



POSITION PAPER

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AIGA Position on Conversion of Cryogenic Transport Tankers/ ISO Containers from Hydrocarbon / Flammable service to Liquid Oxygen service

AIGA is concerned with the current Pandemic situation in India and appreciates the major role played by Gas Industry, Steel Industry and others in trying to meet up the surge in Liquid Oxygen (LO2) demand for medical use. It also recognizes that there is a need for urgently making more transport tankers/ISO containers available for transporting LO2 across the country from various sourcing locations. However, the conversion of transport tankers/ISO Containers on Hydro Carbons/Flammables (LNG, Ethylene, etc.) service to LO2 service is strongly discouraged by AIGA and other Gas Industry Experts globally like CGA and EIGA due to potential inherent safety risks as noted below.

1. Extremely difficult to completely remove hydrocarbons/oil from the inner vessel, inner vessel components and inner pipes including any dead legs / spaces without accessing the inner vessel for Oxygen service cleaning and verification.
2. Detailed engineering review of the Transport tanker / ISO container is essential to assess and verify the suitability for Oxygen service in below areas and not limited to:
 - a. Vessel, piping, safety valves and structural support designs (due to considerable difference in product density)
 - b. Components like valves, gaskets, packings, on-board pumps, etc.,(for Oxygen compatibility)

In this unprecedented situation of higher demands for Medical Oxygen transportation, AIGA suggests exploring the possibility of converting Hydrocarbon / Flammable service tankers into Liquid Nitrogen (inert gas) service. Thus freed up LN2 tankers can then be safely converted to Liquid Oxygen transportation service.

The intention of this Safety Bulletin is to clarify AIGA's position, explaining the potential hazards and associated risks for discouraging the conversion of transport tankers/ISO containers from Flammables (LNG/Hydrocarbons) service to Liquid Oxygen service.

Further information

[1] EIGA 087/20, Conversion of Cryogenic Tanks to Oxygen Service, www.eiga.eu

[2] AIGA 101/19, A Reference Guide on Cryogenic Tanker Product Conversion, www.asiaiga.org

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