

EMIRATES STEEL



EMIRATES STEEL GROWTH PROSPECTS AND
DEMAND IN GULF AREA

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ABSTRACT

Middle East's construction activity has reached an unexpected growth during the past years, becoming one of the major business hubs for various international investors. Meanwhile, steel consumption throughout the GCC and the UAE in particular has expanded rapidly in recent years due to huge demand from the construction sector. Revenues from high oil prices have been largely utilized in construction and infrastructure development in the region. The liberalization of real estate sector has significantly contributed to the mushroom of construction projects. The annual consumption of rebar is around 15 million in 2008. While, approximately 65% of the demand is met by the GCC mills, the balance is met through importing from neighbour countries, especially Turkey.

In order to meet the huge demand growth in UAE, Emirates Steel Industries has constructed a steel complex in Abu Dhabi as first phase in the expansion plan. ES adopted DR-EAF-LF-CC route due to the availability of natural gas in Gulf Area. Steel Making Plant (SMP) has started operation in 24th February 2009, where Electric Arc Furnace (EAF) will be charged with hot DRI, treated molten steel in Ladle Refining Furnace (LRF) and casted in Continuous Casting Machine (CCM).

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Educational Background

- Master Degree from Chemical Department, El-Minia Faculty of Engineering
- Bachelor of Science Engineering in Metallurgy, Faculty of Petroleum & Mining Engineer

Experience

Over 23 years working in Steel Making field, served Senior Management position in specialized plant production management and providing both technical and organizational direction & oversight. Author of several technical papers in steel conferences e.g. South East Asian Iron & Steel Institute (SEAISI), Metal Bulletin (MB), and Arab Iron & Steel Union (AISU). Currently, is working in Emirates Steel (ES) in UAE as Steel Making Plant Manager.

1. UAE ECONOMIC OVERVIEW

In recent years the UAE has demonstrated the will and desire to transform the structure of its economy into a market-based one. Public policy at both the Federal and local level has exhibited undiminished support of the drive towards fewer restrictions, in the form of lower government intervention and greater reliance on market forces.

Based on the study of Abu Dhabi Chamber of Commerce & Industry, the UAE's real GDP growth will stay strong, bolstered by high oil earnings and sustained expansion in the non-oil economy. The trade and current accounts would continue to generate large surpluses. The UAE economy will still grow robustly throughout 2009 period, with the annual rate of expansion averaging close to 6%. Emirates economy will remain strong despite the international financial meltdown, impacts of crises on UAE economy is mild. Figure.1 shows nominal GDP for the GCC countries.

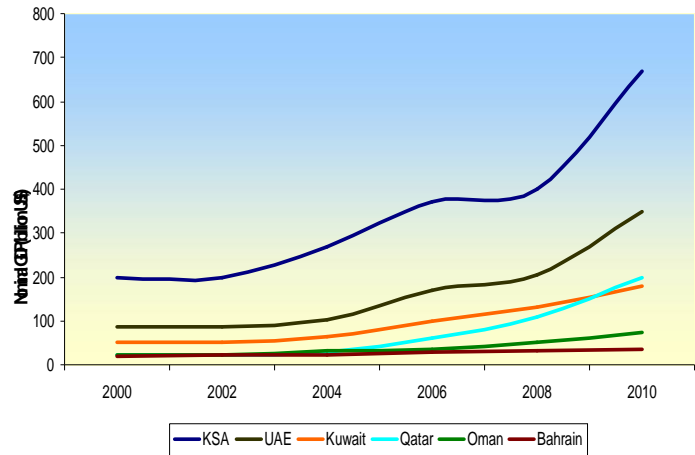


Fig.1 Nominal GDP in GCC countries

2. REGIONAL CONSTRUCTION

The construction industry in the Arab World has great success across the region, as almost every country in the area has announced a number of groundbreaking lucrative construction projects. This has led to increasing of investment in steel project, where several steel plants whether expanded or new steel plants are constructed. Figure.2 shows crude steel production of Arabic Countries in 2007 and 2008.

Construction in the Gulf increased by 50% in the first half of 2008 compared with to 30% increase recording in 2007.

Currently, UAE has the most high-rise construction in the world with 329 buildings under construction. All construction projects in the capital are proceeding despite the global financial crisis.

In the UAE, the value of construction projects underway is estimated at US\$ 223.8 billion and represents approximately 60% of all such construction projects in the GCC.

