

Oxygen and Nitrogen Gas Plant -

*Manufacturing Plant, Detailed Project
Report, Profile, Business plan, Industry
Trends, Market research, Survey,
Manufacturing Process, Machinery, Raw
Materials, Feasibility study, Investment
Opportunities, Cost and Revenue*

Introduction

Liquid oxygen must be handled with all the precaution required for safety with any cryogenic fluid. Gaseous Oxygen is authorized for shipment in cylinders, tank, and car and tube trailers. Liquid Oxygen is shipped as a cryogenic fluid in insulated cylinders, insulated tank trucks and insulated tank cars.



Gaseous Nitrogen is non-corrosive and inert and may consequently be contained in a system constructed of any common metals and designed to withstand safely the pressure involved. At the temperature of liquid nitrogen, ordinary carbon steels and most alloy steels lose their ductility and are considered unsatisfactory for liquid nitrogen service.

Uses and Applications

Applications of Oxygen include: It is used extensively in medicine for therapeutic purposes, for resuscitation in asphyxia and with other gases in anaesthesia. It is also used in high altitude flying, deep sea diving, and as both an inhalant and power source in U.S. space program.

Industrial applications include its very wide utilization with acetylene, hydrogen and other fuel gases for such purposes as metal cutting, welding, hardening, scaring, cleaning and dehydrating. Oxygen helps increase the capacity of steel and iron furnaces on growing scale in the steel industry.

One of its major uses is in the production of synthesis gas from coal, natural gas or liquid fuel. Synthesis gas is in turn use to make gasoline, methanol and ammonia. Oxygen is similarly employed in manufacturing some acetylene through partial oxidation of the hydrocarbons in methane. It is also used in the production of nitric acid, ethylene and other compounds in the chemical industry.

Applications of Nitrogen include: Agitation of colour film solution in photographic processing, blanketing of oxygen sensitive liquids, and of volatile liquid chemicals, The deaeration of oxygen sensitive liquids, The degassing of non ferrous metals, It is used in food processing and packing, Inhibition of aerobic bacteria growth, Magnesium reduction of aluminium scrap,

Pressurization of air craft tires and emergency bottles to open landing gear,
Purging and filling of electronic devices,
The purging and fillings of pipelines and related instruments and the treatment of alkyd resins in the paint industry etc.

Market Survey

The industrial gases industry covers several products: oxygen, nitrogen, dissolved acetylene, argon, carbon dioxide, helium and hydrogen. These find applications in various industries, such as steel, light and heavy engineering, petrochemicals and fertilisers, chemicals and pharmaceuticals and food processing, besides metal cutting and welding.

Oxygen is a vital requirement in medicare. Steel and downstream industries use nearly three-fourths of the output. Unlike western countries, where the industrial gases are mostly produced by gas companies and supplied to large industrial consumers, in India, most of the large consumers of gases have set up their own captive plants.

With the expansion in steel, petrochemicals, automobiles and glass Industries, the demand for merchant gas market is on the rise. Accordingly, the industry is structured into two broad segments: (a) the captive units set up by the users or by a gas producing company at the site of the user; and (b) the independent market producers supplying gas in bulk or in cylinders to the users.

Few Indian Major Players are as under

- **Ahmedabad Gases Ltd.**
- **Arrow Oxygen Ltd.**
- **Arvin Liquid Gases Ltd.**
- **Asiatic Gases Ltd.**
- **Bhagawati Oxygen Ltd.**
- **Bhilai Oxygen Ltd.**
- **Bhuruka Gases Ltd.**
- **Bombay Oxygen Corpn. Ltd.**

- **Corporate Ispat Alloys Ltd.**
- **Ellenbarrie Industrial Gases Ltd.**
- **Fertilisers & Chemicals, Travancore Ltd.**
- **Godawari Power & Ispat Ltd.**
- **Govind Poy Oxygen Ltd.**
- **Hilltone Software & Gases Ltd.**
- **Hindustan Oxygen Gas Co. Ltd.**
- **I L A C Ltd.**
- **India Glycols Ltd.**

