

Joseph Group embarks on 3D printing within the petroleum industry

The new age prototyping

The Oil and Gas industry thrives on the usage of key enabling technologies that drives industrial productivity in the Energy sector. With 3D printing and additive manufacturing, complex parts are now easily customizable at a rate faster than traditional manufacturing, enforcing the new age prototyping process as the ideal solution for production of low volume parts, making it a significant advancement in the industry.

With a fully equipped state-of-the-art facility, and an experienced team of designers and engineers, Proto21 division of Joseph Group is exclusively dedicated to 3D Printing and Prototyping. The solutions offered to their clients in the Oil and Gas industry include:

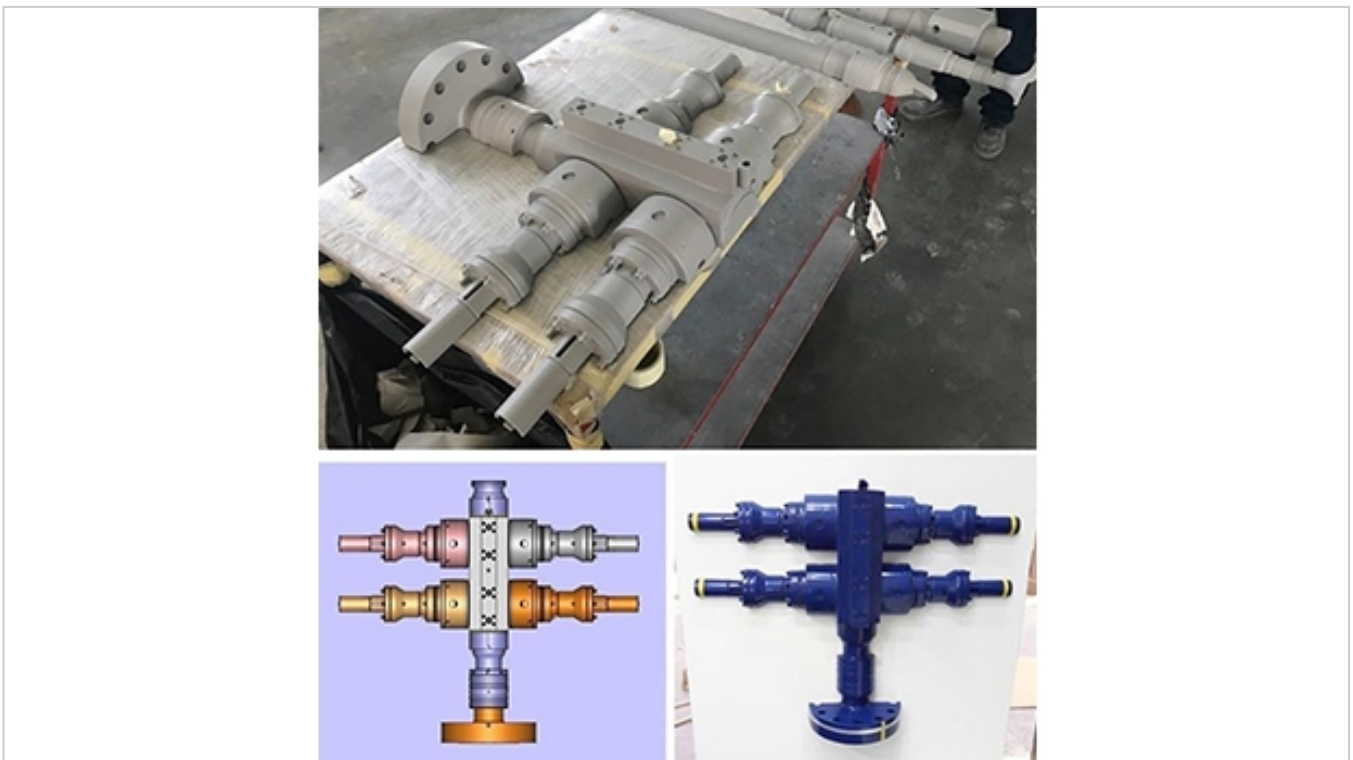
- Creation of digital inventory for engineering tools, spare parts and other vital components to offer cost and time efficiency
- Usage of industry leading technologies like FDM, SLA, Binder Jetting, and HP Multi Jet Fusion technology to 3D print functional prototypes, exhibition models and similar 3D printed parts
- Provision of complete engineering solutions that include 3D Designing, Printing and Reverse Engineering, along with colour and finishes, to enhance the purpose of models



Accelerated product development is a significant advantage of 3D Printing. The utilization of a variety of polymers, engineering resin and polyamide material PA12 powder is what enables the production of prototypes and functional parts of pumps, valves, turbo machinery and other components at a cheaper and faster rate.



At Proto21, clients get the opportunity to acquire concept designs, 3D models, and manufacturing & final finishes.



One of their top clients include reputed fuel retailer, ADNOC. The company worked with the brand on prestigious projects involving the ADNOC drill bits.

Inspired by the original, three giant drill bits were designed, manufactured and installed at the ADNOC Group headquarters in Abu Dhabi. 3 meters in height, these large mock ups were manufactured in parts using 3D printing and polystyrene material resin, and later assembled and installed at site after attentive 3D designing, structural analysis, and material selection.

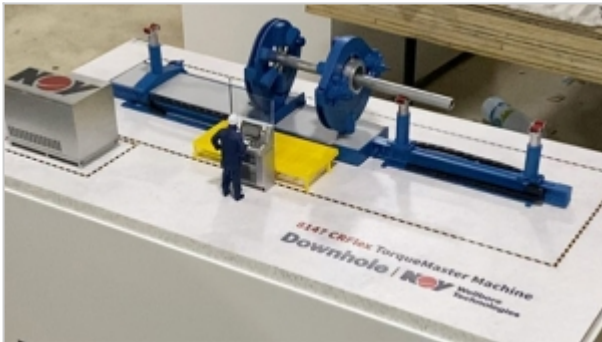


In addition, in place of the original legendary 600 kgs drill bits which was previously displayed at the ADNOC headquarters, lightweight replicas, that weigh only 16 kgs and are easy to move, were produced.



Also 3D printed for the brand were more than 150 small drill bit trophies, produced in a short turnaround period of one week. The models were printed using different 3D printing technologies in order to achieve the required level of detailing and precision.

Other significant projects include presentation models for the ADIPEC event, various oil and gas models, 3D printed oil rock models, scale models of ships and vessels, and awards and give away gifts for clients like NOV and McDermott.




With Proto21, Joseph Group has now expanding its competencies in the Oil and Gas industry to more than signage and branding. The achievements and developments in the 3D printing field that are customized by the Group as per the requirements in the Energy sector can be followed at www.proto21.ae / www.josephgroup-rvi.com or at the Joseph Group socials.

Contact information



Joseph Group
PO Box 80298, Jebel Ali Industrial
Area 1
Dubai
United Arab Emirates

 +971 4 880 3433

 www.josephgroup-rvi.com