

Energizing sustainable change

Spotlight on Progress

Circularity through additive manufacturing

Business need

At Baker Hughes, contributing to a circular economy means producing in a sustainable way from the early stages of product development through project completion or material disposal. We identified that many older or obsolete parts could have their service life extended or features enhanced through additive manufacturing. We evaluate environmental requirements in our additive products and processes and eco-design principles are applied from the beginning of development through a comprehensive approach to predict lifecycle impact.

Impact

We utilize additive manufacturing to reduce material consumption and shipping distances, improving the overall efficiency of production and the supply-chain process. Moreover, additive manufacturing gives us the possibility to extend the life of obsolete products and even to upgrade old products' features. A case study performed on a first stage gas turbine nozzle resulted in a ~26% reduction of energy consumption and a ~42% reduction in raw materials. This not only resulted in a decrease of waste to landfill, but it also improved efficiency and reduced scope 3 category 5 waste generated in operations.

Project team

Additive Manufacturing team

Strategic outcome

Reduce waste to landfill by 2030

Supporting the UN's Sustainable Development Goals (SDGs)



In support of UN SDG target 12.5