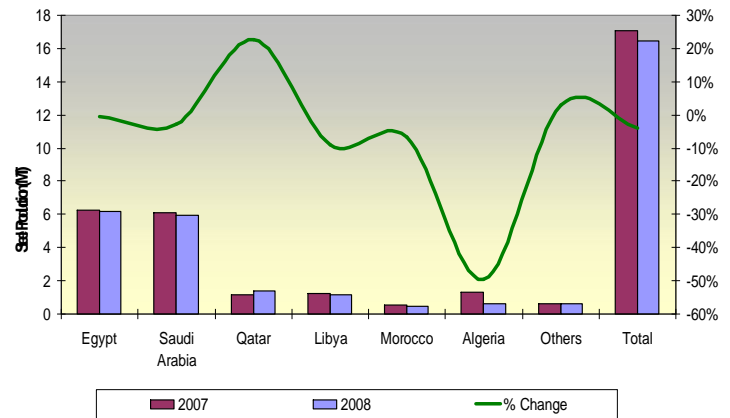


Fig.2 Crude steel production in Arabic Countries

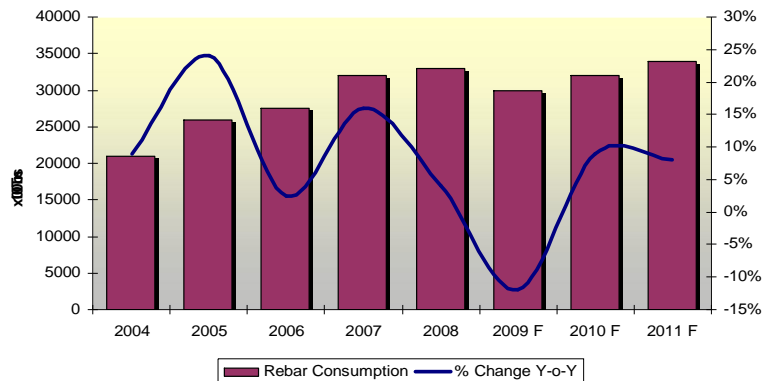


Fig.3 Regional rebar consumption

In addition, upcoming construction projects in Abu Dhabi have a total estimated value of US\$ 50.5 billion whilst estimated total constructions spend over the coming 15 years in the UAE is projected at US\$ 177 billion. 10 ~ 15% of the construction projects cost is accounted for steel reinforcement. Figure.3 shows regional rebar consumption.

3. UAE MARKET FOR REBAR

UAE steel market represents one of the major consumers in GCC, where absorbs about 77% of the net imports rebar into the GCC. Figure.4 shows the production and consumption of GCC countries during 2008.

It is estimated that Rebar consumption in UAE during 2009 will drop by 30-35% (to 4.5 – 4.9 MT) due to the global crisis. Import of rebar will decrease from 5.6 MT to 0.75 MT. In 2009 shares of foreign suppliers will fall dramatically from 80% to 16%.

During first half of 2008 prices were growing with an average speed of 100 US\$ a month. In second half of 2008 they were dropping by 140 US\$ a month on average Figure.4 shows UAE monthly retail prices verses imported rebar prices from last quarter of 2007 until first quarter of 2009.

