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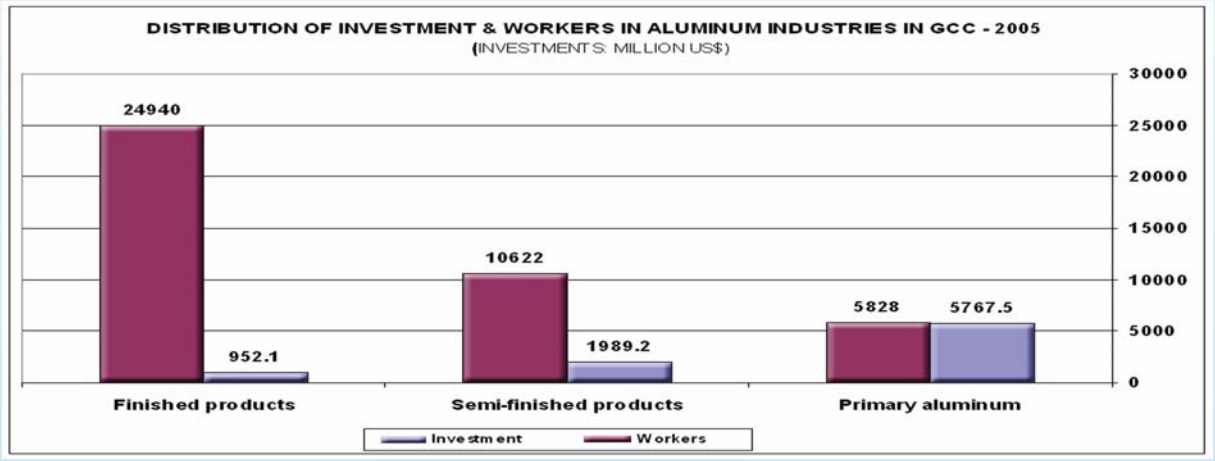
Development of Aluminum Industry in the GCC States

The share of GCC states in world production of primary aluminum has steadily increased during the last three decades from 0.9% in 1975 to 4.9% in 2005. A quantum jump is likely to take place during the next decade raising GCC share to around 10% by 2010 with the expansion of existing smelters and commissioning of new smelters, thus establishing the GCC region as a major player in global aluminum industry.

Aluminum Bahrain (ALBA) and Aluminum Dubai (DUBAL) were the first smelters in the region. ALBA was commissioned on May 1971 with a capacity of 120,000 TPA, and DUBAL in 1979 with a capacity of 135,000 TPA. Such capacities were eventually increased by upgrading through innovations and continuous improvements in operating practices, as well as expansion though installation of new facilities. The capacity build up is likely to exceed 3.75 MPTA by 2010 when the new smelters are commissioned in Oman, Saudi Arabia and Qatar, and when the planned expansion program of ALBA with installation of the sixth pot line project is implemented. The capacity will further increase if the long-term plan of DUBAL is realized to achieve 1.5 Mt/yr by 2010.

ALBA's annual production of metal was 525,000 Tons and 732,000 Tons in 2004 and 2005, respectively. 100% of slabs are consumed by GARMCO for conversion to flat products. 99.7% of aluminum ingots are exported to international markets. While in DUBAL the production was 600,000 TPA of aluminum in 2004. Being located in Dubai, DUBAL has the advantage of expediting shipments to markets in the Far East (Japan, Korea, Taiwan and China), the ASEAN region, as well as Europe and USA.



Plans are ahead for establishing new smelters in Oman, Saudi Arabia and Qatar. Oman is having a long-standing plan for setting up an aluminum smelter in Sohar. As a joint venture of Oman Oil Company, the project is executed with an initial capacity of 330,000 TPA, and it is scheduled to double its capacity to 660,000 TPA by 2010. In Saudi Arabia, there is a good reserve of about 126 Mt of bauxite containing 57.5% alumina. Maaden Co. has decided to build an aluminum smelter within a project that will comprise the mining project in the north, and a bauxite refiner and an aluminum smelter on the east coast. The project is estimated to cost US D 302 billion with a capacity of 600,000 TPA of aluminum. Yet, due to lack of railroad that can carry bauxite from the north to the east coast, the project may not be feasible till a rail link is established. The indicative timeframe is 2008-2009. As for Qatar, the proposed smelter project is to be implemented by a joint venture company of QP and Hydro, and to be based on Hydro reduction technology. The smelter will be located in Mesaieed Industrial Area, with a proposed capacity of 570,000 TPA, and the indicative timeframe for commissioning is 2009.

