STEEL
ROLLING SECTOR IN THE GCC

A MULTI – CLIENT STUDY TO PROVIDE INVESTMENT OPPORTUNITIES IN THE STEEL ROLLING SECTOR

منظمة الخليج للاستشارات الصناعية
Gulf Organization For Industrial Consulting

www.goic.org.qa

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A Multi-client Study Report to Deliver Investment Opportunities in the Steel Rolling Sector to Investors

March 2007

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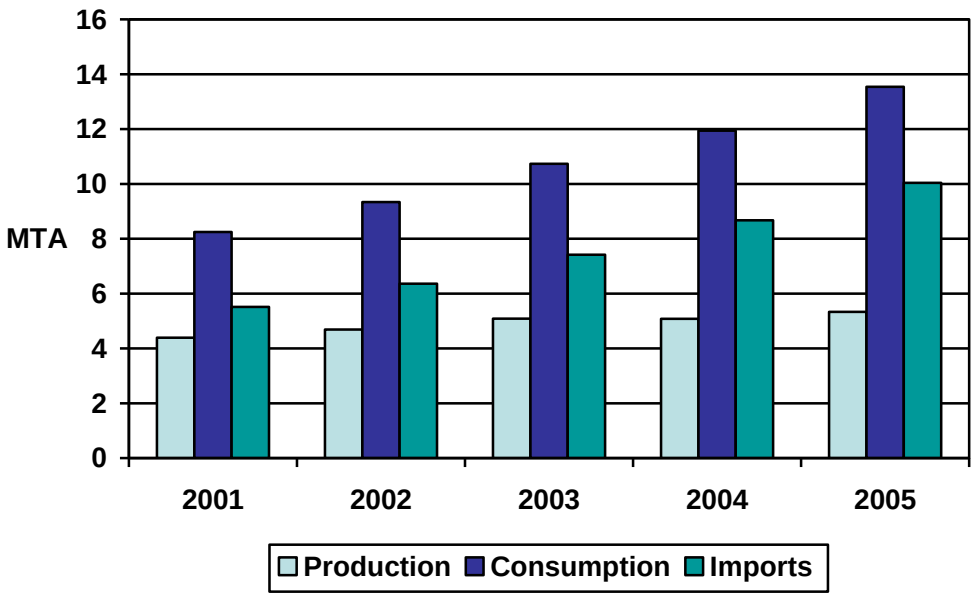
1. INTRODUCTION

The efforts of the GCC nations to diversify their economies from oil and natural gas, and the availability of considerable monetary surpluses, have led to a boom in investment in diverse sectors. Major investments are taking place in petrochemical complexes. The natural advantage of comparatively lower energy costs is being leveraged in setting up metallurgical units for the production of aluminium and steel, which have high energy usage. Massive investments are also taking place in infrastructure projects such as airfields, ports, power plants and desalination plants. In addition to major real estate developments which are creating entirely new cities, several mega projects are underway to provide resorts and residential accommodation for international tourists and home owners. It is estimated that there are presently over 1.2 trillion dollars of projects under execution and this figure is only expected to rise as oil prices continue to be buoyant. Most forecasts predict oil prices to continue to remain above the 60 dollars per barrel limit, thus continuing to result in massive surpluses in the GCC economies.

All these factors have resulted in a huge spurt in construction activities in the region and as a consequence there has been a sharp rise in steel consumption in the region. Local producers of steel have increased production to meet the growing demand. However despite an impressive growth of steel production in the region, the consumption has by far outstripped the domestic production. The production of steel in the GCC region increased by 21 % between the years 2001 and 2005, the consumption of steel during this period, however, saw an increase of 64 %. This has led to ever increasing imports of steel in to this region.. Imports of finished and semi-finished steel in to the GCC region was over 13 million tons in 2005. Fig 1 depicts the growth in production, consumption and imports of steel.

The steel industry has taken note of the continued growth in steel imports and a number of projects have been planned and are under implementation. It is estimated that in the next 2-3 years about 10 million tons of new steel capacity will be created in the GCC region.

Fig 1: - Production, consumption & imports of steel



The new projects under implementation fall into two categories. One category is that of integrated steel plants which will have direct reduction plants feeding direct reduced iron to electric arc furnace shops to produce steel. Most of these plants have planned rolling mills to convert the steel into finished product; however some will produce intermediate products such as billets or blooms for sale.

