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**Government of India**  
**Ministry of Commerce & Industry**  
**Department for Promotion of Industry and Internal Trade**

**Subject:** Maintenance of adequate supply of medical oxygen in the wake of COVID-19  
Pandemic – Status Report - Reg.

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1. In the Video conference of Cabinet Secretary with the Chief Secretaries and Chairpersons of the Empowered Groups, it was emphasized that **adequate supply of oxygen cylinders for medical purposes** should be maintained.

To review the position in this regard, **Secretary, DPIIT chaired a Video Conference at 6:45 PM on 01.04.2020** with the officers of Petroleum & Explosives Safety Organisation(PESO) and important gas manufacturing and oxygen cylinder suppliers Associations to discuss issues in keeping supply chain flowing.

2. From discussions in the meeting the following points emerged: -
  - i. The **present operative capacity** and production of medical oxygen is around 4200 MT.
  - ii. The President of All India Industrial Gas Manufacturers (AIIGMA) reported that the present production of 4200 MT of medical oxygen is **adequate** and **no shortage is reported** from any part of the country. [95% of Medical Oxygen & Nitrous Oxide in India is reportedly being Manufactured/Re-filled/Supplied by the members of AIIGMA].
  - iii. The President, AIIGMA also stated that they are going to set up a **Control Room** in MoU with the National Health System Resource Centre under Ministry of Health & Family Welfare for monitoring all issues pertaining to supply of medical oxygen, including dissemination of information on manufacturing units of medical oxygen and cylinders whom the end users can contact to get the supply.  
  
The phone numbers etc. of the Control Room will be shared with Health Ministry and state Governments, and also with Cabinet Secretariat and MHA. [**Annexure A**]
  - iv. AIIGMA with the approval of ICMR has **formulated guidelines for safe handling of Medical Gas Cylinders/containers** to avoid contamination with coronavirus during their supply to Hospitals/Nursing Homes/Quarantine Camps etc and also their transport back to the suppliers place and factories for refilling as the first place of cylinders getting contaminated is likely to be at end users place.

These guidelines will also be shared with the Health Ministry and state Governments, and also with Cabinet Secretariat and MHA. [**Annexure B**].



- v. The President, AIIGMA stated that **so far no problems have been faced regarding loading and transportation of medical oxygen cylinders.**

In this context, timely instructions were issued by DPIIT through PESO on 25.03.2020 to Principal Secretaries (Home) of all States requesting them to allow uninterrupted transportation and manufacturing of medical oxygen and nitrous oxide in line with MHA order No. 40-3/2020 dated 24/03/2020 on the measures to be taken for containment of COVID-19 epidemic in the country.

- vi. So far there has been **no abnormal requirement of medical oxygen cylinders.** It seems patients are being taken care of with the available cylinders in the market.
- vii. **State-wise report** on number of medical oxygen gas manufacturing units, their present production and issues, if any faced by them in manufacturing is at **Annexure C.**

3. The following **steps** are being taken by DPIIT: -

- i. **PESO to continue to monitor** the situation for ensuring that there is no disruption in the production, transportation and supply of medical oxygen and to maintain production in close coordination with the manufacturers of medical oxygen and cylinders.
- ii. **AIIGMA to smoothly operate the Control room** set up by them to ensure smooth supply of medical oxygen. Telephone numbers and contact details of the Control Room set up by AIIGMA are being shared by DPIIT with M/o Health for their dissemination among the States and the end users i.e. Hospitals/Nursing Homes/Quarantine Camps etc
- iii. **Guidelines formulated by AIIGMA**, as approved by ICMR are also being circulated to all State Governments through M/o Health.



