

Titanium Midstream Melt & Forge
INVESTMENT OPPORTUNITY
Aerospace

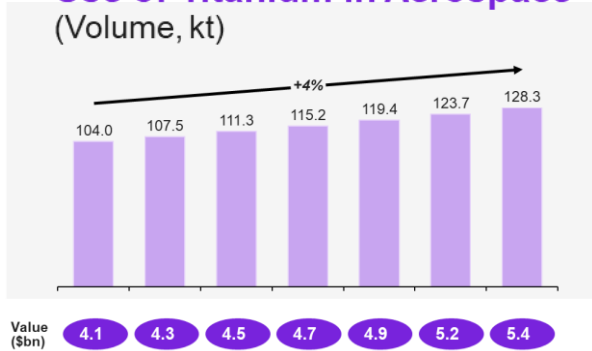


OPPORTUNITY DESCRIPTION: Complete the value chain for aerospace grade Titanium

DEMAND

MARKET SIZE, USD

Use of Titanium in Aerospace (Volume, kt)



KEY DEMAND DRIVERS

- Various titanium alloys are used in aircraft manufacturing – with their use expected to continue going forward
- Geopolitics forcing OEMs to look for alternative sources presenting a unique opportunity for KSA

INVESTMENT OVERVIEW

INVESTMENT HIGHLIGHTS

- Expected Investment size of USD: \$350Mn
- Plant capacity: 8.5 ktpa
- Expected IRR: 14%
- Payback period: 7 years
- Job Creation: 250 (by 2030)
- GDP Impact: \$930 Mn (by 2030)
- Location (Region): Yanbu (Western Region KSA)

VALUE PROPOSITION

- KSA produces Aerospace certified Titanium sponge with Plant capacity of 15ktpa
- Integration with existing facilities – Downstream integration with the AMIC sponge plant
- Sponge plant can be the supplier for melting & forging
- Downstream (precision machining) exists in KSA

MARKET OVERVIEW

RAW MATERIALS

- Titanium sponge
- Titanium scrap

GLOBAL TRENDS

- Shortage in Ti supply globally due to the Russia – Ukraine war.
- Aviation industry on a strong recovery trajectory driving demand for Titanium at 4% CAGAR

SUPPLY

SCALABILITY AND LOCALIZATION

Grade: Low Medium High

- Existence of Ti Sponge produced by AMIC / TOHO JV
- Downstream demand presented by SAMI/Figeac JV
- Pipeline of new orders for aircrafts

IMPORT DEPENDENCY

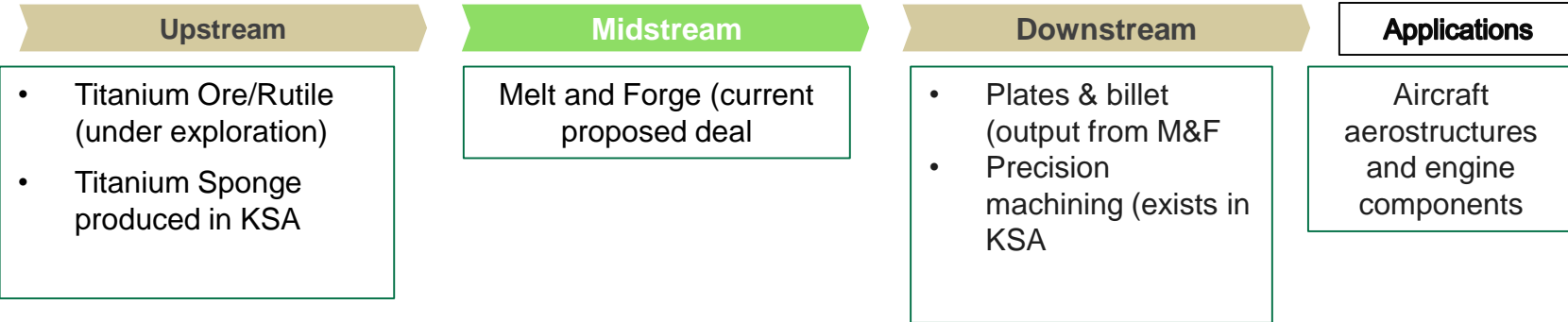
- This investment will allow KSA to be fully integrated and localized.
- Upstream supply is manufactured in KSA
- Rutile (raw material is available in KSA. Currently in mining exploration phase

ENABLING FACTORS

ENABLERS & INCENTIVES

- Leverage procurement obligations in Aerospace contracts and military off-sets
- Leverage future purchase power for commercial aircrafts to demand localization
- Regulatory requirement on new contracts to dictate use of locally produced Titanium
- Electricity tariff reduction at 11 halala /KWh

VALUE CHAIN



COST OF DOING BUSINESS IN KSA

Factor	Ranking amongst regional peers
Electricity tariffs for industrial players	\$48 /MWh
Productivity adjusted wages	\$3.3 /hour
Logistics Performance Index (1-5)	3.2
Construction Costs (Indexed to US, % 0 is cheapest)	74
Ease of getting credit (0-100)	50

KEY STAKEHOLDERS

Key Stakeholders include: Boeing, SAMI, Ministry of Investment, Saudi Exports, Ministry of Energy, Saudi Exim, Dussur, and various government and industrial entities.

DEFINITIONS

#	SCORECARD SECTION	DEFINITIONS
1	Market size	Size of market in value/volume in KSA and/or Region (MENA/GCC) covering future projections based on available estimates from published /government sources
2	Business drivers	A select number of factors that will influence future demand for the related product/service
3	Investment highlights	An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size
4	Value proposition	Summary of key differentiators that position KSA as a strategic choice over other regional/global peers
5	Market readiness	An overview of KSA market structure, market maturity and level of participation by local and global players
6	Global trends	Latest business developments within the sector/product category
7	Scalability and localization	Ease of scaling the business across the value chain or into new adjacent products or geographies that would maximize the opportunity's investment returns and the ability and potential to locally manufacture the product and its components
8	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
9	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
10	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
11	Enablers	Factors that enable investment in the underlying opportunity
12	Cost of doing business in KSA	Key factors that position KSA as a competitive destination for investment in the region. Productivity adjusted wages do not include cost of \$1.23/hour towards annual recurring charges including work permit, resident identity (iqama) and health insurance

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