The other category is projects which envisage setting up of only rolling facilities. These projects plan to produce finished steel products for sale from purchased raw material in the form of billets. Some of these rolling mills are linked to steel making units belonging to the same industrial group whereas others will procure billets from the open market.

A common factor amongst all these projects is that except for a part of the capacity expansion at Hadeed in KSA, which is for flat products, all the other plants plan to produce long products, primarily reinforcement bars.

2 RATIONALE FOR THE STUDY

There are two important aspects to consider when looking at the future of the steel industry in the gulf region. One is the demand factor and the other is the economics of production in this region.

During the period 2001-2005, the world has seen a sustained growth in consumption of steel with an average CAGR of 8 %. During this same period the GCC region has seen a CAGR of over 17 % which is more than twice the world average. The IISI medium term forecast for world steel consumption projects a 4.9 % growth up to 2010 which is likely to come down to 4.2% in the period up to 2015. The level of economic growth in the GCC region will continue to be robust based on sustained high surpluses generated by oil revenues. This economic growth will in turn continue to fuel the construction boom as money is pumped into real estate, infrastructure and tourism projects. The growth in construction activities may slow down as compared to the heady rates of the last couple of years, but this sector will remain a key driver in the consumption of steel products. The increase in per capita income as well as the efforts to diversify into non-oil manufacturing sector will result in setting up of manufacturing chains to produce items of mass consumption by local industries. This in turn will lead to diversification in the requirement of steel products. As a result of the above factors, growth in consumption of steel will continue to be high and are expected to be much above world averages.

The main producers of steel in the GCC region follow the Direct Reduction route to produce iron which is then converted in to steel in electric arc furnaces. The direct reduction route utilizes natural gas as reductant and in areas where natural gas is available; it has been economically competitive to the conventional route of steel making through the Blast Furnace- Basic Oxygen Furnace route. Integrated steel plants however are very capital intensive to set up and need to be linked to natural gas sources; therefore the alternative of setting up individual stand alone rolling mill units is attractive. Besides the advantage of lower overall investment required, these rolling mills can also be located near the consuming market which is an added advantage.

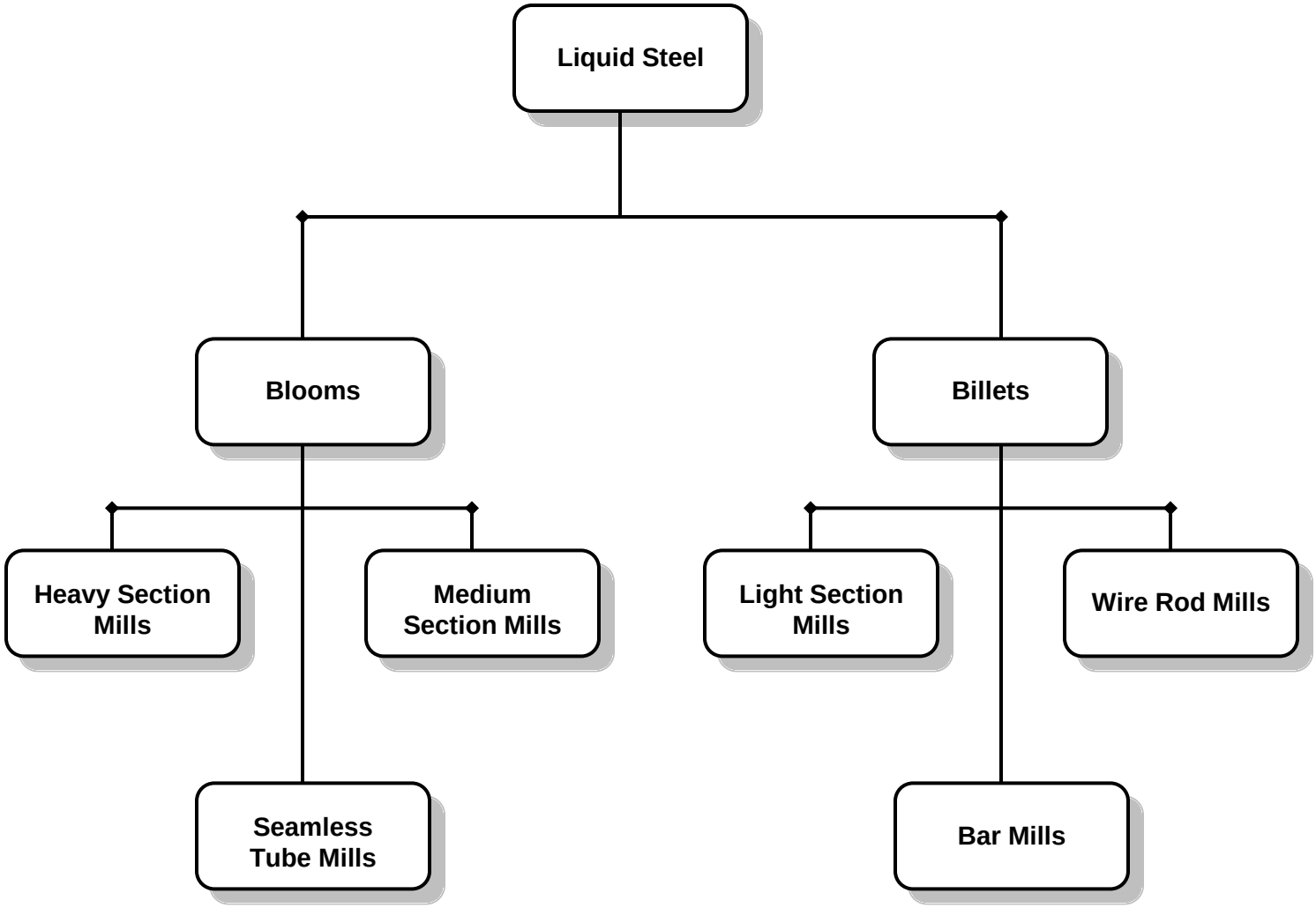
Finished steel products are broadly classified as flat products and long products. The primary rolling mill for flat products is the hot strip mill. This mill by its inherent nature is