1<sup>st</sup> April 2020

**CONTROL ROOM - EMERGENCY CONTACT NUMBERS**

**HELPLINE NUMBERS: 9354899158/9899136618 (MRS VEENA PETER, SECRETARY - AIIGMA)**

**MEDICAL OXYGEN GAS MANUFACTURERS/REFILLERS/SUPPLIERS**

| Sl. No. | Name of Person    | Company Name                   | Contact Number | Remarks                          |
|---------|-------------------|--------------------------------|----------------|----------------------------------|
| 1.      | Surender Singh    | Linde India Ltd                | 8279626987     | Northern Region                  |
| 2       | Dheeresh Manrrai  | Linde India Limited            | 8291004431     | All over India                   |
| 3       | Anirban Sen       | Linde India Limited            | 9831798987     | All over India                   |
| 4       | R C Kaushik       | Praxair                        | 9324548432     | All over India                   |
| 5       | Vinod Singh       | Inox Air Products Pvt Ltd      | 9999162672     | North India Only                 |
| 6       | Rajeev Gupta      | Vinayak Air Products Pvt Ltd   | 9350109650     | North India Only                 |
| 7       | Mukesh Gupta      | Goyal MG Gases Pvt Ltd         | 9643311915     | North India Only                 |
| 8       | Salim Rakhangi    | Phoenix Gases Pvt Ltd          | 9930403747     | Western Region                   |
| 9       | Sunil Gupta       | Raigad Carbides                | 9325025132     | Western Region                   |
| 10      | Sanjay Agrawal    | Essem Gases Pvt Ltd            | 9823088573     | Western Region                   |
| 11      | Subasish Guha Roy | Universal Air Products         | 9845063119     | Southern Region - Karnataka      |
| 12      | Sadanand Pai      | Southern Gases                 | 9845543677     | Southern Region - Karnataka      |
| 13      | R Srikrishnan     | Popular Carbonic               | 9387201533     | Southern Region - Kerala         |
| 14      | Anthony Joseph    | Manorama Gases                 | 9895030269     | Southern Region - Kerala         |
| 15      | J L Manohar Rao   | Siddhivinayak                  | 9849021331     | Southern Region - Andhra Pradesh |
| 16      | R S Sachdeva      | Hitech Industries              | 9815022200     | Northern Region - Punjab         |
| 17      | R Kannan          | Tamilnadu Air Products Pvt Ltd | 9094001166     | Southern Region - Tamil Nadu     |

**CYLINDERS MANUFACTURERS (MEDICAL OXYGEN)**

| Sl. No. | Name of Person   | Company Name                | Contact Number | Remarks           |
|---------|------------------|-----------------------------|----------------|-------------------|
| 1.      | Puneet Khurana   | Everest Kanto Cylinders Ltd | 9821029299     | Steel Cylinder    |
| 2       | Sarang Gandhe    | Everest Kanto Cylinders Ltd | 9167200361     | Steel Cylinder    |
| 3       | Pravin Nandu     | Euro India Pvt Ltd          | 9821042582     | Steel Cylinder    |
| 4       | Vijay Parikh     | Al Can Exports              | 9769111333     | Aluminum Cylinder |
| 5       | Ravi Kaul        | Luxfer Uttam India          | 8860917244     | Aluminum Cylinder |
| 6       | Sandeep Bhasin   | Luxfer Uttam India          | 9971344511     | Aluminum Cylinder |
| 7       | Amit Ramsinghani | Rama Cylinders Pvt Ltd      | 9820055111     | Steel Cylinder    |

**CRYOGENIC VESSELS MANUFACTURERS (LIQUID OXYGEN)**

| Sl. No. | Name of Person         | Company Name         | Contact Number | Remarks |
|---------|------------------------|----------------------|----------------|---------|
| 1.      | Savir Julka            | Inox India Limited   | 9824063920     |         |
| 2       | Santhosh Radhakrishnan | Chart VRV            | 9160710000     |         |
| 3       | Munjel Mehta           | Shell-n-Tube Pvt Ltd | 9822033325     |         |
| 4       | Babu                   | Cryolor Asia Pacific | 8220053223     |         |

**NOITE:** In case the end user has any difficulty in contacting any of the above person, they may kindly contact the following:

