAD for integration into the Roboguide simulation environment.
- Simulated robotic paths and cycle times using FANUC Roboguide to optimize pouring operations.
- Measured and analyzed operational time to enhance process performance.
- Conducted a financial analysis to assess the economic viability of the automation.