

## 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:

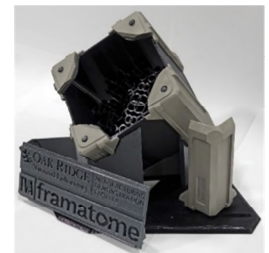
- Manufacturing process assessments,
- Expertise of material properties, in-service behaviour studies,
- Optimised design/re-design to additive manufacturing,
- Process expertise & solving technological issues linked to manufacturing quality,
- Manufacturing & quality controls,
- Production & components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

Your performance  
is our everyday commitment



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### Technical Informations

#### • 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

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