



Carley Foundry, Blaine

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Organization

Carley Foundry produces aluminum castings for customers in the markets of aerospace, medical, recreational vehicles, defense, and more.

Intern Project

Reduce energy consumption in the aluminum cast making process by improving electric melting furnace practices, heat treatment practices, and compressed air usage.

Incentives to Change

Carley Foundry is working to reduce manufacturing costs to stay ahead of competition. As energy is a significant manufacturing cost for a foundry, an intensive review revealed opportunities for improvement.

Solutions

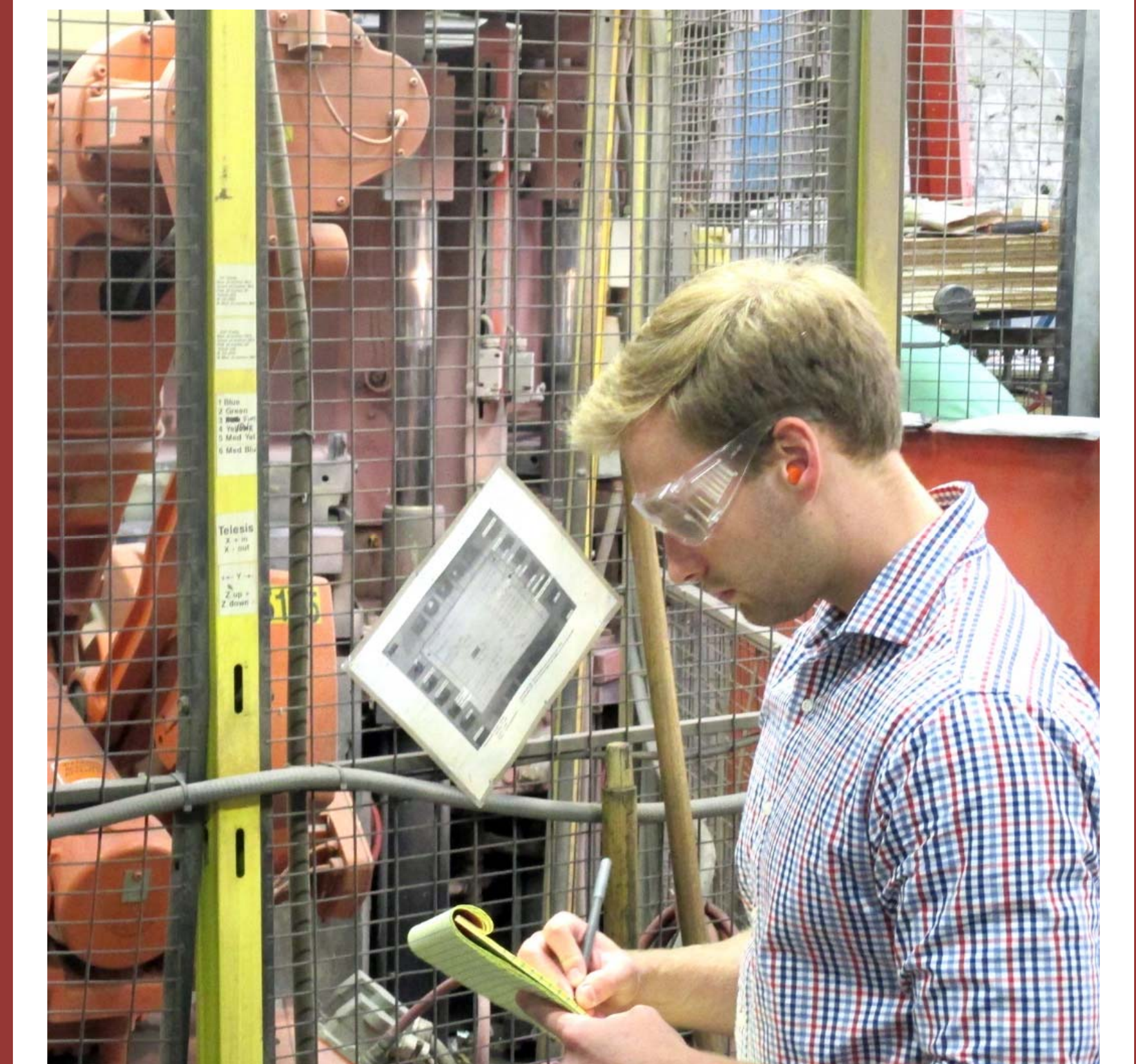
Improve furnace set point practices to save 2,112,000 kWh and \$104,000 annually.

Fix leaks identified in leak check to save \$35,000 annually.

Turn down temperature of furnaces not in use to save 220,000 kWh and \$30,000 annually.

Replace vortex coolers with AC units to save 450,000 kWh and \$26,000 annually.

Turn off quench tanks overnight and when not in use to save 400,000 kWh and \$20,000 annually.



Fixing the insulation on furnaces to save 174,000 kWh and \$11,000 annually.