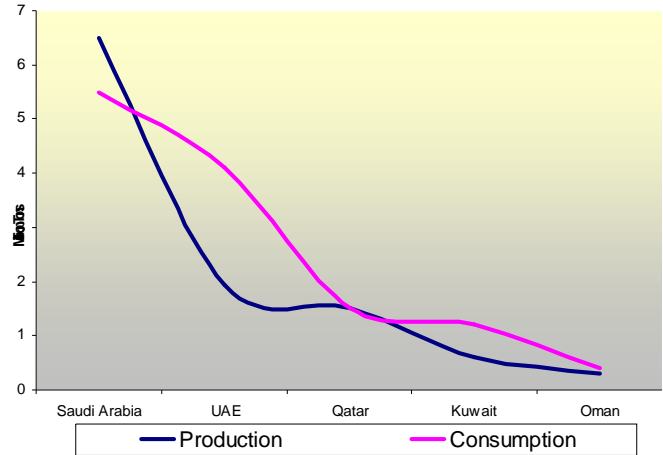


Fig.4 Production & consumption of GCC countries in 2008

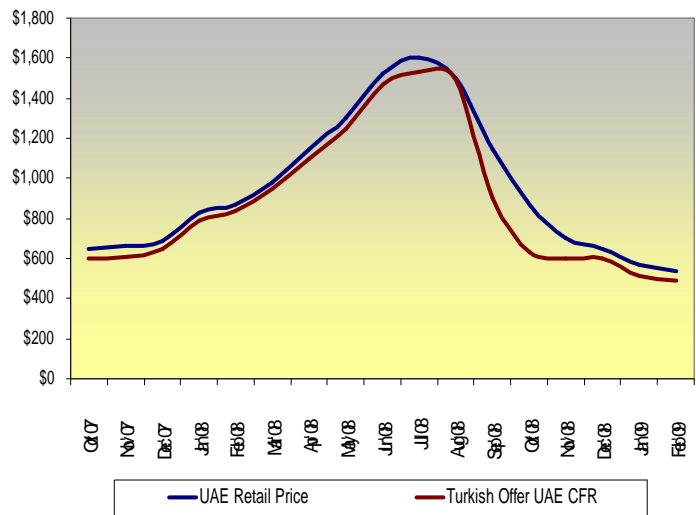


Fig.5 UAE monthly retail prices

4. INTEGRATED STEEL COMPLEX IN UAE

Emirates Steel (ES) is currently the largest steelmaker in the United Arab Emirates. ES first started in steel arena in 2001 with Bar Mill, which has a design capacity of 500,000 tons. With several modifications and effort of the staff, production has increased and reached 715,000 ton.

A strategic decision has been taken to integrate the plant, which can support ES competition in the market in all sides; increases production, increase products range, reduces cost and enhancements quality through producing our own steel billets.

4.1 OUTLINES OF EMIRATES STEEL

Table-1 describes the main facilities of ES, which comprises the following main shops

Main Shop	Basic Specification	Nominal Capacity (T/Y)
Direct Reduction	One HYL III	1,600,000
Steel Making	<ul style="list-style-type: none"> • One Electric Arc Furnace • One Ladle Refining Furnace • One Continuous Casting Machine 	1,400,000
Rolling Mills	<ul style="list-style-type: none"> • Two Bar Mills • One Wire Rod Mill 	1,900,000

4.2 ADOPTION OF DR-EAF ROUTE

The combination of Direct Reduction (DR) and the Electric Arc Furnace (EAF) has proven to be a practical and economical route for the production of high quality steel. ES Management realized that using of scrap to produce steel has some limitation in UAE due to the location of the country is far from the international scrap markets and the availability of scrap in Gulf area is limited. Moreover, availability of natural gas in the Gulf area provides advantages in producing steel with high quality through adopting DR-EAF route.

4.3 PRESENCE OF EMIRATES STEEL

ES first phase expansion has reached to the final stage. Rolling Mill (Wire Rod) started commissioning on 4th October 2007 and Bar Mill started in December 2007. At present, ES has round 20% of the UAE rebar market. With Phase.1 expansion, production will reach 2 million ton per year by 2009, which increases ES's shares in market to 30%. Figure.6 shows ES projected production and market share.

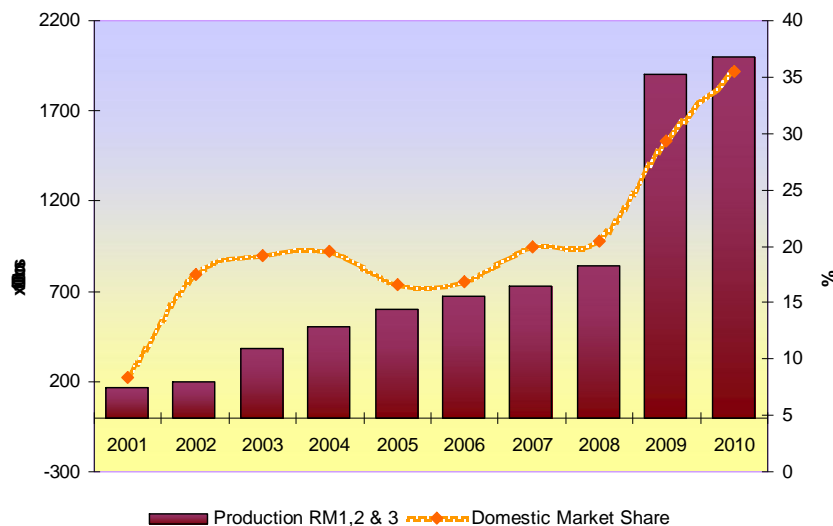


Fig.6 ES production and market share

5. ESI PHASE-2 EXPANSION PLAN

Following the successful start up of rolling mill and the current backward integration and expansion of the long products facility at Mussafah, ES has started further expansion as Phase-2 project in order to cover the short fall of about 400,000 tons steel billets that is required for the existing Rolling Mills as well as produces sections. It is planned to construct an additional steelworks, substantially identical to the DR and Melting Shop while the caster is different to be able to produce the required semi-products sizes. The new Melt Shop/Caster will be able to cover up the need of billets required by the bar/wire rod mills (about 500,000 T) and to produce the semis (bloom 250 mm² and beam blanks 280x220x90 mm, 400x320x100mm and 610x320x100 mm) required by the H-beams mill. The new H-beam mill can produce I-beams (120 ~ 600 mm), H-beam (120 ~ 260 mm), channels (120 ~ 400 mm), angles (120 ~ 200 mm)

5.1 IMPORTS OF LIGHT SECTIONS

Generally, light sections are imported from outside the region, therefore the statistics of the Iron and Steel Statistics Bureau (ISSB), which concentrate of export statistics from outside the Middle East, provide a useful long term reference for light sections. Figures.7 summarizes the imports into the region.

