

## **Surveying The Egyptian Glass Industry And Compile A Monograph Of Data On The Sector**



**Dated: 11<sup>th</sup> September 2005**

## ***Executive Summary***

### **Regional Trade In “Glass” Products 1999 - 2003**

**Imports** Egypt’s imports fell from USD 44.2 mn in 1999 to USD 23.4 mn in 2003, representing a decline of 47.1% over the period. Egypt is the only industrialised developing country, in the region, to have experienced a decline in the import values of such products. Regional “free demand,” as measured by import values, increased from USD 598.8 mn in 1999 to USD 828.5 mn in 2003, representing an increase of 38.4%.

**Exports** The leading exporters of “glass” products in 2003 were: Turkey USD 172.7 mn; Saudi Arabia USD 72.0 mn in 2002; South Africa USD 65.2 mn; Israel USD 53.0 mn; Kuwait USD 22.6 mn in 2001; and Iran USD 20.3 mn. Egypt was in 76<sup>th</sup> position in the world and 17<sup>th</sup> in the region during 2003, due to an insignificant level of “glass” product exports of USD 0.7 in 2003. There was no change in Egypt’s exports of “glass” products over the previous five year period.

**Trade Balance** Turkey had the highest positive trade balance of USD 58.0 mn in 2003, followed by South Africa USD 15.1 mn, and Israel USD 2.6 mn. All of the other countries have negative trade balances in the “glass” products area. Egypt is amongst the group of countries with a relatively high negative trade balances, of USD 22.7 mn in 2003, but this has fallen from a high of USD 43.7 mn in 1999. This is due to a decline in imports rather than an increase in exports. Egypt has the sixth worst negative trade balance in “glass” products in the region.

### **Regional Trade In “Glassware” Products 1999 - 2003**

**Imports** Egypt’s “glassware” imports fell from USD 30.3 mn in 1999 to USD 24.4 mn in 2003, representing a decline of 19.5%. Regional “free demand” in “glassware” products was valued at about USD 900 mn in 2003, which was expanding at a rate of 6.7% per year.

**Exports** The leading exporters of “glassware” products in 2003 were: Turkey USD 31.0 mn; Saudi Arabia USD 34.2 mn in 2002; UAE USD 29.1 mn in 2001; Iran USD 21.3 mn; Egypt USD 19.4 mn; and South Africa USD 14.0 mn. Egypt’s exports of “glassware” grew from USD 13.9 mn in 2000 to USD 36.0 mn in 2002, which is a rapid rate of growth, but fell back to USD 19.4 mn in 2003. If Egypt had managed to maintain the same level of export growth in “glassware” products during 2003, that were achieved in 2002, it would have been in second place in regional export performance for both years.

**Trade Balance** Turkey was the only country in the region in 2003 with a positive trade balance in “glassware” products, with the balance improving from USD 148.5 mn to USD 236.1 mn over the 5 year period, representing an improvement of 59.0%. In 2003 Egypt was a middle ranking country, due to the small negative trade balance, but based in 2002 it was the only other country, apart from Turkey, to have a positive trade balance.

### **Regional Trade In All Glass Products 1999 - 2003**

Turkey is the leading exporter in across all glass products , with USD 172.7 mn of exports of “glass” products in 2003 and USD 311.0 mn of “glassware” products, giving a

combined total of USD 483.7 mn of exports. It is the only country in the region that has succeeded in developing a strong position in both the “glass” and “glassware” product areas, with it demonstrating that it is possible to be a strong exporter in both areas at the same time.

In 2003 Egypt was in eighth place of regional export performance, but this is due only to its export position in “glassware”. With the majority of other exporting countries the balance of their exports is skewed towards “glass”, rather than “glassware” products, as was the case for Egypt.

### Market Opportunities In “Glass” Products

Egypt needs to improve its negative trading position in “glass” products if the overall negative trade balance is to be turned into being positive. The “glass” products that have the highest levels of opportunity within the region to support exports are:

- Float glass absorption or reflection.
- Float glass coloured.
- Ampoules
- Mirrors framed.
- Bent sheets of glass, edged, not framed.