- **Indian Oil Corpn. Ltd.**
- **Inox Air Products Ltd.**
- **Ispat Metallics India Ltd. [Merged]**
- **Linde India Ltd.**
- **Madhav Industries Ltd.**
- **Maharshi Commerce Ltd.**
- **Mapro Industries Ltd.**
- **Modi Industries Ltd.**
- **National Oxygen Ltd.**
- **P V P Ltd. [Merged]**

- **Paushak Ltd. [Merged]**
- **Premier Cryogenics Ltd.**
- **Pushya Industrial Gases Ltd.**
- **Saraogi Oxygen Ltd.**
- **Southern Gas Ltd.**
- **Superior Air Products Ltd. [Merged]**
- **Travancore Oxygen Ltd.**
- **Vijaya Oxygen Co. Ltd.**
- **Vikas Industrial Gases Ltd.**
- **West Coast Industrial Gases Ltd.**

Project at a Glance

PROJECT AT A GLANCE				(Rs. in lacs)			
COST OF PROJECT				MEANS OF FINANCE			
Particulars	Existing	Proposed	Total	Particulars	Existing	Proposed	Total
Land & Site Development Exp.	0.00	35.00	35.00	Capital	0.00	71.65	71.65
Buildings	0.00	32.20	32.20	Share Premium	0.00	0.00	0.00
Plant & Machineries	0.00	105.41	105.41	Other Type Share Capital	0.00	0.00	0.00
Motor Vehicles	0.00	8.00	8.00	Reserves & Surplus	0.00	0.00	0.00
Office Automation Equipments	0.00	69.50	69.50	Cash Subsidy	0.00	0.00	0.00
Technical Knowhow Fees & Exp.	0.00	15.00	15.00	Internal Cash Accruals	0.00	0.00	0.00
Franchise & Other Deposits	0.00	0.00	0.00	Long/Medium Term Borrowings	0.00	214.96	214.96
Preliminary & Pre-operative Exp	0.00	2.00	2.00	Debentures / Bonds	0.00	0.00	0.00
Provision for Contingencies	0.00	10.00	10.00	Unsecured Loans/Deposits	0.00	0.00	0.00
Margin Money - Working Capital	0.00	9.51	9.51				
TOTAL	0.00	286.62	286.62	TOTAL	0.00	286.62	286.62

Project at a Glance

Year	Annualised		Book Value	Debt	Dividend	Retained Earnings		Payout	Probable Market Price	P/E Ratio	Yield Price/ Book Value
	EPS	CEPS				Per Share					
	Rs	Rs	Rs	Rs	Rs	%	Rs	%	Rs		%
1-2	4.18	8.41	14.18	24.00	0.00	100.00	4.18	0.00	4.18	1.00	0.00
2-3	6.99	10.68	21.18	18.00	0.00	100.00	6.99	0.00	6.99	1.00	0.00
3-4	9.75	12.97	30.92	12.00	0.00	100.00	9.75	0.00	9.75	1.00	0.00
4-5	12.42	15.24	43.34	6.00	0.00	100.00	12.42	0.00	12.42	1.00	0.00
5-6	14.98	17.47	58.32	0.00	0.00	100.00	14.98	0.00	14.98	1.00	0.00



Project at a Glance

Year	D. S. C. R.			Debt / - Deposits Debt	Equity as- Equity	Total Net Worth	Return on Net Worth	Profitability Ratio					Assets Turnover Ratio	Current Ratio
	Individual	Cumulative	Overall					GPM	PBT	PAT	Net Contribu- tion	P/V Ratio		
	(Number of times)			(Number of times)		%	%	%	%	%	%			
Initial				3.00	3.00									
1-2	1.26	1.26		1.69	1.69	1.84		33.59%	16.43%	12.15%	243.02	98.54%	0.90	0.72
2-3	1.54	1.39		0.85	0.85	0.96		39.63%	26.10%	17.41%	283.45	98.51%	1.01	1.29
3-4	1.88	1.54	1.88	0.39	0.39	0.47		43.75%	32.90%	21.24%	323.95	98.51%	1.04	2.10
4-5	2.29	1.71		0.14	0.14	0.20		46.57%	37.78%	24.05%	364.44	98.51%	1.01	3.11
5-6	2.78	1.88		0.00	0.00	0.05		48.49%	41.29%	26.12%	404.93	98.51%	0.95	12.76



Project at a Glance

BEP

BEP - Maximum Utilisation Year	5
Cash BEP (% of Installed Capacity)	53.70%
Total BEP (% of Installed Capacity)	58.09%

IRR, PAYBACK and FACR

Internal Rate of Return .. (In %age)	23.34%
Payback Period of the Project is (In Years)	2.814 Years
Fixed Assets Coverage Ratio (No. of times)	2.570



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Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*



What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Technology Books and Directory*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*



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- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*



Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

Who do we serve?

