

CLOSED DIE FORGING

INVESTMENT OPPORTUNITY SCORECARD

MINING & METALS

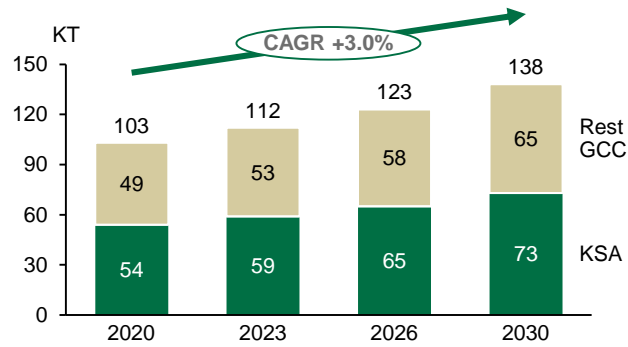


MINING & METALS CLOSED DIE FORGING

OPPORTUNITY'S DESCRIPTION: Establish a Closed Die forging and fabrication shop to produce several components in the energy sector

DEMAND

GLOBAL MARKET SIZE, KT



INVESTMENT HIGHLIGHTS

- Investment model: 100% private sector investment
- Investors have opportunity to leverage Saudi Aramco's commitment to facilitate and support localization of forging by connecting fabricators with large-scale local consumers

INVESTMENT OVERVIEW

VALUE PROPOSITION

- Mining and Metals Industry set to become the "third pillar" of the Saudi industrial base due to KSA's rich deposits of minerals
- KSA's geographical advantage and trade agreements with neighboring countries make exporting favorable
- First mover advantage given limited presence of large-scale local fabrication and lack of any next generation forging player in KSA
- KSA is working to develop sustainable and globally competitive value-added semi-finished and finished metal industries (downstream) that support the Kingdom's goals of diversification

KEY DEMAND DRIVERS

- Saudi Arabia account for 53% of the closed-die forging market in GCC
- Demand for forged metal components such as flanges, ball valves, gate valves, turbines, wellhead equipment and gears from the energy industry are predicted to grow at a stable pace over next 5 – 10 years
- High utilization of forged components in pumps is mainly due to increasing exploration and production activities in the oil and gas sector, and is expected to keep growing

MARKET OVERVIEW

GLOBAL TRENDS

- Global market size for closed die forging (also referred as impression die forging) reached ~USD 21.3 Bn in 2020, and is projected to reach ~USD 35 Bn by 2030, growing at a CAGR of 5.2%
- Closed die forging market is driven by the improving global economic conditions, innovations in components and manufacturing process, and developing end user industries
- Steel is the most used metal for closed die forging owing to its versatile properties that include ductility for load bearing components, high hardness for use as a cutting tool, malleability for machining, shaping & drilling operations, and high temperature resistance



MINING & METALS

CLOSED DIE FORGING

SUPPLY

SCALABILITY AND LOCALIZATION

Grade: Low Medium High

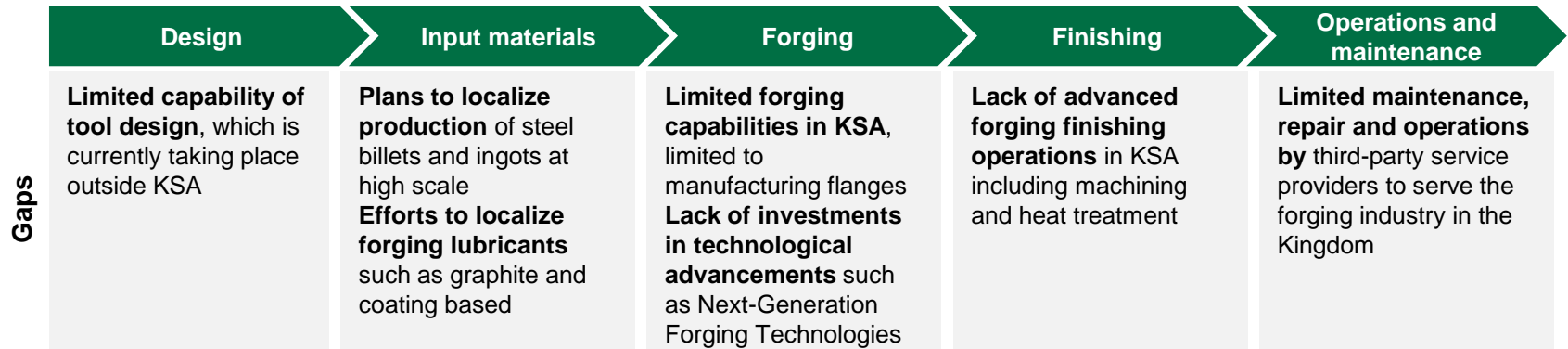
- Low cost of construction, labor wages and utility fees to support low capital and operating expense for the investor and enable extending geographic footprint within the region
- Easy and consistent availability of key raw material, for closed die forging such as metals (iron, steel and aluminum) and commonly used die material (chromium, tungsten and steel) in the Kingdom

IMPORT DEPENDENCY

- In 2018, KSA imported ~39 KT of Forging valued at ~USD 251 Mn (reported by GSTAT)
- Forgings in KSA are mostly imported from China, USA, EU and the UK

Source: GASTAT

VALUE CHAIN ANALYSIS



KEY STAKEHOLDERS



ENABLING FACTORS

ENABLERS

- Up to 75% of project financing by Saudi Industrial Development Fund (SIDF), with two-year grace period for the repayment of loans
- HRDF covers monthly salaries for 30-50% of Saudi employees (extra 10% for females) for 2 years, provided it does not exceed USD 4,000

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

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	Demand 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	Competitor analysis	List of the local & international players manufacturing the underlying product in Saudi Arabia and their market share
7	Global trends	Latest business developments within the sector/product category
8	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
9	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
10	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
11	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
12	Enablers	Factors that enable investment in the underlying opportunity
13	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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