Introduction

An electrode is a metal wire that is coated. It is made out of materials with a similar composition to the metal being welded. Welding electrodes are installed in the weld head to touch and maintain contact with the work pieces through the full weld schedule. The welding electrodes play three different roles in resistance welding: maintaining uniform current density, concentrating current at welding points, and maintaining thermal balance during welding.
Welding electrodes are used for Arc welding purposes. The electrode is coated with the flux. Although electrodes are produced in different gauges, for the purpose of calculation for financial implications of technical details, the assumption has been made for the production of electrodes of 4mm diacore rods. The electrodes are used for fabrication work for joining the steel, alloy steel and cast iron parts for hard facing of jobs etc.
Welding is used to joining two or more metals or thermoplastics permanently with help of coalescence. Many energy sources are used for weldings such as molten metal baths, electric arcs, gas flames, electric resistance, friction, lasers and ultrasound. There are solid states welding processes like friction welding or shielded active gas welding which is widely applied because in these processes metal does not melt. Welding products are used in various end-user industries like marine, building & contractions, automobile, offshore and others.
Market Outlook

On the basis of welding consumables, the global welding consumables market can be segmented into stick electrodes, solid wires, flux cored wires, SAW wires & fluxes, and others. The stick electrodes segment accounted for 40.5% value share in 2016 and is expected to expand at a significant CAGR over the forecast period. On the basis of application, the global welding consumables market can be segmented into automotive & transportation, building & construction, marine applications, and others.
The building & construction segment accounted for 16.8% value share in 2016 and is expected to expand at a CAGR of 5.9% over the forecast period, due to increasing building and construction activities in emerging countries such as China and India.

The welding industry in India comprises various large, medium and small companies that manufacture welding consumables.
Global Welding Consumables Market Value, By Welding Consumables, 2017 (US$ Mn)

5,691.6 (US$ Mn)
Stick Electrodes

2017-2027 at a CAGR of 5.7%

Other types of welding consumables are also highlighted in the diagram.
Demand for welding consumables is directly proportional to steel production in the country. End-use industries such as transportation, building & construction, oil & gas, and power are likely to drive the welding consumables market in India in the near future. However, factors such as inconsistent supply of quality raw materials, shortage of skilled labor and competition from international companies may hamper market growth during the forecast period.

Welding stick
Welding stick electrodes dominated the welding consumables market in India. Stick electrodes are primarily used in manual welding and are a low cost alternative to other types of welding consumables products. The demand for welding consumables in India is likely to experience strong growth owing to the incessant advancements in technology and extensive growth of the end-use industries. The Indian welding consumables market is likely to rise at a 5.6% CAGR between 2014 and 2020. The market was worth INR 30.88 bn in 2013 and is likely to rise at a valuation of INR 45.37 bn by the end of 2020.
The global welding products market size was estimated at USD 11.82 billion in 2015 and is expected to witness significant growth over the forecast period. The factors can be attributed to rising demand from key application segments such as building and construction, transportation and automobiles, and marine.
During the period 2016 - 2025, the global market is expected to grow at a CAGR of 5.3% to reach USD 19.76 billion by 2025. This growth can be credited to rapid urbanization and infrastructure development especially from emerging economies such as India, China, and others. Asia Pacific and Europe together account for more than 53% of global market size. Rapid infrastructural development and technological advancements in the automotive industry are expected to encourage demand over the forecast period.
U.S. Welding Products Market, By Product,

2013-2025 (USD Million)
## Cost Estimation:

**Capacity:** 1200 MT/Annum (Welding Rods)

**Plant and Machinery cost:** 21 Lakhs

**Cost of Project:** 165 Lakhs

**Rate of Return (ROR):** 49%

**Break Even Point (BEP):** 40%
1. What is Welding Electrode Manufacturing industry?

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

3. What is the Project Feasibility of Welding Electrode Manufacturing Plant?

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

6. What is the total project cost for setting up Welding Electrode Manufacturing Business?

7. What are the operating costs for setting up Welding Electrode Manufacturing plant?

8. What are the machinery and equipment requirements for setting up Welding Electrode Manufacturing plant?
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10. What are the requirements of raw material for setting up Welding Electrode Manufacturing plant?

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

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• Good Present/Future Demand
• Export-Import Market Potential
• Raw Material & Manpower Availability
• Project Costs and Payback Period

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