

## OTTO FUCHS KG

Founded in 1910 and with a workforce of over 10,000, today, OTTO FUCHS KG is one of the world's leading manufacturers of lightweight construction products for the aerospace industry and for all well-known automotive manufacturers as well as for the construction sector and industrial applications.

OTTO FUCHS supports its customers right from the development phase in the creation of metallurgically sophisticated forgings, extrusions and rolled rings: by developing precisely matched material alloys made of aluminium, titanium, nickel, magnesium and copper to meet specific requirements and applications, as well as simultaneous engineering, component design using the finite element method and the simulation of forming processes.

Based on this expertise, OTTO FUCHS has expanded its range of services to include Additive Manufacturing (AM) for perfect high-performance products – whether as prototypes, one-off items or in series.

But always economically, by means of a reliable process and at a quality level that is consistently oriented towards established standards throughout the entire value chain such as those used in the aerospace and automotive industries.

## OTTO FUCHS – Perfect in any shape

### Your contacts

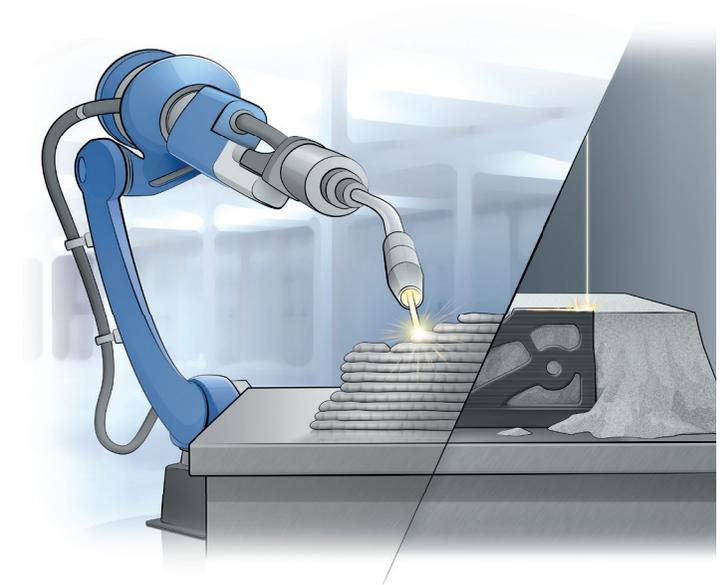
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UNIQUE HIGH-PERFORMANCE  
PRODUCTS – INTEGRATED INTO  
ESTABLISHED QUALITY PROCESSES!

## ENGINEERING

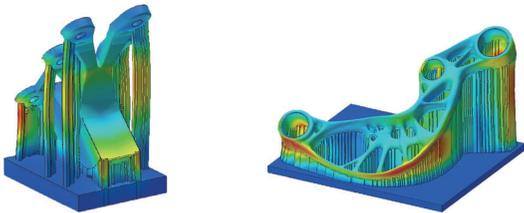
With Additive Manufacturing in the process variants Laser Powder Bed Fusion (L-PBF) and Wire Arc Additive Manufacturing (WAAM), OTTO FUCHS is expanding its specialised production spectrum to include additional degrees of freedom for one-off products and small batches that can be generated from 3D data without the need for tools. The basis for this is provided by well-founded expertise in the fundamental functional-oriented and ready for production design of a component right from the early phase of product development.

In addition to

- » decades of experience in the development and manufacture of lightweight products which are able to withstand extreme thermal and mechanical loads,
- we offer you
- » support in the identification of use cases
  - » feasibility analysis
  - » general and AM-specific component design
  - » load simulation and stress analysis
  - » AM process simulation
  - » component-specific development of process parameters and
  - » build job preparation and optimisation.

Your advantage:

Qualified support throughout the entire process and value chain – for high-performance products in application.



Process simulation

## MANUFACTURING

At OTTO FUCHS, Additive Manufacturing is not just the intelligent extension of an established range of services: with its AM operations, OTTO FUCHS is opening up a whole new dimension of manufacturing for its customers for products made of aluminium, titanium and nickel materials in unprecedented complexity. And with a flexibility and resource efficiency that go far beyond the economic and technical possibilities of conventional manufacturing processes.

Thanks to individually definable post-processing consisting of

- » heat treatment
- » mechanical processing and
- » surface finish

in component quality meeting the very highest demands in every respect.

Your benefits:

Complex one-off products and series also as process- and material-hybrid components – technologically and economically conceived in all process details right through to the ready-to-install finish.



Selection of various components

## QUALITY

Additive Manufacturing opens up a whole new range of possibilities in the production of one-off products and series – while at the same time defining new standards in quality assurance. OTTO FUCHS is familiar with the processes required based on many years of collaboration with companies in the aerospace, automotive and construction industries, for example.

This sets the standard. The same applies to the range of services available to meet these standards in AM.

By means of

- » characterisation of basic material and
  - » process monitoring
- and
- » geometrical-optical measurements
  - » metallography
  - » non-destructive testing and
  - » destructive testing.

Your advantage:

High-performance quality – reproducible, documented and completely verifiable – from materiality and additive production right through to the ready-to-install product.

By OTTO FUCHS



Non-destructive testing