Nitrous Oxide Production.

Laughing Gas Manufacturing Business.

Opportunities in Industrial and Medical Gas Production

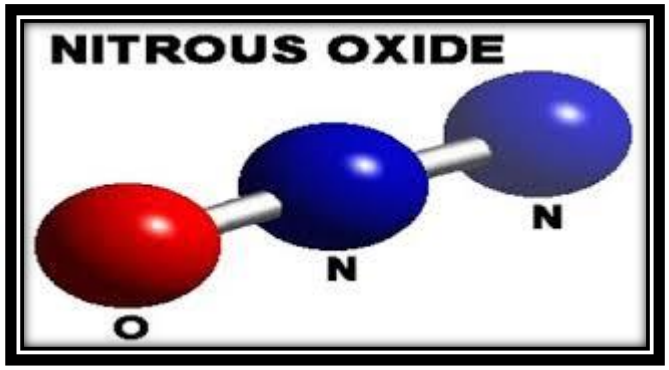
npcs

Introduction

Nitrous oxide is mainly used as an inhalation anesthetic product in medicines. Administration of this product is primarily accompanied by simultaneous administration of a volatile agent such as ethrane, halothane, etc. This product is also used in high end super cars which also plays a major contributor to its demand. It is an excellent oxidizer that can support combustion to its maximum potential which no other gas can and hence has no substitute in this regard.

Nitrous oxide itself is inflammable but is an excellent oxidizer that provides additional oxygen for the extra fuel to burn hence producing more power. It is used in combustion engines as the oxygen present in nitrous oxide causes combustion of fuels more rapidly. Nitrous oxide is also used in high tech thin film industries of LCD and semiconductor manufacturing.

Nitrous oxide or laughing gas is a colorless and non-flammable gas with a slightly sweet odor, which is widely used for various medical and non-medical applications. Some of the non-medical end uses include racing cars, semiconductor industry, and food processing.



In the medical industry, it is widely used in surgery and dentistry procedures as an analgesic and anesthetic. Upon inhaling, it has excellent euphoric effects and this property has led to its recreational use as a dissociative anesthetic.

The use of nitrous oxide in the medical sector has a minimal impact on the environment. Nitrous oxide accounts for 5% of the total greenhouse effects, with only 1% of nitrogen oxide released into the atmosphere coming from medicinal use.

Nitrous oxide is produced commercially by heating ammonium nitrate to a higher temperature. A channel with washers and scrubbers subsequently eliminate water vapor with high oxides of ammonia, nitrogen and nitric acid, and the other impurities. Nitrous oxide is normally stored below its acute temperature and exists in liquid and vapor phases. Unlike cylinders comprising pressurized gas, the cylinder pressure remains constant until all the liquid nitrous oxide vaporizes.