of very high capacity, generally producing a minimum of 2 million tons per year. Recent development of the thin slab casting and rolling technique has given rise to mills of lower capacity of 1 million tons per year. These mills however are coupled to the steel making-casting unit and cannot be set up on a stand alone basis.

Mills for long products on the other hand are extremely flexible in terms of production capacity and allow for a very wide range of economical capacity for most of the products. This study therefore proposes to concentrate on rolling mills for long products.

As pointed out in the earlier section, there has been a rush of projects in the implementation phase. These have been driven by the boom in steel consumption and have been mainly focused on the production of reinforcing steel. Figure 2 serves as a broad example of the choices available to steel plants and rolling mills in terms of finished products which they can plan for. Given that the drivers for production of steel in the GCC region are very positive and that the market is likely to mature, it is appropriate at this time to take stock of the situation and chart out the products to be produced in future steel plants and rolling mills.

FIG 2 - LONG PRODUCT ROLLING MILLS



3. REPORT OBJECTIVES

The objective of the study is to assess the present status of steel rolling industries in the GCC and identify further opportunities considering the demand of rolled steel products in the GCC and export possibilities in the neighboring market. The Report will provide a valuable aid for strategic planning purposes, at a time of immense opportunities in the steel rolling sector. The key issues that need to be addressed include:

- Global trend in the steel rolling field
- Intermediate and finished rolled products being manufactured in the GCC
- Status of steel rolling industries in the GCC
- Intermediate and finished rolled products imported into the GCC
- Identifying rolled steel products that are not manufactured in the GCC
- Identify rolled steel products that have good export possibilities
- Identify opportunities for investment in steel rolling sector and formulate guidelines for planned growth.

4. COVERAGE

The coverage of this Study Report has been carefully formulated to address the critical information requirement of key players from all segments of the industry. Specifically the research parameters will embrace:

4.1 Geographic Coverage

The Report will cover the dynamics of the steel sector and consumption of finished and semi finished steel products within the following GCC States:

Bahrain	Qatar
Kuwait	Saudi Arabia
Oman	United Arab Emirates

4.2 Product Coverage

The Report will review the steel sector and on the basis of its growth, will examine the demand of various categories of finished and semi finished steel products. The status of existing steel producing units as well as those under implementation will be taken into account along with the foreign trade in rolled steel products to identify the gap in demand and availability. Since flat products are normally produced in integrated steel plants, these have been excluded from the scope of this study.

The main categories of rolled mild steel products expected to be covered are given below.

- Wire rods
- Bars and rods
- Light & medium sections.
- Heavy sections
- Rails
- Seamless tubes

4.3 Time period

Historical data will be provided for the period 2001 to 2006, forecasts will be made for the years 2010 as well as 2015.