### Market Size

The size of the regional markets in each of the above “glass” products, by selected leading countries, and in the market as a whole, are:

Product Area	Countries	Import Values In Selected Countries In USD In 2003	Regional Import Values In USD In 2003
Absorption / reflection	Turkey / Israel / Saudi Arabia / Jordan / Tunisia / Syria / Algeria / South Africa / Iran / UAE	72.0	103.1
Float coloured	Israel / Jordan / Tunisia / Syria / Algeria / South Africa / Morocco	16.1	62.6
Ampoules	Algeria	2.4	15.1
Mirrors framed	Israel / Saudi Arabia / UAE	6.6	19.0
Insulated glass	UAE	3.8	14.6
Bent, edged, not framed	Turkey / Israel	7.5	12.8
Cast glass wired	Lebanon / Morocco	2.6	13.5

### Individual “Glass” Products

In 2003 Egypt had positive trade balances in five “glass” products:

- Float tempered glass, at USD 900,000.

- Drawn glass sheets, at USD 400,000.
- Bent glass, edged not framed, at USD 63,000.
- Tubes of fused quartz, at USD 23,000.
- Insulated glass, at USD 21,000.

In none of these product areas is the positive balance sufficiently large to make an impact on reducing the large negative balance in the other “glass” products.

### Egypt’s Trade Performance 2003 – 2005

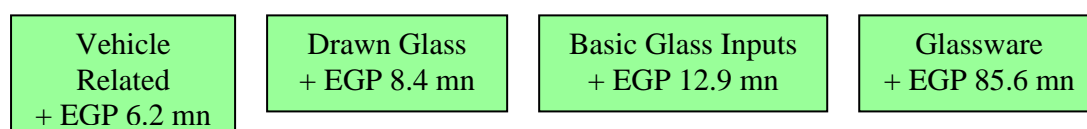
Total imports of glass products increased from EGP 289.6 mn in 2003, to EGP 428.0 mn in 2004, to a projected full year equivalent (fye) level for 2005 of EGP 436.1 mn. Over the three year period the level of increase in imports is projected to be EGP 146.5 mn, representing an annual average increase of 17% per year. Total exports increased from EGP 117.2 mn in 2003, to EGP 193.8 mn in 2004, to a projected fye level of EGP 285.3 mn for 2005. Over the three year period exports are projected to increase by EGP 168.1 mn, which is slightly less than the increase in imports. The rate of annual growth in exports, though, is higher at 48%.

Egypt has a significant negative trade balance in glass products, which was: EGP 172 mn during 2003; increased to EGP 193.8 mn during 2004; with a projected fye outcome for 2005 of EGP 150.8 mn. It is too early to determine if the results for the first five months of 2005 represent a turning-point in the trade performance of Egypt’s Glass Sector. This improvement is due to an acceleration of export performance during the first five months of 2005, which must be continued throughout 2005, if the projected reduction in the negative trade balance is to become reality.

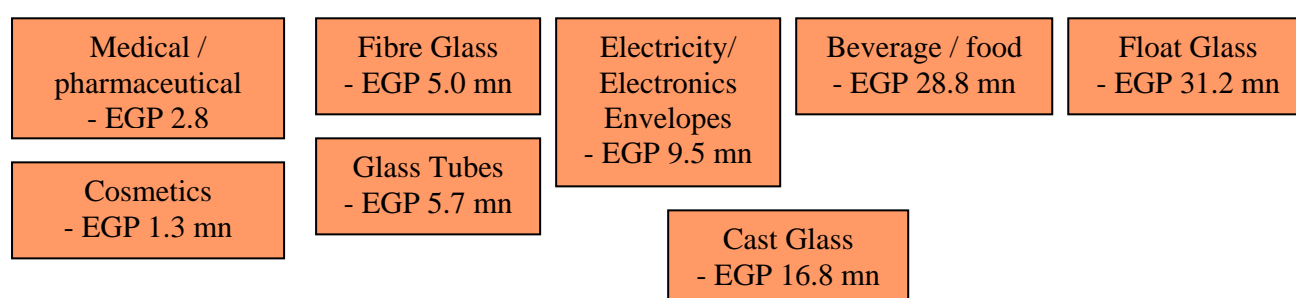
### Changing Trade Performance By Product Group 2003 - 2005

The product groups with improving trade balances represent the areas where Egypt already has strengths, or could have strengths in the future. The product groups with worsening trade balances represent the areas where Egypt has existing weaknesses, or where weaknesses are emerging