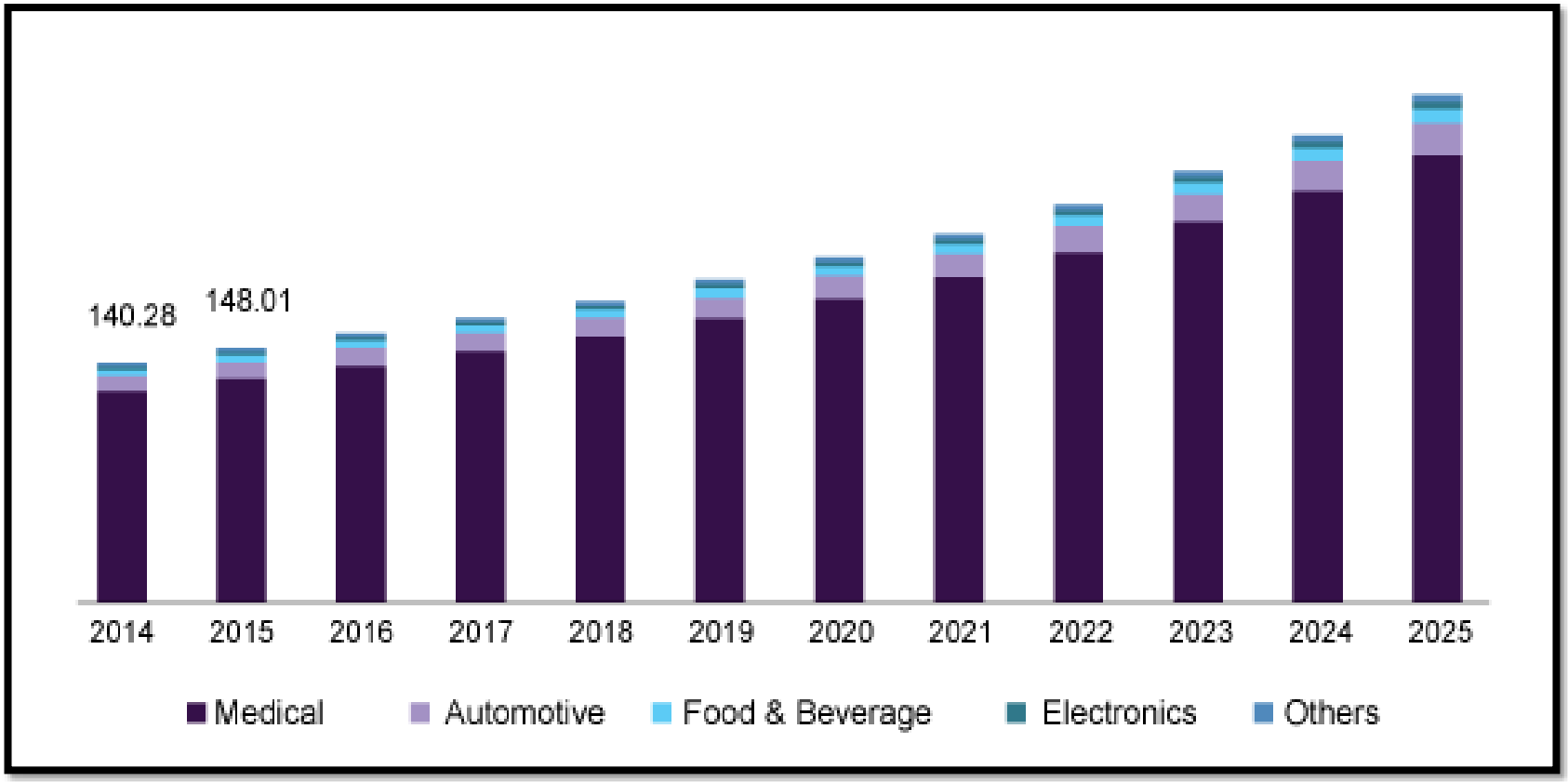
Nitrous oxide (N 2 O) is used in the food industry as a mixing and foaming agent (E942) in the production of whipped cream, 1, 2 and as a fuel booster in the motor industry. 3 It is also a familiar agent in obstetric, dental, emergency, and anaesthetic practice, where use is made of its analgesic and anaesthetic properties. However, nitrous oxide was used recreationally long before its medical potential was realized.

Market Outlook

Global nitrous oxide market is expected to grow from USD 789.2 million in 2017 to USD 1,441.2 million by 2026, at a CAGR of 6.2%. Increasing demand from various industries, especially from the medical sector, is helping the market gain tremendous momentum. In addition, rising prevalence of chronic diseases and growing geriatric population in major countries is further fueling the demand over the forecast period.

Increasing demand for nitrous oxide from a wide range of industries especially from the medical sector is expected to drive its market. It's a colorless gas with a sweet odor, also named as laughing gas and is non-flammable. It is a highly gas material that is produced from the thermal decomposition of ammonium nitrate. Considerable pervasiveness of several types of chronic diseases and increasing number of geriatric population especially in Europe and North America are anticipated to be some potential implications for the product to experience higher demand in the next five to six years. Few of the non-medical applications of the product include semiconductors, food processing & packaging and premium automobiles among the major end-uses.

