Manufacturing of Pig Iron

Investment Opportunity in Steel and Iron Sector.

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Pig iron is the product of smelting iron ore (also ilmenite) with a high-carbon fuel and reductant such as coke, usually with limestone as a flux. Charcoal and anthracite are also used as fuel and reductant. Pig iron is produced by smelting or iron ore in blast furnaces or by smelting ilmenite in electric furnaces.
Pig iron is an intermediate product of the iron industry also known as crude iron, which is obtained by smelting iron ore in a blast furnace. When the metal had cooled and hardened the smaller ingots (the pigs) were simply broken from the runner (the sow) hence the name pig iron. Pig iron types are used to dilute all the elements in ductile iron which is a harmful process. Pig iron contains low residual, lower nitrogen steel, has a consistent chemistry, promote slag conditions and improve process control.
There are three types of merchant pig iron, which are as follows: Basic pig iron is used in electric arc furnace for the purpose of steel making. Foundry pig iron this type of pig iron is also known as hematite pig iron and is used in cupola furnaces for grey iron castings. Pig iron is used for making steel and pure iron units. It has very high carbon content along with silica and another constituent of dross. Pig iron made from smelting iron indulges with the high amount of carbon for further processing steps.
Market Outlook

Pig iron prices in India's domestic market have crashed to Rs 21,000 ($460) per tonne from around Rs 31,000 per tonne a month ago.

The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Consequently, the steel sector has been a major contributor to India’s manufacturing output.

The Indian iron industry is very modern with state-of-the-art steel mills. It has always strived for continuous modernization and up-gradation of older plants and higher energy efficiency levels. Indian steel industries are classified into three categories such as major producers, main producers and secondary producers.
Iron & Steel Industry in India

- **Robust Demand**
  - India’s finished steel consumption is anticipated to increase to 230 MT by 2030-31\(^{\star}\) from 90.68 MT in 2017-18. Demand would be supported by growth in the domestic market.

- **Increasing Investments**
  - The industry is witnessing consolidation of players which has led to investments by entities from other sectors. The ongoing consolidation also presents an opportunity to global players to enter the Indian market.

- **Policy Support**
  - National Steel Policy (NSP) 2017 implemented to encourage the industry to reach global benchmarks

- **Competitive Advantage**
  - Easy availability of low-cost manpower and presence of abundant iron ore reserves make India competitive in the global set up.
Global iron & steel market is expected to witness rapid growth owing to strong demand from construction and transportation sector. Rapid industrialization and urbanization, particularly in the emerging regions such as Asia Pacific and Central & South America are expected to drive the overall iron & steel market.

Growing demand from the building and construction industry owing to rapid infrastructure initiatives undertaken by governments especially in the emerging regions is projected to aid in industry growth. Building & construction industry is the dominant end-use industry for this market followed by automotive & transportation. Emerging economies such as Brazil, China, Russia, and India have witnessed rapid automotive demand owing to factors such as rising disposable income, rapid urbanization, and increase in population. This trend is presumed to continue, and thus, assist the regional market in the near future.
Environmental concerns regarding excessive mining have resulted in several regulations being implemented to curb mining. Emerging economies such as China, which is the largest consumer of steel, has witnessed government regulations mandating steel companies to limit its production in a bid to reduce mining. Such regulatory framework is anticipated to hamper the regional as well as global market.

China has witnessed brisk demand growth in the recent past. This growth has encouraged several industry participants to increase their production capacity in a bid to meet the demand. However such rapid growth in production capacities has resulted in chronic overcapacity which has driven down prices. Any impact in the Chinese market cascades across the global market as China is the largest consumer and producer of steel. The 'Global and Chinese Pig iron Industry 2013-2023 Market. Steel is crucial to the development of any modern economy and is considered to be the backbone of human civilization.
The level of per capita consumption of steel is treated as an important index of the level of socio-economic development and living standards of the people in any country. Steel is a product of a large and technologically complex industry having strong forward and backward linkages and all major industrial economies have been largely shaped by the strength of their steel industries. India’s economic growth is dependent on the growth of the Indian steel Industry. Steel continues to have a stronghold in traditional sectors such as construction, Housing and Roads, special steels are increasingly being used in engineering industries such as power generation, petrochemicals and fertilizers. India occupies a central position on the global steel map, with state-of-the-art steel mills, acquisition of global scale capacities by players, continuous modernization and upgradation of older plants, improving energy efficiency and backward integration with global raw material sources.
**Key Players**

- Bridon International Ltd.,
- ArcelorMittal S.A.,
- Kobe Steel Ltd.,
- Insteel Industries Inc.,
- N.V. Bekaert SA,
- Steel Authority of India Ltd.
- POSCO, Tata Steel Ltd.,
- Rio Tinto,
- BHP,
- Vale,
- Tree Island Industries Ltd.,
- Leggett & Platt Incorporated
Major Queries/Questions Answered in the Report?