#### Improving Trade Balance:



#### Worsening Trade Balance:



## **Egypt's Export Performance 2003 – 2005**

**“Glassware” Products** Egypt's exports of glassware products are dominated by “other glassware, except lead crystal” and “other glassware of lead crystal”, which together account for between 82 and 92% of all “glassware” exports between 2003 and May 2005. During 2003 and 2004 lead crystal products were in the lead, but during the first five months of 2005 there has been a significant switch in emphasis away from lead crystal to the non-lead crystal products. These two products have given Egypt its strength in glassware products, and have been responsible for the significant growth in export performance.

### **Export Market Development**

The export performance of “other glassware, except lead crystal” demonstrates how a strategic approach to export market development can work successfully. It is this product area, on its own, that has been the power behind the significant improvement in Egypt's overall export performance in glass products. There is evidence, though, that in most other glass products the approach to exporting has been opportunistic over the period 2003 to end of May 2005. Relying on an opportunistic approach to exporting may be one of the contributory factors behind other glass product areas not repeating the same significant growth in exports as achieved by “other glassware, except lead crystal”. There are important lessons that can be learnt from this product area on how to increase exports in other glass products.

### **Structure Of Egypt's Glass Industry**

**Pharmaceutical Glass** Domestic manufacturing capacity is estimated to be about 450 mn ampoules per year, which is being fully utilised. About 100 mn ampoules are currently being exported on an annual basis, with 300 mn being imported, giving a domestic market of about 650 mn ampoules a year. There is a shortfall of domestic production of about 300 mn ampoules a year (assuming exports stay at the same level), but the capacity should be increased further if this if exports are to be increased.

**Food And Beverage Glass** The production capacity of the three main producers is estimated to be just over 200,000 tonnes per year, which is being fully utilised. Up to the end of May 2005 Egypt has imported 153 tonnes of jars and exported 506 tonnes, indicating a net export of 353 tonnes. The impact of imports and exports are negligible on the level of domestic supply.

Major food processors have been reporting shortages of domestically produced jars for a number of years and have indicated they have shelved projects to increase the exports of their processed foods. There is “pent-up” demand which exceeds 20,000 tonnes.

Two new projects are planned; the first will add 20,000 tonnes a year of bottle manufacturing capacity, which will help to reduce the large negative trade balance in this product area; the second will add 27,375 tonnes capacity in a new facility that will produce jars and bottles.

**Glassware** There are seven main producers, with fully, or semi-automated processes, and many small workshops, with manual operations. Production capacity is estimated at

just under 100,000 tonnes a year, but most of this is directed to produce middle to low quality products.

**Electric Lighting** Electric light production in Egypt is estimated to use about 12,000 tonnes of glass a year, of which a third is produced by NEEASAE, and two thirds imported as bulbs and tubes for assembly. The fye projection for the value of imported bulbs and tubes for 2005 is EGP 17.8 mn.

There is a planned investment in a new production facility for electric lighting glass to be located at Ismailia, but its production capacity is not specified.

**Flat Glass** Egypt's current production capacity of float glass is 182,500 tonnes a year, which is at least 40,000 tonnes short of domestic consumption. Egypt has weak export performance across most of flat glass products, which is partly due to the shortage of domestic production capacity in basic float glass.

The current situation of having a single float line, with the operator of this line being the main importer of float products, and there being only five sales agents for its domestic sales, results in an unsatisfactory situation for developing the potential of Egypt's high performance glass products sub-sector.

There is a proposed new investment in a new flat (presumably float) glass manufacturing facility at the Gulf of Suez, with production capacity of 125,000 tonnes a year.

## **SWOT Assessment**

### ***Strengths***

- Highest quality sand in the world and also high quality limestone.
- Virtually all input materials required to produce glass are available domestically.
- Egypt has a strategic location within three regional markets: Europe; Middle East; and Africa.
- Strong export performance in glassware product.