U.S. Nitrous Oxide Market Size, By Application, 2014-2025 (USD Million)



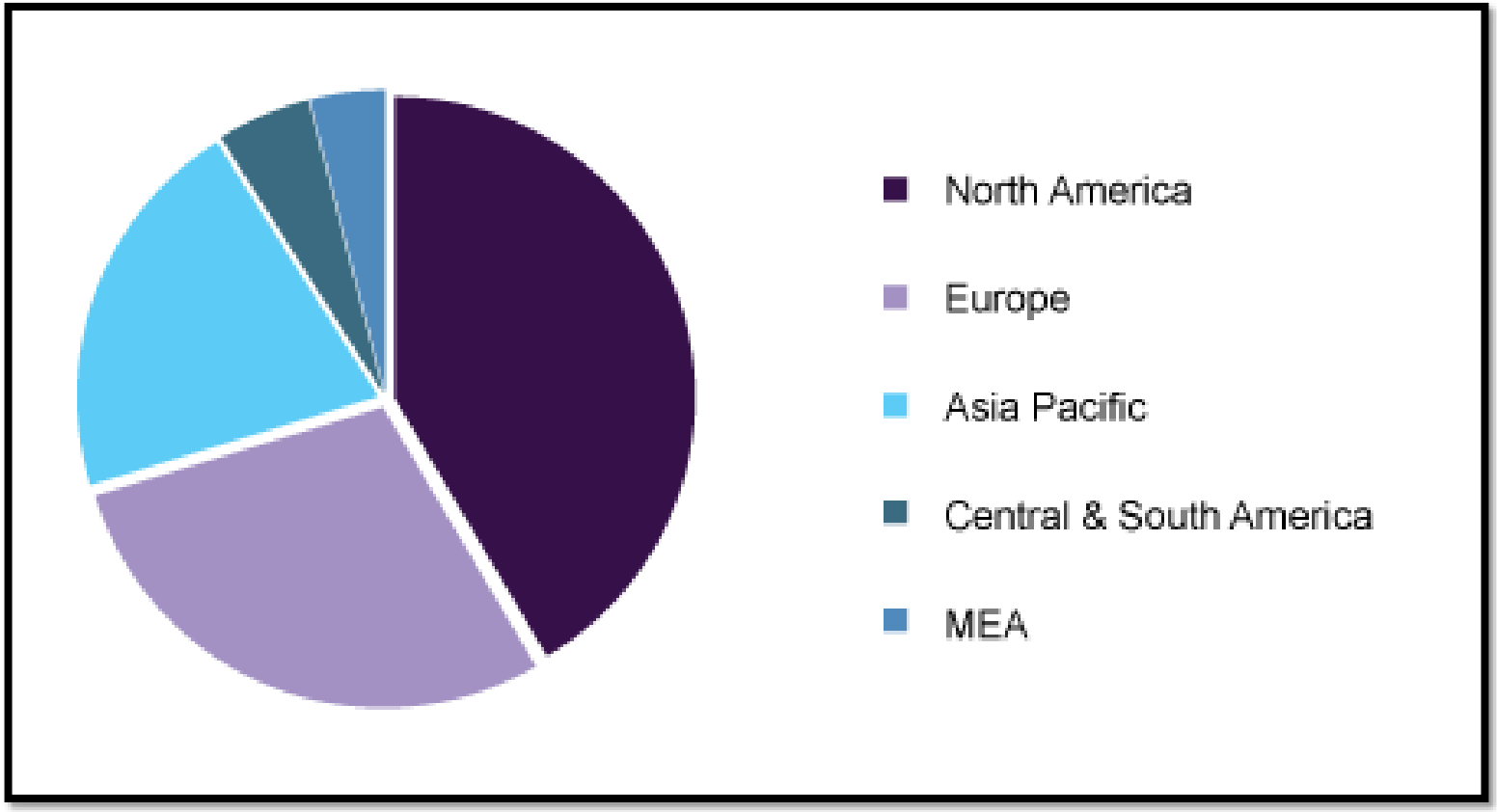
By Application, medical segment is likely to witness significant growth over the forecast period owing to rising use of nitrous oxide gas in clinics, hospitals and dental clinics for various procedures. Nitrous oxide is nontoxic and stable in room temperature. It is safer to store and carry. North America accounted for largest market share followed by Europe. The region is poised to offer huge opportunities over the forecast period due to increasing prevalence of chronic diseases such as cancer, type 2 diabetes, stroke, heart disease, obesity, and arthritis.

