NATIONAL CENTER FOR MANUFACTURING SCIENCES

The Lincoln Electric Company
Welding, Cutting, and Automation Solutions

LINCOLN® ELECTRIC

PROBLEM STATEMENT

HyperFill
- Thick materials are hard to weld quickly and efficiently.
- Single-wire GMAW can cause excess heat, leading to distortion and weld defects.

Cooper Cobots
- It is hard to maintain consistent quality and precision in welding tasks.
- There is a shortage of skilled welders.

Additive Manufacturing
- It is difficult to forge or cast complex shapes.
- There is a sizeable backlog in foundries and forges.

BENEFITS

HyperFill
- Increased productivity over single-wire by up to 85%.
- Ability to weld thicker materials with less passes and less distortion.

Cobots
- Easy to program using the Cooper App
- Improves weld quality and consistency

Additive Manufacturing
- Improved design flexibility without the constraints of traditional processes.
- Reduced material lead times by up to 60%.

TECHNOLOGY SOLUTION

HyperFill offers the ability to address manufacturers' pain points by increasing deposition rates while improving weld quality and arc stability with a low complexity solution.

Cobots maintain consistent quality and precision and can take over repetitive and dangerous welding tasks. Cobots do not require experienced welders to operate.

Additive manufacturing reduces part lead times from months to weeks compared to casting and forging. Parts can be printed on demand to eliminate costly supply chain bottlenecks.

GRAPHIC





