

# MAGNESIUM METAL

## INVESTMENT OPPORTUNITY SCORECARD

### MINING & METALS



# MINING & METALS

## Magnesium Metal

Public / متاح

High Potential

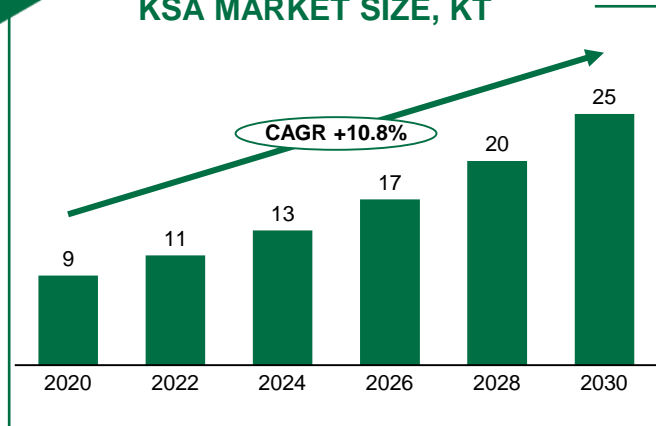
Moderate Potential

Low Potential

**OPPORTUNITY'S DESCRIPTION:** Develop a 30 ktpa magnesium metal plant to cater the domestic and regional demand

### DEMAND

#### KSA MARKET SIZE, KT



#### INVESTMENT HIGHLIGHTS

- Expected investment size of USD 108 Mn
- Plant capacity: 30 ktpa
- Payback Period: 10+ years

### 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
- 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
- In line with Saudi Vision 2030, KSA aims to maximize local production of magnesium and supply primary raw material to the local industries
- KSA has 10 Special Economic Zones (SEZ) and is planning to launch more, in line with the economic transformation agenda as a part of Vision 2030 program

#### KEY DEMAND DRIVERS

- Demand for magnesium metal is mainly driven by increased production of die-castings, aluminum alloys and titanium sponge
- The prime factors expected to drive the market growth for magnesium are the increasing demand in the aerospace sector and automotive sector to make die-castings for automotive components such as steering wheel cores, dashboards, and gearbox casings owing to its low weight and high compressive strength
- Automotive has been identified as one of the core sectors to support the Vision 2030 initiative of development of a sustainable manufacturing-based economy, for diversifying away from the oil sector

### MARKET OVERVIEW

#### GLOBAL TRENDS

- Global market for magnesium metal was valued at USD 3.5 Bn in 2019 and is expected to grow at a CAGR of 8.8% to reach USD 8.9 Bn by 2030. Increasing die casting requirements in automotive industry and various structural applications is projected to lead the market growth for magnesium
- Magnesium is mainly used in aluminum alloys (34% of global demand), magnesium die-castings (32% of global demand) and titanium sponge production (15% of demand). Other end-uses include steel desulphurization, iron casting and cathodic protection
- Magnesium is one of the lightest materials and has an excellent strength to weight ratio along with high thermal and electrical conductivity and the ability to withstand high operating temperatures. Due to these characteristics, magnesium alloyed with aluminum is used in various applications including vehicle parts, Radio Frequency Interference (RFI) and Electromagnetic Interference (EMI) shielding, electrical housings, and electrical connectors
- Asia Pacific accounted for a 51.0% market share for magnesium in 2019. Increasing automotive production in China and India are the long-term drivers for the growth in the magnesium market.



