

Malaysia Liquid Oxygen Market, By Type (Vertical Storage Tank, Horizontal Storage Tank), By End User (Aerospace, Submarine, Gas Industries, Medical, and Others), By Region, Competition, Forecast and Opportunities, 2028 By Type (Bladder, Piston, Diaphragm, and Spring), By Application (Blow Out Preventers (BOP), Mud Pumps, Offshore Rigs, and Others), By Deployment (Onshore, Offshore), By Region and Competition

https://marketpublishers.com/r/M3793B278824EN.html

Date: October 2023 Pages: 70 Price: US\$ 3,500.00 (Single User License) ID: M3793B278824EN

Abstracts

Malaysia liquid oxygen market is anticipated to grow significantly in the projected period of 2028, due to increasing demand for liquid oxygen from the healthcare industry.

It is used in various medical applications, such as respiratory therapy, anesthesia, and cryosurgery. Liquid oxygen is classified as an industrial gas and is widely used for industrial and medical purposes. Liquid oxygen is obtained from the oxygen found naturally in air by fractional distillation in a cryogenic air separation plant. Liquid oxygen is lightweight, has lengthy durations, is not dependent on electricity, and can treat multiple disease. Along with this, the government is also investing in research and development to promote the growth of the liquid oxygen industry. Moreover, the increase in consumption of liquid oxygen in various aerospace & aircraft as liquid oxidizer propellant as well as source of breathable air at high altitude accelerate the growth of the Malaysia liquid oxygen market in the projected period.

Malaysia liquid oxygen market is a dynamic and competitive market that offers opportunities for growth and innovation. The market players are focusing on expanding



their product portfolio, enhancing their quality standards, improving their distribution network, and increasing their market share. Along with this, merger, and acquisition activity in the liquid oxygen market enhances companies' presence in the region as these acquisitions help companies to better serve their customers and meet the growing demand for liquid oxygen in Malaysia in the forecasted period.

For instance, Air Liquide strengthened its position in Malaysia with the acquisition of Southern Industrial Gases Sdn Bhd in October 2019.

Rising Demand for Liquid Oxygen from Aerospace Industry

Liquid oxygen is used in aircraft oxygen systems, as it provides breathable air at high altitudes. The demand for air travel has been increasing. This leads to the growth of the aerospace industry in Malaysia, which further increases the number of commercial aircraft in the country, which has driven the demand for liquid oxygen in aircraft oxygen systems. Liquid oxygen is used in space exploration for various purposes, such as life support systems and propulsion systems as it is employed in cryogenic engines which provide more force with each kilogram of cryogenic propellant as compared to other solid and liquid propellant rocket engines. Liquid oxygen is commonly used in aeronautics due to its high oxidizing ability and high density, which makes it an efficient and powerful oxidizer for rocket propellants. In rocket engines, liquid oxygen is used as an oxidizer, which provides the oxygen required for the fuel combustion reaction. In addition, liquid oxygen is used in cold gas thrusters, which are small rocket engines used for maneuvering satellites and spacecraft in orbit. Liquid oxygen is preferred over other oxidizers because it has a high density, which allows for a higher fuel-to-oxidizer ratio, resulting in a higher specific impulse (i.e., the amount of thrust produced per unit of propellant consumed), thus augmenting the growth of Malaysia liquid oxygen market.

For instance, Astronautic Technology Sdn Bhd, a wholly owned company by the Malaysian government supervised by the Ministry of Science, Technology, and Innovation that focus mainly on the development of space and satellites technology by concentrating on research and development that includes advanced and innovative technologies for the space industry.

Moreover, chemical industries employ liquid oxygen to generate oxidation processes that help alter feedstock structure as well as liquid oxygen also plays a role in petroleum refining and recovery, improving flow and reducing viscosity, among other important functions.



For instance, Linde AG use oxygen in oxygen enrichment technology which is used for sulfur processing in Claus units and in the regeneration section of fluid catalytic cracking units (FCCU) in refinery.

Therefore, the increasing demand from aerospace and process industry led to the growth of Malaysia liquid oxygen market in the projected year.