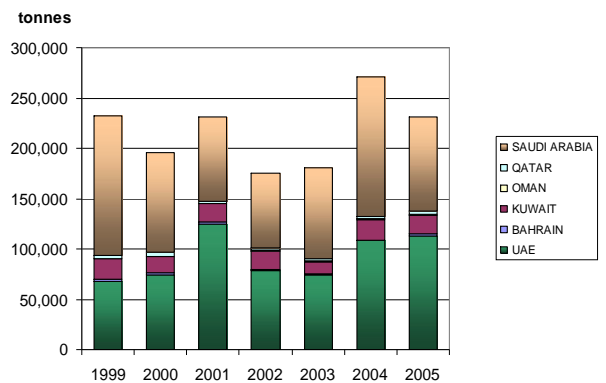


Fig-7 Imports of light sections to GCC

5.2 MEDIUM AND HEAVY SECTIONS

Medium sections are produced in GCC and it appears to have reached peak capacity limits. Both medium and heavy sections consumption have grown at an average growth rate of 20%. This is because infrastructure and commercial building spend is growing at a higher rate than total construction spend. The dynamics of consumption and distribution of medium sections and heavy sections are very different. Medium sections are typically distributed through traders and stockists.

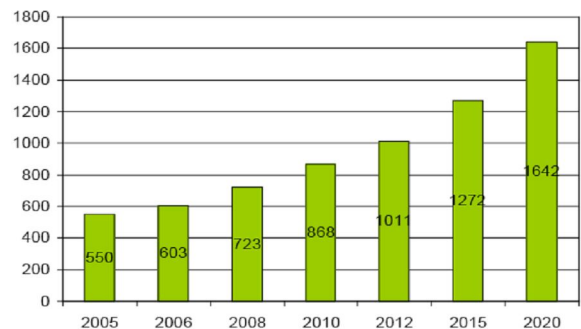


Fig.8 Forecast of medium sections consumption in GCC

This is more of a commodity product than heavy sections. Heavy sections consumption is driven entirely by infrastructure spend and dependent on specific projects. The specifications, volumes, delivery are very specific to each project's requirement.

The consumption of medium sections in the GCC is likely to double to 1.1 Mt by 2012 due to rapid growth in infrastructure, commercial and industrial construction spend. Fig.8 shows the forecast of medium sections consumption in GCC until the year 2020.

The consumption of heavy sections is likely to double to 1.6 Mt by 2013 on the strength of continued spend on infrastructure. Fig.9 shows the forecast of heavy sections consumption in GCC until the year 2020.

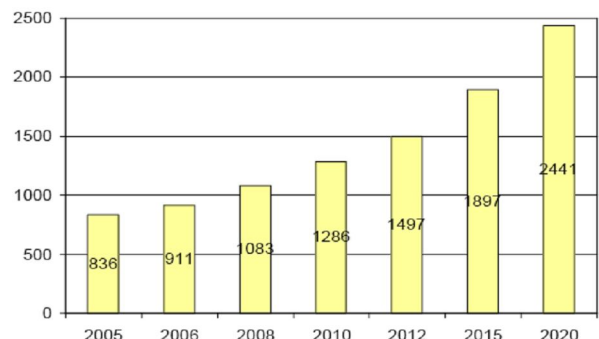


Fig.9 Forecast of heavy sections consumption in GCC

6. FUTURE EXPANSION

The study of the potential future market indicates that a strong market exists for plate/coil. Therefore, as GHC strategic to meet market expectation and customer satisfaction, it is decided to go ahead with several projects in phases to achieve our target. Table-3 shows the future projects, which will be executed in phases, in order to meet our target.

PHASES	DESCRIPTION
Phase-3	DRI based steel plant: <ul style="list-style-type: none"> ○ DRI plant of 1.6 M tpy capacity ○ Steel Melting plant of 1.4 M tpy capacity for slab casting ○ Rolling Mill of 1.2 M tpy capacity for plate / coil production
Phase-4	DRI based steel plant: <ul style="list-style-type: none"> ○ Two DRI units, each of 1.6 M tpy capacity ○ Steel Melting plant of 2.8 M tpy for slab casting ○ Hot strip mill of 2.4 M tpy of high quality HRC ○ Cold Rolling, Galvanizing and Coloring production units can be added at a later stage