1. What is Pig Iron Manufacturing industry?

2. How has the Pig Iron Manufacturing industry performed so far and how will it perform in the coming years?

3. What is the Project Feasibility of Pig Iron Manufacturing Plant?

4. What are the requirements of Working Capital for setting up Pig Iron Manufacturing plant?
5. What is the structure of the Pig Iron Manufacturing Business and who are the key/major players?

6. What is the total project cost for setting up Pig Iron Manufacturing Business?

7. What are the operating costs for setting up Pig Iron Manufacturing plant?

8. What are the machinery and equipment requirements for setting up Pig Iron Manufacturing plant?
9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Pig Iron Manufacturing plant?

10. What are the requirements of raw material for setting up Cement Manufacturing plant?

11. Who are the Suppliers and Manufacturers of Raw materials for setting up Pig Iron Manufacturing Business?

12. What is the Manufacturing Process of Pig Iron?
13. What is the total size of land required for setting up Pig Iron Manufacturing plant?

14. What will be the income and expenditures for Pig Iron Manufacturing Business?

15. What are the Projected Balance Sheets of Pig Iron Manufacturing plant?

16. What are the requirement of utilities and overheads for setting up Pig Iron Manufacturing plant?

17. What is the Built up Area Requirement and cost for setting up Pig Iron Manufacturing Business?
18. What are the Personnel (Manpower) Requirements for setting up Pig Iron Manufacturing Business?

19. What are Statistics of Import & Export for Pig Iron?

20. What is the time required to break-even of Pig Iron Manufacturing Business?

21. What is the Break-Even Analysis of Pig Iron Manufacturing plant?

22. What are the Project financials of Pig Iron Manufacturing Business?
23. What are the Profitability Ratios of Pig Iron Manufacturing Project?

24. What is the Sensitivity Analysis-Price/Volume of Pig Iron Manufacturing plant?

25. What are the Projected Pay-Back Period and IRR of Pig Iron Manufacturing plant?

26. What is the Process Flow Sheet Diagram of Pig Iron Manufacturing project?
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29. What is the Plant Layout for setting up Pig Iron Manufacturing Business?
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Reasons for Buying our Report:

• This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product

• This report provides vital information on the product like it’s characteristics and segmentation

• This report helps you market and place the product correctly by identifying the target customer group of the product
• This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials

• The report provides a glimpse of government regulations applicable on the industry

• The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions
Our Approach:

• Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.

• The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players.

• We use reliable sources of information and databases. And information from such sources is processed by us and included in the report.

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Scope of the Report

The report titled “Market Survey cum Detailed Techno Economic Feasibility Report on Pig Iron.” provides an insight into Pig Iron market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Pig Iron project. The report assesses the market sizing and growth of the Indian Pig Iron Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:
• Good Present/Future Demand
• Export-Import Market Potential
• Raw Material & Manpower Availability
• Project Costs and Payback Period

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in the Pig Iron sector in India along with its business prospects. Through this report we have identified Pig Iron project as a lucrative investment avenue.
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Detailed Project Reports

NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.

Our Market Survey cum Detailed Techno Economic Feasibility Report provides an insight of market in India. The report assesses the market sizing and growth of the Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.
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The detailed project report covers all aspect of business, from analyzing the market, confirming availability of various necessities such as 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, Plant Economics, Production Schedule,
Working Capital Requirement, uses and applications, Plant Layout, Project Financials, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis. The DPR (Detailed Project Report) is formulated by highly accomplished and experienced consultants and the market research and analysis are supported by a panel of experts and digitalized data bank.

We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in India along with its business prospects......Read more
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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
We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.
We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.
What do we offer?

- Project Identification
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- Business Plan
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- Databases on CD-ROM
- Laboratory Testing Services
- Turnkey Project Consultancy/Solutions
- Entrepreneur India (An Industrial Monthly Journal)
How are we different?

- 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
Contact us

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