Growing Demand from Healthcare Industry

The healthcare industry is one of the key end-users of liquid oxygen, using it in various medical applications, such as respiratory therapy, anesthesia, and cryosurgery. Respiratory diseases such as asthma, chronic obstructive pulmonary disease (COPD), and bronchitis are becoming increasingly common in Malaysia due to environmental factors such as air pollution and smoking. Liquid oxygen is used in respiratory therapy to provide oxygen to patients who have difficulty breathing due to respiratory disorders as well as improve oxygen levels in patients with respiratory diseases. Liquid oxygen is also used in cryotherapy, a medical treatment that involves exposing the body to extremely low temperatures to treat certain conditions, such as warts, skin tags, and cancerous tumors. In cryotherapy, liquid oxygen is applied directly to the affected area, which freezes and destroys the abnormal tissue. Along with this, COVID-19 has abominably affected lung functioning which hampers the oxygen supply to various parts of the human body. Hence, oxygen is required for patients that are hit by the COVID-19 pandemic. One way in which this oxygen can be supplied and transported elsewhere is through liquid medical oxygen which is a high-purity oxygen usually employed for medical treatments.

For instance, Linde extends innovative mobile packaged oxygen to medical fraternity and hospitals in Malaysia.

Moreover, liquid oxygen is used in anesthetic procedures as well as used in life support systems for critically ill patients, such as those in intensive care units (ICUs). These systems deliver a high concentration of oxygen to the patient's lungs, which helps improve their breathing and can save their life leading to the huge demand for Malaysia liquid oxygen market.

Additionally, liquid oxygen is used in the steel production process to remove impurities and increase the quality of steel as well as liquid oxygen is also used in metal cutting and welding processes. Moreover, liquid oxygen is used in furnace heating in the steel industry as the furnace is used to heat the steel to a temperature suitable for processing

Malaysia Liquid Oxygen Market, By Type (Vertical Storage Tank, Horizontal Storage Tank), By End User (Aerospac...



along with this liquid oxygen is used to burn off impurities from scrap metal, which is then used in the steel production process.

For instance, The LION GROUP operates Antara Steel Mills in Labuan, Malaysia which are equipped with modern facilities comprising electric arc furnaces, ladle furnaces, and 6-strand continuous casting machines that use oxygen injection for increased furnace productivity and high carbon levels.

All these factors dominate the growth of the Malaysia liquid oxygen market in the upcoming years.

Increasing Demand for Vertical Storage Tank

The vertical storage tank is more stable, distributes pressure more evenly, is less expensive to install, has better energy efficiency, and takes up less floor space than a horizontal design. The cryogenic vertical-type storage tank is used for liquid oxygen as these tanks are powder and vacuum insulated in the annular space and equipped with various circuits to control product fill, pressure buildup, pressure relief, product withdrawal, and tank vacuum.

For instance, Linde group use Cryogenic Standard Tanks LITS 2 for storage and transportation of liquid oxygen.

However, the price of liquid oxygen is volatile resulting in changes in demand and supply which impact the profitability of the companies operating in the market resulting in restraining the growth of the market. Moreover, the production, storage, and transportation of liquid oxygen require strict compliance with safety regulations to prevent accidents and incidents, thus compliance with these regulations are costly and time-consuming, and failure to comply result in legal and financial penalties. Along with this, liquid oxygen faces competition from other industrial gases, such as nitrogen and argon which are used for some of the same applications and due to cheaper or more readily available in some cases result in slow down the market growth.

Market Segmentation

Malaysia liquid oxygen market is segmented based on type, end user, and region. Based on the type, the market is divided into vertical storage tank and horizontal storage tank. Based on the end user, the market is categorized into aerospace, submarine, gas industries, medical, and others. Based on region, the market is



segregated into East Malaysia, and West Malaysia.

Company Profiles

Air Liquide Malaysia Sdn Bhd, Air Products Malaysia Sdn Bhd, Ace Gases Marketing Sdn Bhd, Linde Malaysia Sdn Bhd, and KBS Industrial Gases Sdn Bhd are some of the key players in Malaysia liquid oxygen market.

Report Scope:

In this report, Malaysia liquid oxygen market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

Malaysia Liquid Oxygen Market, By Type:

Vertical Storage Tank

Horizontal Storage Tank

Malaysia Liquid Oxygen Market, By End User:

Aerospace

Submarine

Gas Industries

Medical

Others

Malaysia Liquid Oxygen Market, By Region:

East Malaysia

West Malaysia

Competitive landscape

Malaysia Liquid Oxygen Market, By Type (Vertical Storage Tank, Horizontal Storage Tank), By End User (Aerospac..



Company Profiles: Detailed analysis of the major companies in Malaysia liquid oxygen market.

Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).



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