# MINING & METALS

## MAGNESIUM METAL

Public / متاح

### SUPPLY

#### SCALABILITY AND LOCALIZATION

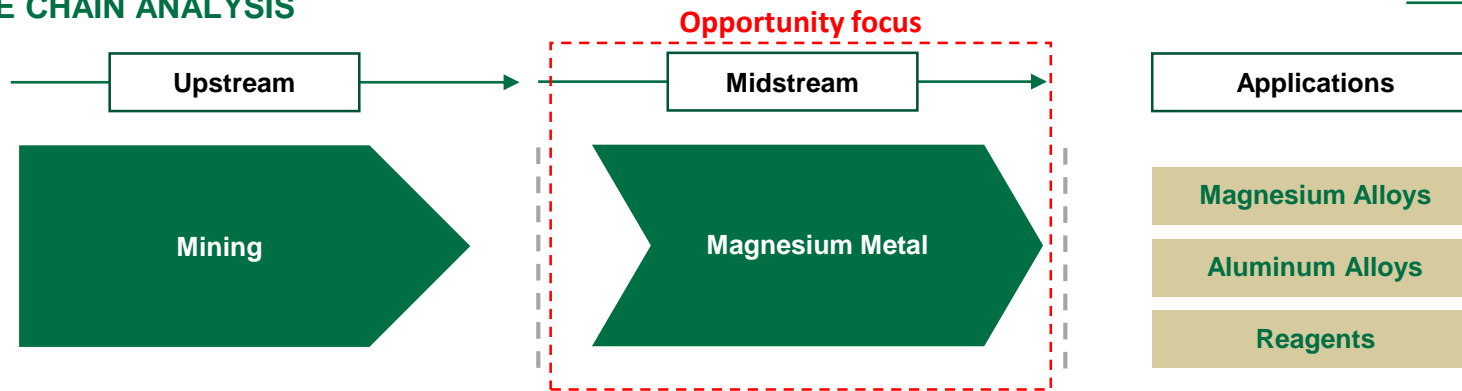
Grade: Low Medium High

- Low cost of construction, labor wages and utility fees to support low capital and operating expense for the investor and enable extending geographic footprint
- KSA has abundant dolomite resources which could be used as feedstock for the magnesium metal plant
- End-to-end logistics connectivity exists in KSA to support investment development
- Local content policies to favor Saudi based manufacturers
- Dedicated capability building and vocational training programs (e.g., industrial colleges, leadership programs)

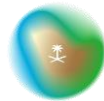
#### IMPORT DEPENDENCY

- Currently magnesium metal is mostly imported from China to meet the domestic demand in KSA

#### VALUE CHAIN ANALYSIS



#### KEY STAKEHOLDERS



### ENABLING FACTORS

#### ENABLERS

- Up to 75% of project financing by Saudi Industrial Development Fund (SIDF) and 2-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



Sources for Cost of Doing Business: EIU, World Bank

Bottom 25% | Top 75% | Top 50% | Top 25%

# 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

# DISCLAIMER

- This report must be used only to access information, and the information must not be construed, under any circumstances, explicitly or implicitly, as an offer to sell or a solicitation to buy or sell or trade in any opportunity herein mentioned.
- Ministry of Investment (MISA) has no undertaking to update these materials after the date, with the understanding that such information may become outdated or inaccurate.
- Mentioned information in this report is obtained from reliable sources but its accuracy and reliability are in no way guaranteed. No guarantee of any kind is tacit or explicit when projections of future conditions are attempted. MISA has used public/or confidential data and assumptions and has not independently verified the data and assumptions used in the analyses. Changes in underlying data or operating assumptions will clearly impact the analyses and conclusions.
- The financial evaluations, projected market and financial information, and conclusions contained in these materials are based upon standard methodologies, are not definitive projections, and are not guaranteed by MISA
- The content of this report must not be construed as an implied promise or guarantee for profit or limited loss express or implied by or from MISA or any of its officers, directors, employees and affiliates. All mentioned investments in this report are subject to risk, which should be considered prior to making any investment decisions
- MISA shall have no liability whatsoever to any third party, and hereby any third party waives any rights and claims it may have at any time against MISA with regard to this report, any services or other materials, including the accuracy or completeness thereof.

**CONNECT WITH US FOR MORE DETAILS:**

**[Metals@misa.gov.sa](mailto:Metals@misa.gov.sa)**

investsaudi.sa



@investsaudi

