

A Times Group publication

**THE** *ULTIMATE GUIDE TO PROFITABLE MANUFACTURING*

# **MACHINIST**

RNI No 71129/98 Volume 15 Issue 7 • July 2020 • Rs 75

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**CUTTING TOOLS  
IN COME  
BACK MODE**

**DIGITISATION  
KEY TO  
SELF-RELIANCE**

**RAILWAYS  
NAVIGATING  
THE NEW NORMAL**

## **THE FUTURE IS GOOD!**

**Rajinder Singh Bhatia on the rise and rise  
of Bharat Forge Defence & Aerospace**



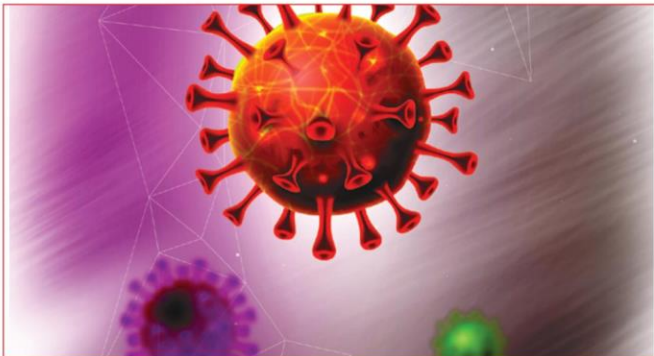
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By Niranjan Mudholkar

## THE FUTURE IS GOOD!

With a comprehensive portfolio catering to some of the mega programs, Bharat Forge's Defence & Aerospace division is ready to further enhance the scope of its work and contribute towards a self-reliant India, says its President and CEO, **Rajinder Bhatia**.



"We have a portfolio which spans across Artillery Guns, Protected Vehicles, Air Defence, Ammunition, Small Arms and Defence Electronics. Now we are expanding ourselves into marine products, especially on propulsion systems and also on small jet engines."

**Bharat Forge entered the aerospace sector about five years ago. So, are you happy with the progress made so far with this division?**

Aerospace is a tough sector to be in; it takes a long time for any OEM to change their supply partners. So under the circumstances, I would say we have made reasonably good progress. Most of this would also depend upon what is happening on the Indian side of the programs. If you take a look at the aerospace business, there are two segments we are operating in - one is to get into the supply chain of the large and active OEMs. We have successfully partnered with three OEMs and we are now in advanced talks with a fourth OEM to get into their supply chain.

The second part of the aerospace business revolves around systems and larger platforms. Now, take a look at the program, Kamov 226T. We have already signed a large collaborative arrangement with the Russians and there is also a possibility of supplying very important items out of that program by us; but unless the program takes off, I cannot start the supply. And these are not components; these are subsystem level or system level supplies. Secondly, we are actively pursuing the program of NUHunder strategic partnership model. Now, unless this program reaches a certain level, I cannot ramp up my business. So, these are some of the factors but over and above I think the future is reasonably



bright. And I think that growth has been reasonable in this segment. It could have been better but I think we are on the right track and it is doing well.

**How has the Covid-19 outbreak affected the operations of Bharat Forge Defence and Aerospace and how are you dealing with the same?**

In the month March 2020, we started to see the signs. The lockdowns had begun and a little bit of impact started showing. Most of the impacts were on the invoicing which was supposed to be done in the last quarter and which happens in March. As you know for a large number of defence and aerospace contracts, March becomes an extremely important month. And a lot of new revenue gets invoiced in that month which got a hit. And, this was invoiced in the next financial year.

Then in April it was a complete shutdown. Towards April end, there was slow resumption on work, when the government announced relaxation in the rules of lockdown, but it has been mostly virtual.

In the month of May and June, the business started to grow. A lot of operations moved to digital and virtual format. The government also showed a lot of flexibility. In fact, one large and two midsize contracts were finalised during this period on virtual platforms with government agencies, which was a very positive development. I think COVID is taking us towards a new

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normal and the new normal is going to be far more dependent upon virtual meeting, work from home rather than purely physical activity as it was before.

