

PRESS RELEASE

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VLM-Robotics formalizes, one year later, the delivery to IREPA LASER (March 2020) of its XXL metal additive manufacturing bi-robot cell!

This cell was specially designed and produced by VLM-Robotics for IREPA LASER and is made up of 2 Comau robots, a linear axis of 5 m of useful stroke, a 2-axis turning gear with a capacity of 3 tonnes and finally a workpiece axis of 3 m useful running.



The large-size parts manufacturing cell delivered by VLM-Robotics is exemplary in its design since its **18 axes are driven by a unique Sinumerik 840D numerical control (NC)**. Its digital and multi-channel control architecture is also completed by the implementation of Direct Control, which consists of controlling the axis motors directly by the NC, making it possible to manage the precision and dynamics of the machine.

To perfect the precision of this cell VLM-Robotics has also deployed a **7th robot axis**, a digital backlash on the Lucas linear axis and a measuring ruler. Finally, the **3-ton 2axis-tuning table is also a own design suitable for manufacturing with double Redex reducers**.

The Siemens NC configuration, multi-channel and direct control - signature of VLM-Robotics - is above all an asset for real-time process adaptation. In this case, the in-process monitoring data (sometimes collected by the 2nd robot) is used to adapt the business action on the manufacturing robot (**closed loops**).

This machine is finally **programmed on Siemens NX** and had to integrate, above all, around **ten effectors of the CLAD-pw** (powder and wire) laser process for additive manufacturing **developed by IREPA LASER** itself or as **part of its collaborative projects** such as as the PSPC PAMPROD, or the European project INTEGRADDE.



This cell perfectly illustrates the expertise of VLM-Robotics manufacturer recognized by Siemens as its Solution Partner in France but also by Symop union and France Additive group as a 4.0 solution provider.

Bringing together suppliers such as **Siemens, Comau, Lucas, Janus and Redex**, this unit is also **a great contribution to the new French sector of industrial intelligent machines and systems.**



Since the machine was delivered, **the business synergies of the two partners: the laser process expertise of IREPA LASER and the intelligent machine expertise of VLM-Robotics** have largely demonstrated their relevance through the developments carried out over the past 12 months.



Presentation of VLM-Robotics (F-33- Lacanau de Mios) /

Manufacturer of agile robotic cells of manufacturing 4.0, the company serves industrialists in all sectors: ADS, Building & Road, Energy, Naval, Rail ... on their need for agility in the realization of multi-technology cells: machining, bonding, non-destructive testing and / or additive manufacturing. **Its cells controlled by CN in Direct Control and Multichannel serve complex manufacturing processes**

- **6-30 axes multi-interpolation**
- **data control** (simulation, sensors)
- **specific post-pro development**
- **in-process monitoring**, closed loops, adaptive robotics
- **connected cells**, edge & cloud computing, AI

Innovation partner of Siemens in France ("**Siemens Solution Partner**") on manufacturing robotics 4.0 www.vlm-robotics.fr

Presentation IREPA LASER (F- 67-Strasbourg) /

IREPA LASER is a **cooperative society of collective interest (SCIC SAS) specializing in laser processes and materials:**

- **welding**
- **surface functionalization** (texturing, cutting, micromachining, surface treatment, hardening, hardfacing)
- **additive manufacturing** DED, CLAD-pw and hybridization
- **optical and laser safety**

It offers its customers tailor-made industrial solutions to support them in their development and industrialization projects for their products (studies, R&D, expertise, production and training)

www.irepa-laser.com

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