



ADDere SYSTEM II: Laser Wire Additive Manufacturing System with Automated Material Handling

The ADDere SYSTEM II represents a step-change advancement in large scale metal additive manufacturing. Using the same base laser wire additive technology from ADDere I consisting of a control suite of high speed, real-time, closed loop sensors and purpose built control software built on an industrial robotics movement system, MWES further refined the system with an eye towards building a truly manufacturing orientated additive work cell.

With the ADDere SYSTEM II, MWES has updated the production cell for Titanium parts 80" long, 40" wide and 40"



tall. The laser power has been increased to 20 kW. With the new laser power level and the 500 amp hotwire now allow for higher deposition rates of up to 20 lbs/hour. The MWES own developed closed loop sensor system allows for consistent builds during the deposition. Heat and geometry are recorded, evaluated and the according parameters adjusted in real time.

All manufacturing parameters are being recorded during the build sequence to allow for re-evaluation at a later time. The system is built to operate in an argon atmosphere which is monitored throughout the additive metal build process.

While the ADDere SYSTEM II is built within a class 1 Laser enclosure that has an interchange argon lock, MWES has integrated an automated material handling system. This material handling system allows for the loading and unloading of the additive manufacturing system without losing the argon atmosphere in the build chamber.



SYSTEM II Specifications:

Built part size (LxWxH): 2m x 1m x 1m / 80x 40x 40in

Built part weight (Max) 1000 kg / 2200 lbs.

Laser power: 20kW

Deposition rate: up to 30 lbs./h

Positioner: 2 servo axis

Sensor system: real time, closed loop

Software package: ADDere by MWES

If your business is looking at large scale additive 3D metal printing solutions, please contact us today! The ADDere Additive Manufacturing process can be the solution to many of your manufacturing needs.

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