5. APPROACH

The study will be managed and conducted by staff from Gulf Organization for Industrial Consulting with extensive experience in the steel industry experience as well a direct experience in the GCC.

The Report will be prepared using a conventional mix of both desk and field research. At the outset, the project team assembled for the project will draw upon the internal

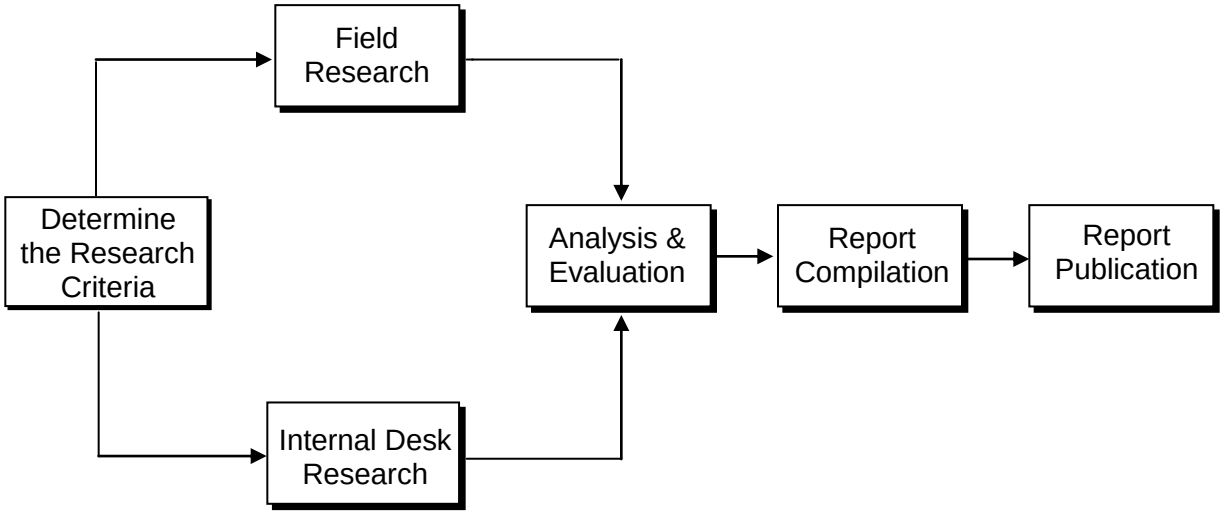
databanks maintained by the company. These unique databanks have been developed over many years of operation and they will be interrogated in order to extract all information that is relevant to the study. In addition, all relevant external sources will be accessed in order to validate and build on the information held by GOIC.

Commercial information and forecast will be developed from the in-house databases, augmented by a program of regional fieldwork. Discussions will be held with key industry and government officials to provide a thorough understanding of the dynamics of the current and future steel rolling projects in the different GCC States.

The program is based on developing accurate and complete information followed by analysis using a team of expert professionals with prior expertise and by application of appropriate tools. The approach will cover:

- A series of interview with:
  - Ministries and government agencies
  - Local steel producing companies.
  - Traders
- Review of extensive in-house and published information
- Development of preliminary views on industry dynamics, macro-economic, and country related issues
- Carrying out multi-faceted analysis to arrive at preliminary conclusions
- Further fieldwork in the region will be undertaken as necessary to supplement the analysis and clarify specific issues

Approach to the Study



6. REPORT CONTENTS

The proposed content of the report will include.

Section	Description
1.	**Executive summary**
2.	**Introduction**
3.	**Methodology**
4.	**Overview of world trends in steel rolling sector**
5.	**Overview of steel rolling sector in GCC**

1. Bahrain
2. Kuwait
3. Oman
4. Qatar

5. Saudi Arabia
6. United Arab Emirates.

Overview will include

- Current status
- Projects under implementation
- Drivers for growth
- Future outlook

6. Demand of intermediate & finished steel rolled products in GCC

1. Bahrain
2. Kuwait
3. Oman
4. Qatar
5. Saudi Arabia
6. United Arab Emirates

Study will cover

- Production
- Imports
- Exports
- Apparent cons

7. Export possibilities for finished rolled products

- Regional demand-supply balance
- Regional macro-economics
- Product recommendations

