Statement of proposal the problem statement engineering essay

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SYNOPSIS

DISSERTATION – 2 SEM-8TO STUDY THE GLOBAL MARKET SCENARIOANDANALYZE THE NEW APPLICATIONS OF INDUSTRIAL GASESCOMPLETED UNDER THE MENTORSHIP OFPROF. S. K. POKHRIYALCOMES, UPESSUBMITTED BYAMAN SUDR-430209005INTEGRATED BBA + MBA SEM 8UPES

STATEMENT OF PROPOSAL

THE PROBLEM STATEMENT:

TO STUDY THE GLOBAL INDUSTRIAL GAS MARKET AND TO FIND NEW AREAS WHERE INDUTRIAL GASES CAN BE USEDIn this Research, I would be attempting to give a wholesome view about the global Industrial gas market by observing the various price, demand and supply patterns as well as the consumption and manufacturing capacities and other factors which have an impact on the industrial gases industry. For this purpose, I will be studying the market leaders in industrial gases in the respective geoagraphics and will also add my experience I am to gain by undergoing internship in EMIRATES INDUSTRIAL GASES llc. For this, I will be analyzing the total value chain involved with industrial gases. This study will be giving out the various fields where industrial gases are currently used and the scope of expansion or contraction in terms of volumes in these fieldsThis would be an in depth study of an industry which contributes heavily to the refinery, petrochemical

and metallurgy business among many other industries. Furthermore, this study will also be an attempt to identify new areas in which industrial gases can be used .

RESEARCH OBJECTIVES

The objective of the research study can be stated as follows: To study the Global Industrial Gas market scenarioTo analyze the pricing , demand and supply patterns of industrial gasesTo understand the uses of Industrial gases and the industries or areas it is used in. To study the business strategies of the top market leaders in Industrial gas industry. To find new areas in which industrial gases can be used. To study the value chain of industrial gases involving production , transportation and distribution,

INTRODUCTION

BACKGROUND

Industrial gases are a group of gases which are manufactured commercially and sold for uses in other applications. The most common industrial gases are: A) Air Gases –1) Oxygen (O2)2) Nitrogen (N2)3) Argon (Ar)B) Rare Gases –1) Helium (He)2) Krypton (Kr)3) Xenon (Xe)4) Neon (Ne)C) Other Gases-1) Hydrogen (H2)2) Carbon monoxide (CO)3) Carbon dioxide (CO2)4) Nitrous oxide (N2O)5) Chlorine (Cl2)6) Hydrogen chloride (hcl)7) Sulphur dioxide (SO2)8) Acetylene (C2H2), 9) Methane (CH4)10) Propane (C3H8). In addition, there are many different mixtures of these and other gases to meet the needs of specific applications. The industrial and medical gases industry serves a very large number of customers in the whole community. Industrial gases are essential for almost all manufacturing. Large quantities of oxygen,

nitrogen and argon are used in the steel and metal industry. Shipyards and the automotive industry use acetylene, propane, mixtures of fuel gases and oxygen for cutting and welding. Liquid nitrogen is vital in recycling plastics, packaging and scrap tires. The chemical industry employs all major industrial gases as a raw material or for inerting. The other smaller market segment consists of cylinder gas and mixtures. Coming to India, there are presently over 300 small & medium size plants and approximately 25 large tonnage plants all over the country. These gases are supplied through pipelines to captive customers in adjacent factories; in cryogenic transport tanks for bulk deliveries to long distance customers; or filled in cylinders. The present annual turnover of the gas industry, excluding captive production is about Rs. 3, 000 crores ($650 million). With increased industrialization, the demand pattern of industrial gases is also changing fast. Modern application in the food processing industry, agro industries, healthcare and technology are growing at a tremendous pace. This has driven the industry to adopt stringent quality control systems and an efficient distribution network. Major players in India include1) BOC India2) INOX Air Products Ltd. 3) Jindal Praxair Oxygen Co. Ltd. 4) Air Liquide India Holding P. Ltd. 5) Aims Industries Ltd etc. The Indian gas industry is growing at an average rate of 12 per cent per annum during the last couple of years, with the industrial oxygen growing consistently at 15-17 per cent per annum. The growth of industrial gas industry can be easily forecast on the basis of projections of the steel and other metallurgical industry. Steel demand is seen rising by 10% in the fiscal year to march 2011, helped by higher spending on infrastructure will continue to drive growth of the gas industry. Natural gas comprises 9 % of

India's primary energy consumption and it will be 14% of energy mix by 2010. Demand for natural gas is also likely to increase at an average annual growth rate of 7. 3%. Metals production and fabrication will continue to be the largest market for industrial gases, accounting for 31% of total demand in value terms in coming years. The second largest market will be the chemical processing/petroleum refining segment. The medical/healthcare market, though smaller in size, will be the fastest growing and record gains from the expansion of healthcare services in developing nations and rapidly increasing use of home healthcare respiratory therapies in advanced economics. Hydrogen is gaining prominence and most companies are striving to develop technologies that can efficiently exploit the potential of hydrogen. Increased use of natural gas will create an opportunity for higher production of argon and carbon dioxide. The Industrial gas industry has a very bright future in the coming years.

