BOSON MACHINES SUPPLIES MEDICAL DEVICES TO 70% OF HOSPITALS IN MUMBAI

Additive manufacturing, which is also called as 3D printing, is the cutting edge technology of Fourth Industrial Revolution that is helping manufacturers ramp up production of critical medical devices for COVID-19. Boson Machines is a Mumbai-based start-up company founded by Mr. Arjun Panchal and Mr. Parth Panchal in 2017. The company started as a manufacturer of 3D printing machines four years ago and in recent weeks it has been working with medical experts to design and produce 3D printed face shields for doctors and other healthcare workers. The company produces 8000 face shields a day and supplies them to 70% of hospitals across Mumbai. Apart from face shields, the company also produces other medical devices to support the fight against the pandemic.

In an interview to MVIRDC World Trade Center Mumbai, Mr. Arjun Panchal explains how his organization leverages additive manufacturing to meet growing demand for medical devices.

Excerpts of the interview:

1. How can 3D printing help in supplying critical medical devices at a short turnaround time?

Additive manufacturing has been a very essential part of Industry 4.0. The technology has only been aligned for rapid prototyping across the globe due to various factors like speed, accuracy and feasibility. At Boson Machines, since the beginning of our firm, we have believed in running this technology for mass production and facilitating the market with machines that have been built for rugged jobs. The same mentality and experience helped us build a "Face Shield" which has been hereby declared as a very essential part of a PPE kit for medical professionals. With the help of 3D Printing, we are able to cater to these institutions in a very short span of time with multiple designs customized according to their needs.

2. What is rapid prototyping? How is this useful under the current circumstance?

Rapid is the need of the hour as these products which are being built are something new to our nation. With overnight designing and prototyping, we were able to formulate and test the design with the help of doctors which has led to a product that has catered to 70% of hospitals across Mumbai. With desktop-sized machines and perfectly tuned "print-farm" we have moved from rapid-prototyping to a successful production line.

3. How do 3D printed goods compare with conventionally produced goods in terms of cost and labor requirements?

Starting with the freedom of design change to changing material composites, additive manufacturing gives us complete control over the production line and quick execution of changes if required which is usually a very difficult task on other conventional techniques.

4. In the last few weeks, how has your organization supported the medical fraternity in the war against COVID-19? What is your future action plan?

Amidst the chaos, our team has been working 24/7 to make sure these products are readily available to all the medical professionals fighting on the frontline against this pandemic. With an increase in demand across the nation, we have streamlined the process bit by bit with each passing day and made it commercially viable and user friendly. Our firm has always believed in continuous research & development and we're currently working with doctors to develop multiple projects to help our country gain stability in the post-COVID era.

NOTIFICATIONS

Press Information Bureau, Government of India

- Relaxation in lockdown
- E-commerce firms to continue to operate for essential goods
- Videoconference of the Health Ministers of G20 countries

DGFT

- Allocation of additional quantity for export of raw cane sugar to USA under Tariff Rate Quota
- Procedure for allocation of quota for import of Calcined Pet Coke and Raw Pet Coke

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