NASENI
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PEDI

A PROPOSAL FOR THE PRODUCTION OF BRAKE PADS FOR VEHICLES USING BASALT

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PROBLEM

Traditionally, brake pads have been manufactured using composite materials comprising metals, asbestos, aramids and various synthetic fibers. These health hazards associated with these asbestos and environmental concerns related to synthetic fibers necessitated exploration of alternative eco-friendly reinforcement materials.

SOLUTION

WHY BASALT?

- Longer service life
- Wider working temperature range (450º C- 1300ºC)
- Chemical resistance
- Eco-friendliness
- Improved wear resistance
- Stable friction
- High strength and stability
- Good bonding and adhesion
- Natural availability in most states of Nigeria

MARKET OPPORTUNITY

Size of the Market: There are over thirteen million vehicles in Nigeria under different categories (private, public, commercial and fleet)

Growth Trends: There will be steady demand for alternative to asbestos brake pads as awareness of the health benefit increases.

Why this Market is Attractive: Basalt brake pads are eco-friendly and non-carcinogenic and are such better alternative to asbestos brake pads mostly used in Nigeria.

PRODUCT TECHNOLOGY

- Standard dry-mix molding process
- Blending large mechanical mixer
- Pre-forming
- Hot Pressing and Molding
- Post-curing (Baking)

BUSINESS MODEL

Collaboration with National Union of Road Transport Workers (NURTW), Road Transport Employers Association of Nigeria, Nigeria Spare Parts Dealer Association of Nigeria and National Automotive Design Council. We project total sales of thirteen million units of brake pads at four thousand five hundred naira per unit (₦4,500) at wholesales and five thousand naira (₦5,000) per unit at retail.

Pricing Strategy: Each unit of brake pads will be sold at four thousand three hundred naira (₦4,300) for bulk buyers buying over two thousand pieces at once. Customers with strong credit worthiness and broad market base to get products at reasonable initial deposit.

TRACTION

CURRENT PROGRESS

Currently on Research partnership with National Automotive Design and Development Council (NADDC) Obafemi Awolowo University, IFE and Federal University of Technology, Akure.

COMPETITION

- Importation of asbestos brake pads posses a major threat in production of brake pads.
- This project leverage on availability of raw material, physical and chemical composition benefits of BASALT as the major strength in production.
- Support for home grown development in line with government policies play vital role in project development

GO-TO-MARKET STRATEGY

- Public Advertisement and Government engagement in policy formulation to support local production
- Marketing and Sales Channels
    1. Online Website development for sales
    2. Online advertisement through third party websites/apps (e.g. youtube, Instagram etc)
- Partnership or Distribution Plans: Collaboration with NURTW, RTEAN, Fleet Operators, with incentivized packages

FINANCIAL PROJECTIONS

Year	Unit Sold	Revenue	Cost of goods per unit sold	Gross Profit	Cost of Production	Net Profit
1	50,000	250,000,000	500	225,000,000	150,000,000	75,000,000
2	70,000	350,000,000	500	315,000,000	210,000,000	105,000,000
3	80,000	400,000,000	500	360,000,000	240,000,000	120,000,000
4	100,000	500,000,000	500	450,000,000	300,000,000	150,000,000

FINANCIAL PROJECTIONS Cont.

- **Key Assumptions**

4 pieces of brake pads (1 set)

Production Capacity: 50,000 Units

Cost of Production per unit: ₦3,500

Sales Price per unit: ₦5,000

Profit Margin: ₦75,000,000

- **Breakeven Analysis**

Cost of Production: ₦175,000,000

Projected Revenue: ₦250,000,000

Breakeven point: 15,000 Units

FOUNDERS AND KEY TEAM MEMBERS

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