

OFB in the Forefront of the War Against the Coronavirus



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The Ordnance Factories were established to strengthen the capacity to wage war, both offensive and defensive. The arms, ammunition, and equipment supplied by the Ordnance Factories have played a crucial role in every skirmish, battle and war fought by the armies of the East India Company, the British Empire and the independent Indian Nation, in battlefields across continents. The contribution of the Ordnance Factories has always been appreciated by the Government of the day, whether it was for timely supply of Gun carriages in South Africa during the Boer war, or for the role played during the First World War for meeting the hugely increased demand.

During the Second World War, the 3.7 inch howitzer, manufactured since 1925 was used very effectively in the jungles of Burma. It also proved critical during the Kashmir operations in 1948 in pushing back the Pakistani raiders. The wars of 1965 and 1971 were fought with the arms, ammunition and equipment produced by the Ordnance Factories. The captivating images of the 155 mm Bofors Guns booming during the Kargil operations made for unforgettable footage on national television. All the spares

parts for these guns, including spare barrels and all the ammunition that was used was produced by the Ordnance Factories. Appreciation for the prompt supplies during the Kargil conflict by the then Chief of Army Staff, General V.P. Malik, is part of the official record. In keeping with this tradition, the Ordnance Factories are once again in the forefront of the war against the Coronavirus. When the magnitude of the global pandemic became clear and the vulnerability arising out of the critical gaps in infrastructure and equipment sank in, the phone rang in the Ordnance Factory Board (OFB) for assistance in combating the pandemic. The OFB was being asked to rapidly realign their production processes to supply different kinds of products, to equip a new kind of army fighting a different type of war against an invisible enemy. Estimated shortages were to the extent of a requirement of 27 million N95 masks, 15 million PPEs, and 50,000 ventilators by June 2020. The frequency and scope of the consultations at the highest levels of the Govt. of India, through phones and video conferences, increased by the day and on the 24th. of March during a video conference between the Cabinet Secretary, the

Chairman of the Railway Board, the DGOF and Chairman of the OFB and the Chairman of ISRO, the broad contours of the multi-pronged strategy took shape. The Director General Ordnance Factories and the Chairman of the Ordnance Factory Board, Mr. Hari Mohan calmly reassured the mandarins at Delhi that the Ordnance Factories have always stepped up when war clouds loom and that this time was no different.

During the near total logistical disruption caused by the largest lockdown in the world, the lights in 10-A Shaheed Khudiram Bose Road at Kolkata, the offices of the OFB, burned late into the night and marathon video conferences were conducted with the General Managers of the forty one Ordnance Factories. The need of the hour was to design, develop and mass produce items that had never been manufactured before, to create testing new facilities and to identify sources and to procure new materials on a mass scale. Gradually, the dimensions of the problem became clear and a strategy of empowering General Managers by increasing their powers of purchase, meticulous planning, lateral thinking, bold re-engineering, and innovate design rapidly helped to establish

TENT 2M.



Interior of tent medical.



Hand sanitizer.



supply lines of products, that had never before been produced by the Ordnance Factories. Mr. Hari Mohan, adopted a style of leadership that was personally engaged in order to engage others so that anyone and everyone could exercise initiative. The Chemical factories under the Ammunition and Explosive Division of the OFB began the bulk supply of hand sanitizers conforming to WHO specifications, with the Cordite Factory Arvankadu, near Ooty in Tamil Nadu issuing the first consignment of hand sanitizer on the 31st of March to Hindustan Latex Limited (HLL) which had been nominated as the nodal agency for PPEs by the Government of India. This was followed by bulk supplies from the Ordnance Factories at Bhandara near Nagpur and Itarsi in Hoshangabad in M.P.

The next achievement was the design and production of the Tent Medical 2M by the Ordnance Equipment Factory at Kanpur, as a cost effective, light weight and innovative solution for the rapid creation of quarantine and isolation facilities. Made of a single layer of 450 grams per square metre (gsm) poly viscose cloth on a metal frame of mild steel and aluminium alloy, the tent has an area of 9.55 square metres which is enough to contain two beds and all the necessary medical equipment required to tend to patients in isolation.

The first lot of these tents was supplied to the Govt. of Arunachal Pradesh, a fact appreciated by Mr. Kiren Rijiju, the Lok Sabha M.P. from Arunachal Minister of State in the ministries for Youth Affairs and Sport and Minority Affairs, who tweeted his appreciation on the 14th of April (@KirenRijiju). Another lot has since been issued to the Govt. of Odisha. Perhaps the most notable success was the production of the Coverall. The coverall



Hari Mohan
DGOF & Chairman, OFB

is a single use personal protective equipment (PPE) made from poly spun bonded non-woven fabric which is totally impermeable to blood and other bodily fluids, conforming to the American Society of Testing and Materials (ASTM) ASTM F 1670 and ISO 16603 class 3 specifications.

The main constraint was that the testing facility for conducting the blood resistance test, wherein the fabric is tested for impermeability, using synthetic blood at predetermined pressures for specified periods of time was available only with the South India Textile Research Association (SITRA) at Coimbatore. The Ordnance Factories took up this challenge in a mission mode at multiple locations and within a fortnight could design, manufacture, and validate a suitable piece of machinery and get it accredited by the National Accreditation Board for Laboratories (NABL) at two factories on the 11th of April, namely the Small Arms Factory at Kanpur and the Heavy Vehicles Factory at Avadi near Chennai, thereby creating a second test facility in South India and a test facility in North India for the first time. On the 17th of April, three more factories, The Ordnance Factory Kanpur, the Ordnance Factory Muradnagar, near Delhi and the Ordnance Factory Hazratpur, in Firozabad near Agra were also granted accreditation. Another such facility

is also planned at the Ordnance Factory Ambarnath near Mumbai, thereby creating a Pan India network of facilities. These facilities will also be made available to other agencies engaged in the supply of coveralls so as to rapidly create capacity to fill the critical demand and supply gap. The Ordnance Clothing Factory at Avadi, supplied the first lot of Coveralls to the Hindustan Latex Limited (HLL) on the 13th of April against an initial order of 1.1 lakh pieces.

In addition, the Ordnance Factory Medak (OFMK) near Hyderabad has undertaken the repair of ventilators in hospitals in Hyderabad on a war footing. All these efforts have earned widespread appreciation in the Govt. as expressed by the Defence Secretary Dr. Ajay Kumar, in his tweet on the 12th of April (@drajaykumar_ias) and in the media (https://www.youtube.com/watch?v=OZZsHTCY_VQ; https://youtube.be/JHia08vziv_M; https://youtube.be/ENsVM7lz_XIM; <https://www.youtube.com/watch?v=tA8KxgUSOOA>; <https://khabar.ndtv.com/video/show/news/coronavirus-544537>)

In addition to these major innovations the Ordnance Factories have set aside 280 beds in 10 hospitals located in various states across the country for isolation of patients. Aid to the local district authorities by way of donation of hand sanitizer and masks, providing food to the poor and the needy and to migrant workers on their way home are some of the community level initiatives taken up by individual factories. The employees have also whole heartedly contributed to the PM CARES Fund. Once again, the Ordnance Factories, in keeping with their ethos, have come to the aid of our valiant soldiers so ensure the safety of the nation under all circumstances. ■