Low Cost Carbon Fiber — Technology and Market Assessment

Case Study

FutureBridge

Case study: Business case and solution

Low Cost Carbon Fiber

Client	A leading R&D institute (consortia of major chemical and automotive companies)
Industry	Advanced materials
Products	Carbon fiber

Context

- Client is a member of a consortium, formed with the objective of developing low cost carbon fibers; therefore, it wanted to constantly track this area to stay ahead of the curve, and at the same time monitor how other entities across the globe are approaching the goal of low cost carbon fiber production

Key Business Questions

- What is the level of technology development w.r.t. low cost precursors such as lignin, cellulose, and polyolefin?
- What is the strategic intent of companies operating / or planning to enter in its development?

Engagement Scope

1 Technology Identification and Assessment

- Identified technological developments related to production of low cost carbon fibers – precursor/ stabilization/ carbonization/ treatment/ sizing
- Identified the technological developments to tackle challenges related to performance, weight reduction and manufacturing cost of carbon fibers

2 Precursor Production Strategies

- Identified technological developments for alternative precursors, new methods addressing the issues in the conventional process, optimization of production process, etc.
- Benchmarked production strategies (using textile grade PAN precursor) of the industry peers to achieve cost efficiencies

3 Competitor Comparison and Market Analysis

- Identified competitor working on the low cost carbon fiber production technology and assessed their activity in this domain
- Identified strategies adopted by competitors to keep the prices low
- Conducted market analysis highlighting potential end markets for low cost carbon fibers

4 Key Findings and Conclusions

- Benchmarked production strategies (using textile grade PAN precursor) of the industry peers to achieve cost efficiencies
- Highlighted potential application areas for low cost carbon fiber that are likely to grow in near future

Case study: Methodology and benefits to client

Low Cost Carbon Fiber

Research Methodology

Secondary Research

- Conducted desk research to identify different production technologies employed by competitors/ institutes
- Referred paid databases and identified patents for extensive coverage

Primary Research

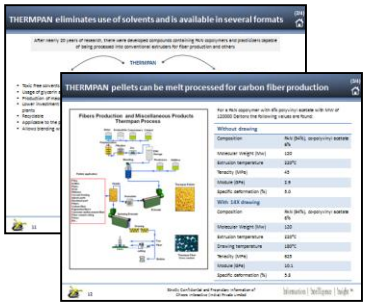
- Conducted 10+ telephonic interview to gain opinion of industry experts

Benefits to Client

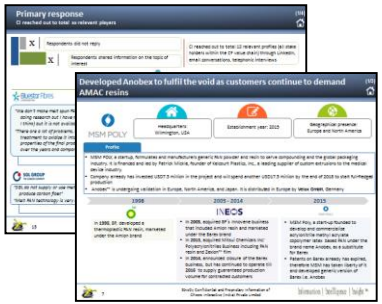
- Insights around the technological developments helped Client to tackle challenges related to performance, weight reduction and manufacturing cost
- Assessment of players working in this domain helped the Client to understand key innovative features of their technologies and development status

Sample Analysis

1 Technology Identification and Assessment

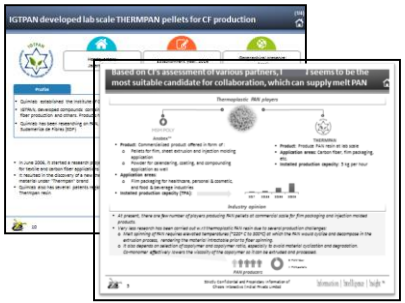


2 Precursor Production Strategies



3 Competitor Comparison and Market Analysis

4 Key Findings and Conclusions



Thank you

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