The second part was our response to the Prime Minister's call towards Atmanirbhar Bharat and also COVID related products. We were able to ramp up one of our small acquisitions in Hyderabad to start making N95 and N99 masks, and they are doing a good job with that. We are also working on a ventilator technology and are expected to come out with a product shortly, which will be a world-class product. We recently launched an AI-based health and monitoring system which is called HRMS. And I think that is one very successful system based on artificial intelligence where-



in it can detect and inform violations for not wearing masks, not maintaining social distances, body temperature, and many other activities.

But if you ask me, whether the pandemic has impacted our revenues, of course, it has. The first quarter has been badly impacted. We have begun with 50 percent to 60 percent of our working efficiency and hope to see further improvement, but the impact has been there in the first quarter.

**How has the overall product portfolio of Bharat Forge Defence & Aerospace evolved over the years? Can we expect further enhancements in near future?**

Over a period we have created a very large portfolio. We have a portfolio which spans across Artillery Guns, Protected Vehicles, Air Defence, Ammunition, Small Arms and Defence Electronics. Now we are expanding ourselves into marine products, especially on propulsion systems and also on small jet engines. So what we have created over the last period of about eight to nine years is a reasonably large portfolio and we are quite happy.

With regards to adding new products, we are looking at marine products and aerospace subsystems. These are the products that will come into our portfolio. We also are trying to ramp up our portfolio of protected vehicles, these are specialist vehicles which offer small arms or glass protection of areas to certain degrees.

**What are some of the key projects that you are working on currently for the Indian Armed Forces?**

There are number programs in different segments - in the artillery segment we are working on the ATAGs program, which is a state-of-the-art weapon platform, best in class in the whole world. This is our prime focus for which we are working as an industry partner to the DRDO. We have also developed other five or six different types of artillery systems, which are lightweight, some are mounted, and some are ultralight. And we are hopeful that all these will come very handy to our



armed forces in the near future.

The second area where we are doing quite well is on the protected vehicles. We have already supplied armoured personnel carriers to the Indian Army for UN Mission; we are exporting them to Sri Lanka and some other neighbouring countries. So, we are looking at some traction on the protected vehicles. We are also participating in one of the largest defence programs being undertaken which is IAF's CIWS program and trials for which are going to commence in the next few months. We are also participating in Indian Navy's NUH program (under SP model). We are also working on Armoured Troop Carriers and various types of ammunition.



If you take a look at the aerospace business, there are two segments we are operating in - one is to get into the supply chain of the large and active OEMs. We have successfully partnered with three OEMs and we are now in advanced talks with a fourth OEM to get into their supply chain.

We are also evaluating small arms, marine defence, and radars. So, the portfolio is very large with some of the key programs and some mega programs. I think the future is good

**Would you like to share some information about the overall manufacturing capabilities and capacities of the defence and aerospace segment at Bharat Forge?**

One different thing is that these facilities are not just for Bharat Forge but also for the entire of the Kalyani group of companies. We have had a focus on two ends, one on the technology side, where we established four technology centers - two in Pune, one in Hyderabad and one in Bangalore. Bangalore and Hyderabad are purely focused towards defence and aerospace solutions. The ones at Pune are Kalyani Centre for Technological Innovation and Kalyani Centre for Manufacturing Innovation. These two cut across the complete portfolio for Kalyani group companies including Bharat Forge,

and which we are doing in all other sectors.

Secondly, coming to the manufacturing infrastructure, we have created facilities at Hyderabad, Pune, Satara and Mysore. And we are now in the process of setting up in a new facility in Jejuri, on outskirts of Pune. It will be a complete manufacturing set up which should come into steam in another year.

In terms of manufacturing capabilities on the mechanical side, we have the best technology available both in terms of metallurgy, metal forming, and machining. We are now also setting up manufacturing facilities and competencies for defence electronics to include microwave and RF seekers.

**I understand that earlier this year at the defence Expo, you announced some certain strategic collaborations with some foreign partners. So what's the progress on that went?**

The collaborations are going on very well. One of the large collaborations which we had announced is progressing well. Some of the other collaborations on small arms and other segments such as vehicles, are progressing well too. But COVID has played a bit of a spoilsport because physical meetings have totally dried up; people are not able to travel. We are hoping that things get back to normal and required impetus will be provided. Hopefully, we should be able to announce another joint venture by the end of the year.