As for semi-finished aluminum products, the GCC states made notable progress in the production of rolled and extruded products. They have almost attained self-sufficiency. For extruded products, they meet regional requirements and export 40% of the production to international markets. More than 80% of cold rolled products are exported. Yet, they still import 55,000 TPA of rolled products, mostly foil and coated flat products.

UAE comes first in aluminum secondary metal product firms (80), followed by Saudi Arabia (5), Bahrain (2), and one each in Kuwait, Oman and Qatar. As for rolling mills, there are two establishments in the GCC states: GARMCO in Bahrain and Profiles RHF LLC in Sharjah, UAE. GARMCO, with a production capacity of 162,000 TPA of cold rolled products and 20,000 TPA of foils, produced around 138,000 t of cold rolled products in 2004, and 150,000 t in 2005, as well as 15,000 t of foils in 2004. The Profiles RHF LLC of Sharjah operated in July 2000 with a capacity of 20,000 TPA of rolled products and 5,000 TPA of foils. The plant has a plan to increase cold rolling capacity to 65,000 TPA.

Due to the expansion in the construction sector, several extrusion plants have been set up all over GCC states. There are 22 major extrusion plants in the region with a total production capacity of 300,000 TPA, and the overall capacity utilization exceeds 88%. Most of the plants have anodizing, powder coating and painting facilities. About 60% of the extruded products are used in GCC and the balance is exported to international markets.

Cables are manufactured in Midal Cables which started production in 1977 as a joint venture between Inter Steel Bahrain and Olex Cables Australia. The major product lines are aluminum and aluminum alloy conductor and wire, metal form products, and aluminum and aluminum alloy redraw rod and wire. The metal form products are manufactured by Conform extrusion technology for both simple and complex shapes in solid, hollow and sheet forms of aluminum and aluminum alloy. 60% of Medal's products are exported to overseas markets in 57 countries. A number of downstream industries have come up to draw the cast aluminum rod into wires.

Aluminum powder is produced in Bahrain Atomization International Company set up in 1973 as a joint venture between the Government of Bahrain and Breton Investments Limited. The plant capacity, which is fully utilized, is 6,500 TPA. Almost 100% of the production is exported.

Aluminum wheels are produced by Aluwheel Company in Bahrain. Several models of alloy wheels blank castings and wheel alloy ingots are produced from the liquid aluminum supplied by ALBA. The production capacity is around 15,000 TPA of which 20% is for blank wheels and 80% for alloy ingots. 100% of the products are exported.

The number of firms for aluminum finished product industries amounts to 496 with investments exceeding US D 950 millions, and labor force of more than 24,000. Of these industries, 16 are engaged in coating, 8 in barrel making, 12 in foil production and more than 400 in fabricated items such as doors, etc., to meet the requirements of the booming construction sector.

The average imports and exports of aluminum products in the GCC states for the last four years amount to 407,490 t/yr and 1,104,970 t/y, respectively. Thus, the GCC region as a whole is a net exporter of aluminum products. Bahrain and UAE are the net exporters, and all other states are net importers.

As for environmental aspects, both the smelters of ALBA and DUBAL are certified ISO 14000 companies, and have shown considerable concern for the environment. ALBA has spent a huge sum of US D 310 millions towards improvement in environment. DUBAL has also spent over US D 120 millions in environment management plan during the last two expansion programs.

There has been considerable progress in downward industries for semi-finished rolled and extruded products, and powder in the GCC states. The opportunities exist for setting up further downstream facilities for production of semi-finished products as well as parts and components for development of engineering industries.

OVERALL STATUS OF ALUMINUM INDUSTRIES IN GCC, 2005

Classification	Total Number of Firms	Investment Million US D	Manpower
Primary aluminum	2	5,767.5	5,828
Semi-finished products	59	1,989.2	10,622
Finished products	495	952.1	24,940
Total	**556**	**8,708.8**	**71,390**

Source: Industrial Market Intelligence Dept., GOIC.

INVESTMENT OPPORTUNITY

DIGITAL MULTI-FUNCTION METER

Key Statistics:

Output	100,000 unit/year
Total sales	US D 17.0 million / KD 5.07 million
Total Investment	US D 3.75 million / KD 1.12 million
Employment	58 workers
Pofitability indicator (IRR)	25%

Regional Setting. The GCC countries are expanding their manufacturing base by setting up projects in different fields, thus accounting for their import substitution and also for the export orientation. However not many industries were setup in the field of Electronics. This project aims to manufacture product which can be used for local consumption by replacing the conventional analog meters. This product's adoption is subject to the approval by the Electricity Board.

