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DRDO to establish 500 Medical Oxygen Plants in three months

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Medical Oxygen Plant

The Medical Oxygen Plant (MOP) technology, developed by the Defence Research and Development Organisation (DRDO) for onâ?•board oxygen generation for LCA, Tejas by Defence Bioengineering and Electromedical Laboratory (DEBEL), DRDO will now help in fighting the current crisis of oxygen for COVID-19 patients.

The oxygen plant is designed for a capacity of 1,000 litres per minute (LPM). The system can cater to 190 patients at a flow rate of 5 LPM and charge 195 cylinders per day.

Transfer of technology has been done to Tata Advanced Systems Limited, Bengaluru and Trident Pneumatics Pvt Ltd, Coimbatore, who will be producing 380 plants for installation across various hospitals in the country. 120 plants of 500 LPM capacity will be produced by industries working with Indian Institute of Petroleum, Dehradun, belonging to CSIR.

Medical Oxygen Plant (MOP) technology is capable of generating oxygen with 93±3 per cent concentration which can be directly supplied to hospital beds or can be used to fill medical oxygen cylinders. It utilises pressure swing adsorption (PSA) technique and molecular sieve (Zeolite) technology to generate oxygen directly from atmospheric air.

The installation of this plant helps in avoiding hospital dependency on scarce oxygen cylinders especially at high altitude and inaccessible remote areas. MOP has already been installed at some of the Army sites in North East and Leh-Ladakh region. The plant complies with International Standards like ISO 1008, European, US and Indian Pharmacopeia. Site preparation for five plants to be installed in Delhi/NCR region has already been initiated.

The DRDO has initiated fabrication of 380 numbers of Medical Oxygen Plants with release of supply orders for 332 numbers on Tata Advanced Systems Limited, Bengaluru and 48 numbers on Trident Pneumatics Pvt Ltd, Coimbatore with a target of producing 125 plants per month under PM CARES Fund. With this it is expected that 500 Medical Oxygen Plants will be installed within three months.