The Medical industry provides major share in Nitrous oxide market owing to its anesthetic and therapeutic properties. It is also used in small procedures like dressing of burns, debridement and wound suturing. In dental treatments it is used during tooth extraction procedures and it is used as a refrigerant in laparoscopy and cryosurgery.

The global market for nitrous oxide is projected to surge in the coming years as it continues to be an integral part of many industries. Usually known as laughing gas, nitrous oxide is expected to be in demand for many medicinal and non-medicinal purposes in the forthcoming years. The growing demand for nitrous oxide in a wide range of industries such as electronics, food and beverages, and automotive has played a pivotal role in shaping the global market for this colorless gas.

Rising demand from several enterprises, for example, food and beverages, automobiles, medical, and electronics are foreseen to be a trend setter, accelerating the growth of nitrous oxide market. Moreover, surging demand from Asia Pacific region, attributable to high predominance of chronic infections and growing of geriatric population base in major nations, for example, India and China, is profiting the general market.

Global Nitrous Oxide Market Share, By Region, 2016 (%)



The nitrous oxide market is widely utilized in dentistry procedure and also used in surgery. These are major factors contributing towards growth of this market. The usage of nitrous oxide in medical industry has less impact on the environment. A growing prevalence of chronic disease is another factor expected to supplement growth of this market in the years to come. Apart from this, rising geriatric population is another aspect backing growth of the global nitrous oxide market.

The key players in the nitrous oxide market include Praxair Technology, Inc.; Oxygen & Argon Works Ltd.; The Linde Group; Matheson Tri-Gas, Inc.; SOL Spa; Merck KGaA; Air Liquide; Airgas, Inc.; and Ellenbarrie Industrial Gases Ltd. are some of the key players engaged in extensive R&D and production of nitrous oxide. Moreover, Promas Engineers Pvt. Ltd., SS Gas Lab Asia, KVK Corporation.

Major Queries/Questions Answered in the Report?

1. What is Nitrous Oxide Manufacturing industry ?
2. How has the Nitrous Oxide Manufacturing industry performed so far and how will it perform in the coming years ?
3. What is the Project Feasibility of Nitrous Oxide Manufacturing Plant ?
4. What are the requirements of Working Capital for setting up Nitrous Oxide Manufacturing plant ?

5. What is the structure of the Nitrous Oxide Manufacturing Business and who are the key/major players ?

6. What is the total project cost for setting up Nitrous Oxide Manufacturing Business?

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Tags

#Nitrous_Oxide, #Laughing_Gas, Nitrous, #Nitrous_Oxide_(N2O), Nitrous Oxide (Laughing Gas), #Medical_Nitrous_Oxide, Medical Gas, Nitrous Oxide Uses, Nitrous Oxide Formula, #Happy_Gas, Nitrous Oxide Gas, How to Make Nitrous Oxide Laughing Gas, #Nitrous_Oxide_Production, Nitrous Oxide Plant, #Preparation_of_Nitrous_Oxide_(Laughing_Gas), #Dinitrogen_Monoxide, Manufacture of Nitrous Oxide, Production of Nitrous Oxide, Manufacture of Nitrous Oxide, Nitrous Oxide Industry, Nitrous Oxide Manufacturing Process, Nitrous Oxide Gas Plant, Process for Production of Nitrous Oxide, Nitrous Oxide Manufacturing, Manufacturing of Nitrous Oxide, Process of Manufacturing Nitrous Oxide, Nitrous Oxide Manufacture, Nitrous Oxide Manufacturing Plant, Detailed Project Report on Nitrous Oxide Production, #Project_Report_on_Nitrous_Oxide_Production, Pre-Investment Feasibility Study on Nitrous Oxide Production, Techno-Economic feasibility study on Nitrous Oxide Production, #Feasibility_report_on_Nitrous_Oxide_Production, Free Project Profile on Nitrous Oxide Production, Project profile on Nitrous Oxide Production, Download free project profile on Nitrous Oxide Production

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