The Products, Applications & Standards. Digital Multi-Function Meter is an instrument for digitally measuring and registering of the power consumption in each of the three phases. It is a 3 Phase 4 Wire meter with an auto metering facility and has an accuracy class of 0.5. The product manufactured will be in strict accordance with the international standards. The basic communication method for data transfer will be infrared communication.

Raw Materials. The main raw materials for this project are PCB with components, Polycarbonate, Brass etc. The major raw material PCB with components will be supplied by the technology holder, the other raw materials are readily available in the international market and can be imported easily.

The Plant. It is automated medium sized plant with standard machinery for assembling and testing.

Technology. The technology is commercially proven and well established. The production process is automated. There is no license fee for the technology.

Environment. The process is non toxic and does not release any harmful gases.

Market. The project will target Kuwait and other GCC countries. With the growing need for accuracy and precision in reading the energy meters, and accuracy of billing, the world is adopting to the Digital Electricity Meters with a tele-metering facility.

Output: The project total output at 75% capacity utilization, based on single shift operation will be 75,000 units per annum.

Technology Sources and Partnerships. Technology is from one of the leaders in the manufacture of Digital Electricity Meters with auto reading facility from Korea. The technology supplier will provide the equipment, training and technical know-how. There is no technology fee.

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SELECTED ECONOMIC & SOCIAL INDICATORS FOR GCC COUNTRIES, 2005

DESCRIPTION	U.A.E.	BAHRAIN	K.S.A	OMAN	QATAR	KUWAIT	TOTAL
Oil Revenue -Million USD	24,800.0	2,964.0	112,480.0	10,112.0	7,530.0	31,940.0	189,799.0
Non-Oil Revenue -Million USD	7,300.0	910.0	15,600.0	2,300.0	3,350.0	3,020.0	32,480.0
Current Expenditure -Million USD	23,600.0	2,380.0	73,500.0	7, 180.0	7,600.0	14,600.0	128,870.0
Development Expenditure -Million USD	4,916.0	890.0	14,830.0	2,918.0	1,820.0	2,600.0	26,974.0
Commr. Banks Credit to Manuf. -Million USD	3,815.0	780.0	9,300.0	789.0	272.0	1,480.0	15,436.0
Indust.Banks Loan to Manuf. -Million USD	52.9	7.8	785.5	3.6	13.1	112.0	1,004.9
Electrical. Consumed - Mil. KWH / per capita	11.2	11.8	7.2	4.8	15.3	13.1	7.9
Water Consumption - Mil. Gal. / per capita	53.0	48.2	17.6	11.8	56.0	47.0	25.8
Phone Machines per 1000 person	281.0	282.0	168.9	112.0	271.9	192.1	183.0
Mobile Machines per 1000 person	780.0	690.0	371.0	285.0	590.0	614.0	460.7
P.C. Machines per 1000 person	141.5	180.1	106.0	57.3	185.0	137.2	104.5
Internet Users per 1000 person	291.0	237.0	86.0	90.6	228.0	240.5	122.0

Source: Industrial Market Intelligence Dept., GOIC.imi.goic.org.qa

GDP IN GCC COUNTRIES BY TYPE OF ECONOMIC ACTIVITY AT CURRENT PRICES - 2004 (MILLION US D)

ISIC DESCRIPTION	U.A.E.	BAHRAIN	K.S.A	OMAN	QATAR	KUWAIT	TOTAL
Agr., Fisheries & Forest	3,220	71	10,398	519	64	316	14,588
Mining, Quarrying & Fuel	41,547	3,116	126,813	12,250	21,921	30,248	235,895
Manufacturing Industries	15,794	1,277	26,553	2,493	2,516	4,310	52,943
Electric, Water & Gas	2,142	157	2,910	457	8	1,445	7,849
Construction	9,075	440	14,300	934	1,720	1,370	27,838
Trade, Restaurants & Hotels	14,671	1,169	16,254	3,997	1,382	405	37,878
Trans., Commu. & Storage	8,691	831	9,973	2,139	923	3,040	25,597
Finance, Insurance & Bank	5,015	1,203	7,638	355	369	3,936	18,516
Housing	9,417	1,014	13,407	1,092	983	3,004	28,918
Government Services	10,265	2,025	40,530	5,424	3,157	11,553	72,953
Other Services	2,893	203	7,404	-	400	1,344	12,245
GDP At Factor Cost	122,729	11,506	276,179	29,662	34,173	60,972	535,221
Net Indirect Tax	-	158	2,471	228	199	(2,192)	864
GDP At Market Price	122,729	11,664	278,650	29,890	34,371	58,780	536,084

Source: Industrial Market Intelligence Dept., GOIC.imi.goic.org.qa