HYBRID MANUFACTURING
WITH WIRE-LASER METAL DEPOSITION

Next-Level Manufacturing

Hybrid manufacturing combines additive and subtractive methods within a single system. It leverages the advantages of each to produce precise, fully-dense components that are often too complex, expensive, or even impossible to achieve with conventional techniques alone.

An advanced manufacturing method, hybrid manufacturing brings innovation, efficiency, and optimization to the production process.

Wire-Laser Metal Deposition

With wire-laser metal deposition (w-LMD) hybrid manufacturing, the additive component is printed with wire feedstock and melted by lasers.

The benefits of w-LMD over other metal hybrid methods—like powder-bed fusion or bound-filament printing—include higher deposition rates, less expensive feedstock, more efficient material use, reduced porosity, superior structural integrity, scalability, and better surface finish.

The diverse range of w-LMD feedstock options include stainless and tool steels, titanium, and heat-resistant superalloys, like Inconel® and Stellite®.

Lose the Limitations

- Reduce lead times with faster production cycles.
- De-risk new concepts with rapid prototyping.
- Cost-effective development without expensive tooling.
- Ideal for low-volume or specialized requirements.

Design Freedom
Unique structures and intricate geometries without custom tooling. Consolidate parts, build integrated functionality—even build directly onto existing components.

Improved Performance
More durable components perform better. Damaging factors like thermal cycling, corrosion, and abrasion can be reduced through material optimization, design ruggedization, and functional grading.

Build, Repair, Modify
Create new parts, or repair, refurbish, and enhance existing ones. Reduce maintenance costs and downtime with more durable, longer-lasting components.

Cost-Effective Efficiency
Reduce waste with near-net shape printing and minimal post processing. Exotic alloys can be used selectively to provide targeted, cost-effective enhancements.

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