**How happy or satisfied are you with the policies of government of India? And do you think the defence production policy 2020 will be significantly better than the previous version?**

Firstly, let me tell you on the policy front there would not be any complaints. The government has come out with very vibrant policies which are encouraging the private industry to be part of Defence industrial base in the country. The one issue which may come up is the operationalisation of policies as that is where the delay takes place. In terms of the policy, the most landmark policy was issued in 2018, which was called Defence Production Policy 2018. It is on the website of the government of India, on the Make-in-India site. It was one of the most forward-looking policies ever made. It provides clear targets for exports and domestic production, and we need to compliment the government for that. There has been a major shift in the policy framework. All this policy framework is very positive. But there is a need for improvement on the implementation/operationalisation of these policies. At the end of the day, for any industry to prosper, what you need is proactive policies and implementation which is not delayed.

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And we are now in the process of setting up in a new facility in Jejuri, on outskirts of Pune. It will be a complete manufacturing set up which should come into steam in another year.

Hopefully, things are moving in the right direction.

**Would you like to share some information about the exports of Bharat Forge defence and aerospace?**

The exports could be identified in two parts. Firstly, we have the components and subsystem level exports, which could be undertaken as part of the supply chain of global OEMs. Now, this has been going on and has improved a lot. If you see the government figures on the export, figures are much better than the last three four years. They are improving and we are part of it. We are exporting to Israel, we are exporting to Europe, and some other companies across the globe. But these are at component level. The real Atmanirbhar Bharat of our honourable Prime Minister will come in existence when we are able to supply platforms and systems as exports. We need to make that as our target when we are able to supply tanks, ships, guns and other ammunition all over the world. That is the time when the Atmanirbhar Bharat and self-reliance would come into existence. Within our portfolio's we have certain systems which are finding a lot of traction. We are finding traction from the Middle East and some neighbouring countries. This is a slow process and it cannot happen overnight. Soon the Indian industry will be able to do large exports to the neighbouring nations or to the countries where we have a diplomatic relationship. The government target is of achieving over \$5 billion exports in the next five years, so is not farfetched if all the



things fall in place and operationalization materializes. With all of this, we are looking at a reasonable growth in exports. The current growth is approximately 10 percent to 12 percent per year. But we want quantum growth, then we will be able to export systems outside the country.

If you take a look at the sectors that can contribute to Atmanirbhar Bharat, Defence and aerospace are the prime sectors. There is a great amount of opportunity and interest from the government and private industry. These sectors can create multiple jobs opportunity and in true sense can make India Atmanirbhar.

**Are you happy with the overall defence and aerospace ecosystem that we have in this country?**

The defence and aerospace sector is an interesting sector, where most dependencies are on the MSMEs and the tier-one as well as tier-two suppliers. These suppliers in the country have been under stress because they are generally not having enough capital to sustain in trouble times. The pandemic has added to the stress; the government has now come up with new reforms to support these businesses.

The biggest challenge in this area is the availability of capital. We are trying to support some of our vendors by giving them orders, by trying to ensure that payment terms are easier. But this is one area where the government will have to be proactive. It has shown some concern in this for the last few months. We, at our end, are supporting some of our vendors. So we have already put a strategic stake in some of the companies. Buying a reasonable stake but not taking management control in the company helps them with capital. This is what is required in terms of boosting capability.

Personally, I don't think there is anything that is lacking in the country. But in terms of their ability to survive tough times, it is not there. Their business is not mature where they have order books which can last for years. They are still dependent on orders and it is still hacksaw kind of a demand for them. So, I think we need to support them. But in terms of capability, I don't think there is anything is lacking.

**The Government of India has recently opened up the space segment for the private sector. Do you think you would be getting into this segment as a natural extension of what you're already doing with defence and aerospace?**

Most certainly. We have already started bidding for some of the programs. And at the component level for high technology components we are already a supplier. We do have plans to be into it in a bigger manner, and we are looking at that. 🚀