Industrial Investment Opportunities

Extruded Aluminum Components of EVs

UNITED ARAB EMIRATES
MINISTRY OF INDUSTRY
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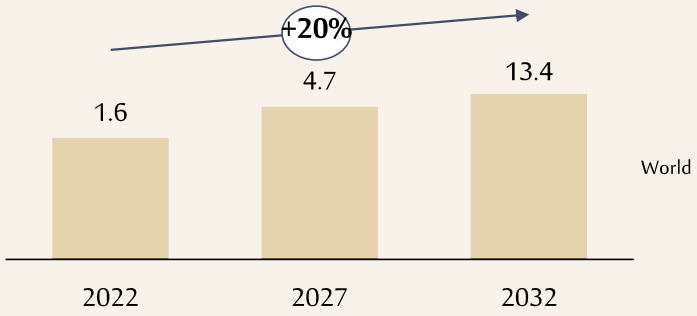
Extruded Aluminum Components of EVs

The Aluminum Extrusion plant is to produce specific aluminum-based Electric Vehicle components: EV Battery Cell, Sunroof Frame, Vehicle Body, Chassis & Sub assembles, Sill & Rockers, Front, and Rear bumpers

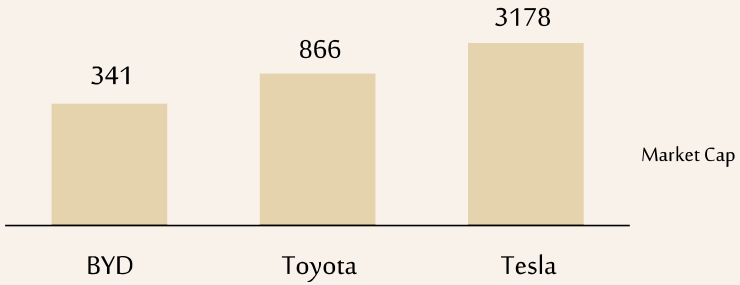
Investment case

- Setup a large-scale an Aluminum Extrusion plant for specific Electric Vehicle components in UAE
- Investment size = AED 149 Mn
- Plant capacity = 15,000T per year
- Expected IRR = 15%
- Expected NPV = AED 67.6 Mn

Global Market Size 2022 – 2032 (Tn AED)



Top 3 Automobile Companies 2022 (Bn AED)



Global trends & demand drivers

- Supportive regulatory frameworks: countries are strengthening key policies such as CO2 emissions standards and zero-emission vehicle (ZEV) mandates
- Electric Vehicle uses directly contributes to the reduction of environmental pollution and lessening dependency on oil
- Despite being more expensive than steel, the automobile industry is prepared to accept price due to the sheer scale of potential sales driven by its significant weight benefits
- Technological advancement in battery efficiency will drive adoption and the use of aluminum in manufacturing electric vehicles is a key to increasing efficiency.
- Estimated use of aluminum used in electric vehicles is 30% higher than in internal combustion engine cars

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Value Chain Analysis

- UAE produces some of the most price-competitive aluminum globally.
- Plant will be downstream of aluminum billet manufacturers; i.e., EGA.

- Each project component is 'fit to purpose' set within the vehicle architecture

- Global automotive safety requirements rely heavily on the supply chain to maintain material chemical composition flexibility and quality manufacturers.

- Provide customers with peace of mind as a "one-stop-shop" for a fully finished component, ready for assembly into vehicles around the world. manufacturers.

- 3x lighter than comparable steel components.
- Directly increases vehicle battery efficiency and range.

- Suitable packaging to ensure safe transit of components around the globe.

High localization in UAE | Mid localization in UAE | Limited localization in UAE

Value proposition

- EV's are the future of the automobile industry companies Battery range is at the forefront of EV innovation
- Automobile weight is inversely correlated to vehicle efficiency and range
- Aluminium weighs about one third of steel per cubic foot.
- Source locally cost competitive aluminium billets
- Up to 40% of vehicle can be manufactured using aluminium
- Produce custom-made extruded components for an ultra high growth market
- Leverage a thriving local aluminium ecosystem and create downstream synergy
- Expected increase in demand for EV aluminium components due to establishment of multiple EV production facilities across the region

Enabling Entities

- **KIZAD**: Leverage upstream and downstream synergies within the ecosystem
- **Khalifa Port**: Plant to serve global customers mainly, strategic and efficient supply chain is critical as well as global accessibility
- **EDB**: Competitive price of debt capital will help make the investment opportunity more attractive
- **EGA**: Partnering up with a major aluminum manufacturer will create major competitive advantages
- **MoIAT**: Downstream of existing aluminum billet manufacturers