### ***Weaknesses***

- The lack of a recycling system for glass products, in particular bottles and jars, is creating significant problems for Egypt's glass manufacturers as they are having to operate their furnaces at lower levels of recycled inputs than is specified by the furnace manufacturers. This results in higher manufacturing costs and lower quality glass products.
- Alexandria Sodium Carbonate Co. is the only domestic producer of soda ash and is unable to meet domestic demand. Significant quantities of soda ash are being imported.
- Restrictions on the availability of certain dimensions of domestically produced clear float glass, and all coloured float glass is imported. Imports of all types of float glass have been increasing.

- Lack of a domestic high performance glass sub-sector, with this weakness applying more to building, than auto, glass.
- High dependence on imports of bulbs and tubes for domestic electric lighting manufacture.
- Lack of R&D activities that are being applied commercially.
- Shortage of trained chemical – engineers required to support the development of the industry.
- Overall weakness in flat glass production and products, resulting in weak exporting performance in this product area.

### *Opportunities*

- New projects to:
  - Increase bottle manufacturing capacity.
  - Add new production capacity for jars and bottles, this could be based on further phases of the new facility indicated above with the potential of having four furnaces, each with a capacity of 27,375 tonnes.
  - New production capacity for electric lighting glass, see project described above.
  - Add at least one new float production line.
  - Produce high performance glass.
  - Develop fibre glass manufacturing capability.
- New soda ash production facility, in addition to the extra 35,000 tonnes capacity that will start operating in the next 6 months. The region, as a whole, is a significant net importer of soda ash of about 1 mn tonnes a year, with the potential for Egypt to become a major player in this product.
- Egypt's Glass Industry to emulate the export-led growth of Turkey's Glass Industry, with Egypt's industry changing from being a net importer of glass products, to a significant net exporter. Specifically, continue to develop Egypt's strength in glassware products, and turn the current weakness in flat glass products into a strength.
- Establish a link between having a leading regional research and development capability in life cycle costing of buildings, under the concept of "environmental optimisation in environmental services" , and developing Egypt as regional base for the manufacturing of high performance glass.

### *Threats*

- New float glass manufacturing capacity is added in the region, in addition to the new facility being constructed in UAE, that reduces the likelihood of having a second and possibly third float line located inside Egypt.
- Regional high performance flat glass capabilities, for building and auto glass, are developed in other countries which takes the opportunity away from Egypt to become a major player in these products.

- Auto glass produced in Egypt continues not to meet the product quality standards and specifications of auto OEM manufacturers outside Egypt.

### **Projects And Initiatives**

The proposed projects and initiatives for Egypt's Glass Industry are:

**Recycling** Three elements to a recycling project:

- Segregation of the glass containers from other forms of rubbish at the point of consumption.
- A efficient and cost effective method of collecting the glass and delivering it to glass manufacturers.
- Stopping food processors re-using glass containers, as is, ensuring that containers are not diverted into being used for non-food products.

**Cost Competitiveness** A detailed study is proposed which should cover all forms of input materials, operating costs, overheads, financial costs, duties and taxes, and distribution costs.

**Development Strategy – “Glassware” Products** The development strategy should indicate how the “glassware” product area is to continue improving its exporting performance in the short, medium and longer-terms, for Egypt to become a major regional player alongside Turkey.

**Development Strategy – Float And High Performance Glass** A strategy is required to support the development of Egypt's float glass production capability, both as a basic product, and in the secondary high performance glass area of activity.

**Quality Assurance Of Input Materials** This initiative will address the weakness of the lack of consistency in the quality of input materials, such as sand, and the limestone sometimes being delivered as a too fine powder.

**Wadi Food Glass Project** The Wadi Food glass project should be viewed as a strategic partner for IMC in developing the capabilities, and exporting performance, of Egypt's food processors that need glass packaging.

**University – Research – Business Links** A mechanism needs to be set-up to establish closer links between University teaching departments, research centres and businesses in Egypt's Glass Industry to ensure there is a flow of well-trained engineers, chemists and managers to work in this expanding industry.

**Industry Global Leaders** Two companies have been identified that are either now, or could be in a relatively short period, be recognised as being global players, in their respective product areas.

**Workshop Conversion** A specific initiative is proposed to up-grade the existing glass workshops.

***Soda Ash Study*** To determine if Egypt can become, first self-sufficient in the supply of soda ash, followed by development into a significant regional player.

***Fibre Glass*** Further work is required to determine the reasons for this situation and if there are any existing catalysts for taking initiatives to address this situation.