- *Public-sector Companies*
- *Corporates*
- *Government Undertakings*
- *Individual Entrepreneurs*
- *NRI's*
- *Foreign Investors*
- *Non-profit Organizations, NBFC's*
- *Educational Institutions*
- *Embassies & Consulates*
- *Consultancies*
- *Industry / trade associations*



Sectors We Cover

- *Ayurvedic And Herbal Medicines, Herbal Cosmetics*
- *Alcoholic And Non Alcoholic Beverages, Drinks*
- *Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin*
- *Activated Carbon & Activated Charcoal*
- *Aluminium And Aluminium Extrusion Profiles & Sections,*
- *Bio-fertilizers And Biotechnology*
- *Breakfast Snacks And Cereal Food*
- *Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling*



Sectors We Cover *Cont...*

- *Bamboo And Cane Based Projects*
- *Building Materials And Construction Projects*
- *Biodegradable & Bioplastic Based Projects*
- *Chemicals (Organic And Inorganic)*
- *Confectionery, Bakery/Baking And Other Food*
- *Cereal Processing*
- *Coconut And Coconut Based Products*
- *Cold Storage For Fruits & Vegetables*
- *Coal & Coal Byproduct*

Sectors We Cover *Cont...*

- *Copper & Copper Based Projects*
- *Dairy/Milk Processing*
- *Disinfectants, Pesticides, Insecticides, Mosquito Repellents,*
- *Electrical, Electronic And Computer based Projects*
- *Essential Oils, Oils & Fats And Allied*
- *Engineering Goods*
- *Fibre Glass & Float Glass*
- *Fast Moving Consumer Goods*
- *Food, Bakery, Agro Processing*

Sectors We Cover *Cont...*

- *Fruits & Vegetables Processing*
- *Ferro Alloys Based Projects*
- *Fertilizers & Biofertilizers*
- *Ginger & Ginger Based Projects*
- *Herbs And Medicinal Cultivation And Jatropha (Biofuel)*
- *Hotel & Hospitality Projects*
- *Hospital Based Projects*
- *Herbal Based Projects*
- *Inks, Stationery And Export Industries*

Sectors We Cover *Cont...*

- *Infrastructure Projects*
- *Jute & Jute Based Products*
- *Leather And Leather Based Projects*
- *Leisure & Entertainment Based Projects*
- *Livestock Farming Of Birds & Animals*
- *Minerals And Minerals*
- *Maize Processing(Wet Milling) & Maize Based Projects*
- *Medical Plastics, Disposables Plastic Syringe, Blood Bags*
- *Organic Farming, Neem Products Etc.*

Sectors We Cover *Cont...*

- *Paints, Pigments, Varnish & Lacquer*
- *Paper And Paper Board, Paper Recycling Projects*
- *Printing Inks*
- *Packaging Based Projects*
- *Perfumes, Cosmetics And Flavours*
- *Power Generation Based Projects & Renewable Energy Based Projects*
- *Pharmaceuticals And Drugs*
- *Plantations, Farming And Cultivations*
- *Plastic Film, Plastic Waste And Plastic Compounds*
- *Plastic, PVC, PET, HDPE, LDPE Etc.*

Sectors We Cover *Cont...*

- *Potato And Potato Based Projects*
- *Printing And Packaging*
- *Real Estate, Leisure And Hospitality*
- *Rubber And Rubber Products*
- *Soaps And Detergents*
- *Stationary Products*
- *Spices And Snacks Food*
- *Steel & Steel Products*
- *Textile Auxiliary And Chemicals*

Sectors We Cover *Cont...*

- *Township & Residential Complex*
- *Textiles And Readymade Garments*
- *Waste Management & Recycling*
- *Wood & Wood Products*
- *Water Industry(Packaged Drinking Water & Mineral Water)*
- *Wire & Cable*



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