

Additive manufacturing

Innovative way of producing components for the nuclear industry

A new approach to designing and manufacturing components.

Challenge

Cost and lead-time competitiveness of products is always at stake. However, traditional manufacturing processes limit designers from implementing the most efficient levers of optimization of components.

In addition, the high level of nuclear quality and safety requirements impose a trusted expertise of process engineering & manufacturing as well as in-depth knowledge of materials metallurgy quality.

Solution

Relying on its thorough expertise in the nuclear industry, Framatome has developed a know-how in additive manufacturing throughout the whole value chain of components production, including the mandatory demonstration and qualification stages:

- Manufacturing process assessments,
- Expertise of material properties, in-service behaviour studies,
- Optimised design/re-design to additive manufacturing,
- Process expertise & solving technological issues linked to manufacturing quality,
- Manufacturing & quality controls,
- Production & components qualification process management.

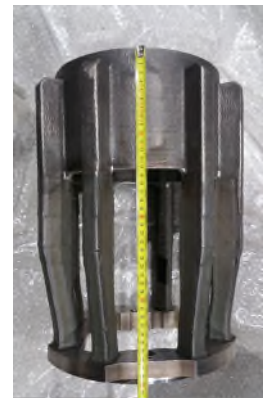
Therefore, Framatome provides a complete and fast solution for components with additive manufacturing.

Customers benefits

- Lead-times reduction (including development cycle period)
- Management of the whole value chain meeting nuclear industry requirements. Solutions can be used for defense and navy activities.
- Design to Cost (functions integration to main component, optimization of forged parts size, manufacturing to final geometry)
- Supply-Chain optimisation & securing (storage costs reduction, obsolescence management)



© Framatome



Technical information

Available manufacturing processes:

- Laser Powder Bed Fusion
- Laser Metal Deposition
- Wire+Arc Additive Manufacturing

Matériaux used:

- Stainless steel
- Low alloy steels
- Microalloyed steels
- Nickel-based alloys

Possible dimensions (meters):

- 0.4x0.4x0.4 with LPBF process
- 1.0x1.0x1.0 with LMD process
- Several meters with WAAM process

Contact : g-fra-pcm-sales@framatome.com
www.framatome.com

It is prohibited to reproduce the present publication in its entirety or partially in whatever form without prior written consent. Legal action may be taken against any infringer and/or any person breaching the aforementioned prohibitions. Subject to change without notice, errors excepted. Illustrations may differ from the original. The statements and information contained in this publication are for advertising purposes only and do not constitute an offer of contract. They shall neither be construed as a guarantee of quality or durability, nor as warranties of merchantability or fitness for a particular purpose. All statements, even those pertaining to future events, are based on information available to us at the date of publication. Only the terms of individual contracts shall be authoritative for type, scope and characteristics of our products and services.

Your performance
is our everyday commitment