IMPORTANCE OF THE RESEARCH:

In 2016, the global industrial gases market is forecast to have a value of $98. 8 billion, an increase of 55. 2% since 2011. One of the major strengths of the industrial gas industry is that it is not tied to one or two major markets for its success. These sectors, all of which rely on industrial gases in varying degrees to produce their final products or services, account for more than 50% of the total global GDP. The industrial and medical gases industry serves a very large number of customers in the whole community. Industrial gases are essential for almost all manufacturing. Large quantities of oxygen, nitrogen and argon are used in the steel and metal industry. Shipyards and the automotive industry use acetylene, propane, mixtures of fuel gases and

oxygen for cutting and welding. Liquid nitrogen is vital in recycling plastics, packaging and scrap tyres. The chemical industry employs all major industrial gases as a raw material or for inerting. The other smaller market segment consists of cylinder gas and mixtures. With the expansion of modern industries , the demand for industrial is certainly to going to rise . Furthermore, with advancement in technologies , many new areas are opening up which would require industrial gases for their operations.

SCOPE OF RESEARCH

The research is an attempt to give an insight of industrial gas market and its associated aspects. The research will help to give the different demand, supply trends of industrial gases as well as to use the data to make future predictions. This research will help in identifying industries and areas where industrial gases can be used to increase business and as a result, to increase profitsProvides textual analysis of the industry's prospects, competitive landscape and profiles of the leading companiesIncorporates in-depth five forces competitive environment analysis and scorecardsCovers the Global, European and Asia-Pacific markets as well as individual 5 major markets (France, Germany, Japan, the UK and the US). Includes a five-year forecast of the industry

REVIEW OF LITERATURE

The Global Industrial Analysts Inc. published a comprehensive global report on Industrial and Specialty Gases market. According to this report, the global market for industrial and specialty gases is forecast to reach 11 Trillion Cubic Feet by the year 2017, supported by excellent growth opportunities in electronics, healthcare and energy sectors, in addition to the lucrative prospects in developing markets in the Asia-Pacific region laying special emphasis on China and India.

The report suggests that the industry focus on development of new environmentally friendly technologies and products is expected to open new application markets for industrial gases.

The Linde group , which is arguably the global market leader in the Industrial gas segment released a report describing the types of industrial gases produced, the process and equipment’s involved in their production as well as their uses. According to the report, Industrial gases are produced primarily by air separation that is, extracted from the atmosphere. Examples of gases produced in this manner are nitrogen, oxygen, argon, and other rare gases. However, some gases, including hydrogen, acetylene, and carbon dioxide, are co-products or by-products of other processes. The worldwide market for industrial gases is about $40 billion a year, with the U. S. alone at $13 billion. U. S is currently the biggest market in Industrial gases. This report mainly focuses on the gases that are produced and sold by the Linde group and have given inadequate information about the other industrial gases. Furthermore, with the advancement in technology, the

method of production may also be subject to changes. bcc report on industrial gas market dated 27 February 2013 described the use of oxygen and nitrogen in the metal and medical segment of industrial gas market and predicted the growth in demand of these gases with the advancement in technology. The article has made predictions with 2017 as the target. It describes the changes in industrial gas distribution that could happen in the future, it also stresses on the growth of this industry in the asia –pacific region. The report fails to explore the emerging fields where industrial gases can be used due to the advancements in technologies; it focuses mainly on forecasting the increase in demand of industrial gases in the existing fields.

RESEARCH METHODOLOGY

RESEARCH DESIGN

For this Research, A mixture of Exploratory and Descriptive research design will be used in order to have an in-depth knowledge about the Industrial Gas industry and its various associated industries and also to generate necessary knowledge which can be used future studies about the new applications of industrial gases. Descriptive research design is a valid method for researching specific subjects and as a precursor to more quantitative studies. Whilst there are some valid concerns about the statistical validity, as long as the limitations are understood by the researcher, this type of study is an invaluable scientific tool. The whole process including the production, purification, transportation and distribution of industrial gases will be observed and described under this research.

SAMPLING DESIGN

Judgmental type of sampling will be used in this research. According to judgmental sampling, elements will be selected on the basis of a set group of criteria’s as well as the judgment of senior experienced professionals from the industry. For this research, the criteria for selecting the industrial gas companies will be geography, market share . For the second part of the research, that is to find new applications of industrial gases, the elements will be selected on the basis of the application of industrial gas.

DATA COLLECTION

PRIMARY DATA COLLECTIONThe Primary Data for this research is to be collected by interviewing people associated with the industrial gas industry. SECONDARY DATA COLLECTIONThe Secondary Data for this research has been gathered from previous Dessertations , newspaper and magazine articles and from verified and reliable sources from the internet

BIBLIOGRAPHY

Applications of industrial gases, Industrial gas, (www. wikipedia. org) , retrieved april 2013.

Industrial gases, I-chemicals K-Industrial gases, Mr. Bryn Smith (Tamaki college), edited by Mr. John Packer and Mr. John Cumming (BOC gases), retrieved January, 2012.

Global Industrial and Specialty gases, Global Industrial Analysts Inc., PRweb, (www. strategyR. com), retrieved March 17, 2013.

Global Industrial Gas Market Trends, Draedal research, (www. researchandmarkets. com), retrieved april, 2013.

World Industrial Gases to 2014, Freedonia group, (www. freedoniagroup. com), retrieved August, 2010.

New Economic Trends, Industrial Medical and Specialty Gases Journal, Cryogas international, (www. cryogasinternational. com), retrieved march 2012.

Projects On Industrial Gases, NIIR project consultancy services, (www. npcs. com), retrieved april 2013.

Industrial Gas Products, Industrial Gas company India, (www. industrialgasco. com), retrieved april 2013.

List of Industrial Gas companies, Industrial Gas, Wikipedia, (www. wikipedia. org), retrieved april 2013.

Products and Services, Emirates Industrial Gases company llc., (www. eigc. com), retrieved april 2013.

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