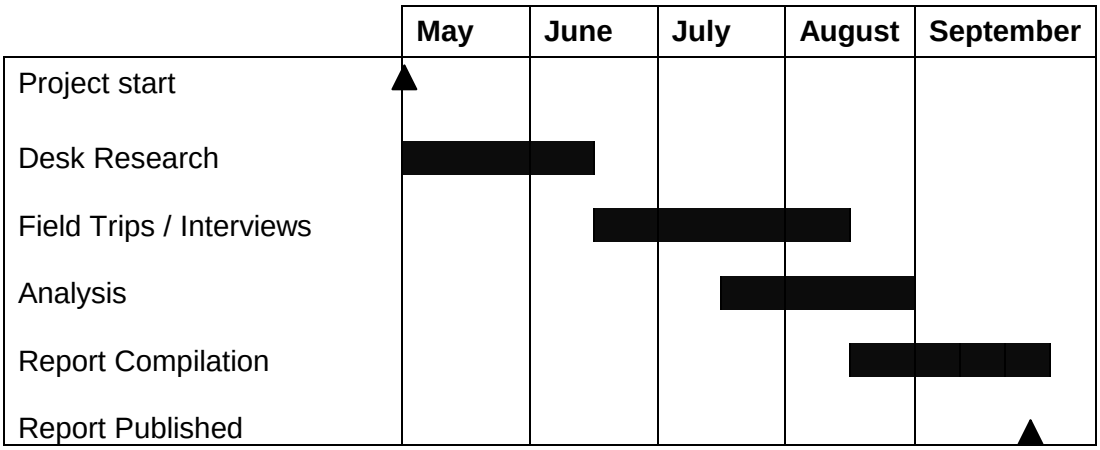
8. Potential downstream projects in GCC

- Key products
- Technology drivers
- Synergy with existing units

9. Conclusions & recommendations

7. TIMING AND COSTS

It is expected that the study will take around 5 months time, and the Report will be ready by the end of September 2007. It will be delivered in October 2007.



The cost of the report "Steel rolling sector in the GCC" will be 5000 US $ only (Five thousand US Dollars only)

8. GOIC CREDENTIALS

Gulf Organization for Industrial consulting is an intergovernmental industrial development organization, funded by the six Arab Gulf Cooperation Council (GCC) states:

- ✓ Bahrain
- ✓ Kuwait
- ✓ Oman
- ✓ Qatar
- ✓ Saudi Arabia
- ✓ UAE

Relevant Project Experience

The following list indicates the depth and breadth of GOIC's work in the metals and steel sector.

Sl No	Study Reports/ Project Profiles
1	Oman Steel Sector Study
2	Status and prospects of the Building Materials Industries in the GCC
3	Road Map for Aluminium Industry in Bahrain
4	Metallic Pipes and Tubes-Vision Report
5	Automotive and ancillary Industries –Vision Report
6	Road Map for Engineering & Electrical Industries in Bahrain
7	Mapping of Refrigeration & Cooling Sector Industries in GCC
8	Study Report on Possibilities of Establishing Industries in Non-Ferrous Metal (Excluding aluminium) Sector in GCC.
9	Aluminium Downstream Industries Market Study
10	Petrochemical Industry in the Kingdom of Saudi Arabia
11	Investment Opportunities in Major Industrial Sectors in Kuwait
12	Industrial strategy for United Arab Emirates
13	Pre-Feasibility Report- Manufacture of Aluminium Die-Cast Parts for Automotive Industry
14	Pre-Feasibility Report-Manufacture of Multi Layer Composite Al-Plastic Pipes
15	Option Study for Aluminium Downstream Industry

Project Profiles	
1	Alloy and Special Steel Plant
2	Aluminium Can Stock
3	Aluminium Clad Steel Wire
4	Aluminium Die-Casting
5	Aluminium Dross recycling & Refining
6	Aluminium Foundry for Vehicle Wheels
7	Aluminium Slugs Manufacturing Plant
8	Aluminium Strip Caster Project
9	Castings for the Cement Industry
10	Continuous Coil Coating Line Project
11	Cold Rolling Mill
12	Copper and Copper Alloys from Scrap
13	Enameled Copper Winding Wire
14	ERW Steel Pipes
15	Ferrochrome
16	Galvanized Rebars
17	High Integrity (HI) Aluminium Castings
18	Hot Briquetted Iron (HBI)
19	Leaf Springs
20	Light Aluminium Extrusions (CONFORM)
21	Light Sections Steel Mill
22	Manhole Covers
23	Micro Steel Mill (2 Concepts)
24	Narrow Cold Rolling plant
25	Powder Injection Moulding
26	Production of Magnesium
27	Precision Welded Aluminium Tube for Radiators
28	Recycled Aluminium Alloys
29	Rolled Finned Tubes
30	Seafood Cans
31	Seamless Copper Tube
32	Seamless Steel Tube