Saket Tiku, President - AIIGMA at 9322668367

*VPeter*

Veena Peter  
Secretary





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Regd. No. S/7716 of 1975

1<sup>st</sup> April 2020

**GUIDELINES FOR CLEANING OF EXTERNALLY CONTAMINATED MEDICAL GAS  
CYLINDERS/CONTAINERS**

1. For initial cleaning, hot potable water with detergents, not exceeding 50 degrees Celsius (50 °C) should be used for cleaning cylinders/containers. Valves & inlets should be closed & covered so that the water doesn't get inside the cylinders/containers. Under no circumstances medical gas cylinder/container should be immersed in water.
2. After cleaning the cylinder/container with the water, the cylinder/container should be cleaned with Isopropyl Alcohol or equivalent disinfectant wipes. The application of alcohol based wipes should be limited otherwise it can cause a potential fire risk. Also ensure that residual disinfection agents are removed from the Gas Cylinder/container.
3. The cleaning & disinfection procedure should be performed at customers site, in designated areas having a safe & efficient waste disposal system in accordance with local regulations.
4. While cleaning the cylinder/container, avoid cleaning agents that contain ammonia, amine based compounds, bleach or chlorine based compounds as they can cause corrosion of steel/ aluminium alloy components / stress cracking of brass, including copper alloy components
5. In case the customer does not have the cleaning facility, then the Gas cylinder should be kept in an isolated area, with the tag put on it , clearly mentioning that the cylinder needs cleaning. Supplier needs to be informed that the cylinder has not been cleaned.
6. Till COVID 19 gets completely eliminated all Medical Gas Cylinders/containers should be quarantined till they are cleaned. These cylinders/containers should be filled with Medical Gas/Oxygen only after cleaning is done.
7. Don't touch face and mouth before and after handling the cylinders.
8. Wash hands properly with sanitizer, having 60% alcohol, after handling the cylinders.
9. Personnel involved in filling, storing, handling & transporting of Medical Gas Cylinder/container should be trained in this procedure and should be wearing protective gear at all times.

**The cleaning has to be performed initially at the end users premises because that is the first place where the cylinders are likely to get contaminated. These Guidelines are for the safety of public at large, for those people who are handling these cylinders either at the filling station during transportation or at the end users premises.**



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**Report on manufacturing and supply Chain of Medical Oxygen**

State wise list of major oxygen manufacturing plants along with the location and capacity are detailed below-

(For convenience, all the manufacturing plants located in North eastern states are clubbed as North East)

| State            | Location of the manufacturing plants  | Liquid Oxygen Capacity ( MT) per day   | State wise total capacity(MT) per day |
|------------------|---|--|---------------------------------------|
| North East       | Assam Air Products Guwahati<br>Premier Cryogenics Guwahati<br>Himalayan Air Products Dibrugarh, Assam | All including have the capacity to fill 700 no. of gaseous cylinders each of 46.7 ltrs |                                       |
| Chattisgarh      | Lynde Bhilai  | 85   | 85                                    |
| Gujarat          | INOX Karzan, Baroda<br>INOX Hazira<br>INOX Ahmedabad<br>Air Liquid Bharuch<br>Lynde Dahej             | 120<br>144<br>149<br>15<br>60  | 488                                   |
| Haryana          | Air Liquid  | 40   | 40                                    |
| Himachal Pradesh | INOX Solan  | 120  | 120                                   |
| Jharkhand        | INOX Bokaro<br>Lynde Jamshedpur   | 134<br>300   | 434                                   |
| Kerala           | INOX Kozikode<br>INOX Palkkad   | 149<br>149   | 298                                   |
| Karnataka        | INOX Bellary<br>Lynde Bellary/Hospet  | 50<br>225  | 275                                   |



|               |   |   |         |
|---------------|---|---|---------|
|               | Lynde Banglore<br>Lynde hospet<br>Karnataka Dharwad   |   |         |
| Maharashtra   | INOX Nagpur<br>INOX Chakan Pune<br>INOX Mumbai<br>INOX Raigarh<br><br>Tyo Nippon<br><br>Lynde Murbad ( Thane)<br>Lynde Taloja Raigarh | 97<br>149<br>122<br>80<br><br>100<br><br>173<br>270 | 991     |
| Orissa        | Lynde Rourkela and<br>Kalingnagar   | 340   | 340     |
| Rajasthan     | INOX Bhiwadi  | 120   | 120     |
| Telangana     | INOX Hyderabad  | 60  | 60      |
| Tamil Nadu    | INOX Sriperumbdur<br><br>Lynde Chennai  | 149<br><br>100                                      | 249     |
| Pondichery    | INOC Puducherry   | 84  | 84      |
| Uttarakhand   | AirLiquid Roorki<br><br>Lynde Haridwar  | 30<br><br>150                                       | 180     |
| Uttar Pradesh | INOX Modinagar<br>INOX Noida  | 149<br>35   | 184     |
| West Bengal   | INOX Durgapur<br><br>Lynde Uluberia and Howrah<br>Lynde Haldia  | 149<br><br>25<br>90                                 | 264     |
|               |   |   | 4212 MT |

**Note: No problems have been reportedly faced in any State regarding manufacturing, loading and transportation of medical oxygen cylinders.**