

Thu, 11 April 2019

How Dhanush empowers the forces

At a recent ceremony organised at the Gun Carriage Factory, Jabalpur, the first six ‘Dhanush’ guns have been handed over to the Indian Army. The guns were flagged off by Saurabh Kumar, the director general of the Ordnance Factories and the chairman of the Ordnance Factory Board (OFB). Dr Ajay Kumar, the secretary of Defence Production to the Government of India was the chief guest, while Lt General PK Srivastava, PVSM, AVSM, VSM, the director general of Artillery, was the guest of honour. The ceremony also saw Lt General RS Salaria, VSM, Commandant School of Artillery, Major General Manmeet Singh, MG Artillery HQ Western Command Chandi Mandir, among others.

The ‘Dhanush’ 155mm x 45 calibre modern artillery gun system, developed jointly with the Indian Army and manufactured by the Ordnance Factories, received bulk production clearance in February and the initial order of 114 Guns was placed on the OFB. Significant contributions have also been made by the DRDO, public sector units such as SAIL and BEL and several private sector firms.

‘Dhanush’ incorporates the latest features such as an inertial navigation system, an on-board ballistic computer, direct day and night firing system, a modern target acquisition system and a communication system that makes the weapon compatible with the Army’s project—‘Shakti’.

Weighing less than 13 tonnes, with a high ground clearance of 400 mm, a range of elevation from -3° to 70° and an arc of traverse of 60°, ‘Dhanush’ is the most maneuverable artillery system and can be deployed in any terrain.

The gun has evolved as the most modern gun system in its own right, independent of its lineage. The gun weighs 700 kg more than the 155mm/39 calibre Bofors and has an 877mm longer barrel. It has a larger chamber volume of 23 liters as compared to 19 liters of the Bofors.

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Sail provides steel for indigenous artillery gun

The company has played a key role in the development of one home grown, state-of-the-art gun —Dhanush— for which it has supplied special quality forging steel from its Durgapur based alloy plants

The Steel Authority of India Limited (SAIL) has supplied steel for India’s first indigenous and biggest artillery gun — ‘Dhanush’, which has been inducted into the Indian Army recently. With this, SAIL has once again established its commitment to fulfill the country’s every requirement to strengthen India’s defence systems.

SAIL’s special alloy steel, produced by SAIL-Alloy Steels Plant based at Durgapur, has been used for making this artillery gun. ‘Dhanush’ has been indigenously designed and developed by the Gun Factory in Jabalpur where it was handed over to the Indian Army.

The organisation, which is in its 60th year of production, has contributed in creating a strong foundation for modern India and at the same time meeting every requirement of special quality steel for Indian defence. SAIL steel has been used in the country’s various defence programs including the INS Vikrant, INS Kiltan, INS Kamorta, MBT Arju and so on.

The company's Rourkela Steel Plant has also been supplying special grade steel to Jabalpur's Gun Factory to meet its various technical requirements related to development and repair.

SAIL chairman, Anil Kumar Chaudhary said, "It is matter of great pride for us that SAIL steel is being used in India's various defence programs along with being used for building the country's infrastructure. The company is ready to meet and supply special grade steels for technical requirement of the country's defence programs."

In the financial year 2018-19, SAIL produced 16.3 Million Tonnes (MT) crude steel in FY19, registering a growth of eight per cent over the corresponding period last year and clocking the best ever saleable steel production during the year. The production from new mills of the company's plants recorded a marked improvement in FY19, giving an enriched product basket. The total steel despatch from SAIL was the highest ever at 14.86 MT during FY19 due to a dedicated logistics setup created by the organisation.

It is important to note that the FY19 ended with a robust performance during Q4 with a growth of 10 per cent, 8 per cent, 14 per cent and 13 per cent in respect of production of hot metal, crude steel, saleable steel and sales respectively. Also, SAIL had the highest ever production of 9.85 lakh tonnes of UTS 90 Rail. The production of Rails got momentum in the second half of FY19 with around 5.66 lakh tonnes of production and 35 per cent higher than the H1 figure. In line with this improved performance, the company has managed to improve its turnover by 16 per cent which now stands at Rs 66,100 crore.

However, he feels that the challenge for the next year is much higher with a plan of 21 per cent increase in production of crude steel and similar growth in sales to catch on with the fast growing domestic steel consumption backed by an increased demand from infrastructure and construction segments.

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A growing threat

The latest drug-resistant microbe may not be a creation of overmedication, but of the overuse of fungicides in agriculture

There's a new superbug on the loose. *Candida auris* was first described as a pathogen in 2009, when it was found infesting a Japanese woman's ear (whence the auris) and in the decade since, it has been reported in 32 countries, including India and Pakistan. A hardy fungus, undeterred by antifungals, it may have killed a third of the several hundred people it has infected, and is at the new threat horizon of drug-resistant microorganisms. Sulpha drugs and penicillin liberated the human race from the tyranny of microbes, which used to casually cut short lives. Easily accessible antimicrobials made possible an era of improving public health, which changed the fortunes of nations and, arguably, altered the course of history. But now, an excess of access threatens to send us back to the dark times before penicillin, when ordinary micro-organisms — even soil bacteria — could slay the weak at will. *Candida auris* has gained infamy as a hospital-acquired infection, and like other resistant organisms, preys on people with poorly developed or compromised immune systems, including newborns, the elderly and diabetics. In a few decades, they could represent a greater threat to life than cancer.

It's anthropogenic Darwinism at work. Drug-resistant strains of microorganisms commonly develop from flawed prescription regimes, a matter of concern for decades. In affluent populations, they may be caused when patients demand overmedication. But slums in poor countries probably yield a richer crop, with patients buying antimicrobials over the counter from untrained shopkeepers. The method is