33	Silicon Steel Finishing
34	Solder Electroplated Copper Wire
35	Spin-Cast Metal Parts
36	Stainless Steel Cladded Steel Pipes
37	Stainless Steel Cold Rolling Complex
38	Stainless Steel Long Products
39	Stainless Steel Precision Tubes
40	Stainless Steel Wire Mesh
41	Steel Foundry (2 Concepts)
42	Steel Profiles Acessories, Windows & Door Frames
43	Steel Sections & Rebars
44	Steel Wire Rope
45	Submerged Arc Welded (SAW) Pipes
46	Titanium Tubes
47	Ultra Thin Aluminium Foil
48	Welding Electrodes
49	Zinc Sherardized Components
50	Zinc Smelter

Range of Services

Numerous studies and services have been requested from GOIC over the years, ranging from major industrial policy studies to reports on specific industries and products. In addition GOIC has served the private sector through it MIOP program, consultancy services and other programs and activities. These services include expert opinion on industrial matters, data provision, project evaluation and various studies.

INDUSTRIAL INVESTMENT PROMOTIONS SECTOR
❖ Investment Opportunities ❖ Project Identification ❖ Feasibility Studies ❖ Multi-Client Study Reports ❖ Sectoral Studies ❖ Consultancy Assignments ❖ Technical Training ❖ Technical Assistance ❖ Industrial Coordination ❖ Industry Conferences & Workshops ❖ Subcontracting & Partnership Exchange

INDUSTRIAL & ECONOMIC INTELLIGENCE SECTOR
❖ Data Collection & Processing ❖ Databases Development & Management ❖ Strategy & Policy Studies ❖ Sectoral Overviews ❖ Consultancy Assignments ❖ Regional Policies ❖ Country Programs ❖ Trade Support ❖ Publications ❖ Library resources

Through its work, GOIC has built-up unrivalled knowledge and contact networks covering the GCC region, and industrial sectors. GOIC has become an established source of information on the GCC countries. This has been achieved through maintaining good contacts and effective institutional relationships with ministries, official bodies and organizations, existing industrial establishments as well as other regional Arab and international organizations.

Consultancy assignments are tackled by specially created task forces drawn from the various technical departments, as needed, in order to provide the most comprehensive reports and appropriate advice; in-house task forces often work in conjunction with outside expert organizations.

From its inception, many specialized assignments have been completed.

GOIC is well-equipped and experienced to conduct this important multi-client study.

9. QUESTIONS REGARDING THIS PROPOSAL

Any question regarding the proposal or for further information please contact the following personnel:

Gulf Organization for Industrial Consulting (GOIC)

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E-Mail: asingh@goic.org.qa

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E-mail: prasad@goic.org.qa

10. ORDER FORM

We wish to subscribe to the GOIC- "Steel Rolling Sector in the GCC" and understand that:

1. The cost of the study is US $ 5,000 (Five thousand US dollar).

2. We shall pay GOIC the applicable fee stated above in accordance with schedule set forth below.

Payment Schedule for this report

Advance	50 percent
On report completion	50 percent

3. Payment terms are 30 days from the date of invoice.

4. We will receive one (1) copy of the report. Additional copies will be available at US $ 200 (two hundred US dollar) per copy. We will also receive the report in PDF format on a CD-Rom.

5. We nominate the following person to whom the Report should be sent:

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Title : ……

Company : ……

Address : ……

: ……

Date : ……

6. Except for information that is generally available to the public in printed publication, or is already in our possession or developed independently by us or is received by us in good faith from a third party, any information in the subject study is for the

sole and confidential use of our company. Said information may be used in our research and commercial activities on a confidential basis.

7. We agree to use reasonable care to protect the confidential nature of this Report. Our foregoing obligations shall, in no event, continue beyond three (3) year from the date of publication.

9. Payment can be made through direct wire transfer directly to GOIC (at the details given below) or through cheque or demand draft made out to Gulf Organization for Industrial Consulting, GOIC's bank details are:

Gulf Organization for Industrial Consulting
Bank: Doha Bank, Main Branch – Doha, Qatar
Account Number: 202/050734/01/10/0

I have understood the terms and conditions for subscription.

Kindly send me a confirmation of my subscription.

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