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Glass Manufacturing

Executive Summary

- The value of global glass demand is expected to reach USD61bn in 2020 while the demand for glass and glass products in South Africa is expected to increase at a compound annual growth rate (CAGR) of 5.3% between 2015 and 2020.
- In 2014 it was estimated that glass comprised 0.3% of total manufacturing in the country and grew on average 1.7% per annum between 2010 and 2015.
- Consol Glass is the largest producer of glass packaging products in Africa and supplies to the food and beverage industry. The company has a turnover of R4.5bn, has an estimated 78% share of the glass packaging market in South Africa and exports to 17 countries.
- With flat demand and growth in South Africa, many of the larger glass companied are looking to the rest of Africa for growth opportunities. African markets are appealing for their high growth rates, the increase in per capita income and the growing youth population. According to Nampak, the company's "rest of Africa" operations contributed 49% to the operating profit for the 2014 year.
- Consol has its own silica sand opencast mine in the Western Cape (Bellville) , making it less dependent on imports and raw material suppliers. The Bellville number one furnace was rebuilt and expanded at a cost of R410-million and completed in July 2007 adding 60 000 tons of capacity.

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1. Industry Background

The value of global glass demand is expected to reach USD61bn in 2020 while the demand for glass and glass products in South Africa is expected to increase at a compound annual growth rate (CAGR) of 5.3% between 2015 and 2020. Growth in the glass manufacturing industry remained flat between 2010 and 2015, growing at an average of 1.7% per annum. In 2016 growth of between 3% and 4% was forecast for sub-Saharan Africa and 8.1% for East Africa

Glass is produced for use in various sectors. Demand for glass is therefore affected by demand in these sectors as well as by the specific requirements to which the glass products must adhere. The industry is directly linked to other sub-sectors of the economy, including building and construction, automotive, food and beverages, pharmaceuticals, mining, aircraft manufacture, solar energy and creative arts and crafts. The increased price of electricity and fuel has further depressed profits, as have cheap imports and depressed sales in the automobile industry. Larger companies are now looking at expansion in the rest of Africa with investments in glass manufacturing facilities there to offset declining domestic profits. The glass manufacturing industry in South Africa is small when compared to the entire manufacturing industry. In 2014 it was estimated that glass comprised 0.3% of total manufacturing in the country and grew on average 1.7% per annum between 2010 and 2015. The value of glass sales during 2015 totalled R9.317bn. Imports during 2015 were valued at R3.509bn and glass to the value of R2.072bn was exported. The glass industry has branches, warehouses and factories strategically situated across the country and in neighbouring countries.

Raw materials for both glass and fibreglass are imported, mainly from China. A number of ingredients are used in the manufacture of glass. Silica, soda ash and limestone are the main ingredients with other products added to control colour and ultra-violet properties. Consol Glass, Nampak and PFG import soda ash from Botswana Ash Recycled glass or cullet is an important raw material in the production of glass containers. Consol uses as much as 50% cullet (recycled glass) per batch of glass produced. Raw materials for both glass and fibreglass are imported, mainly from China. Consol has its own silica sand opencast mine in the Western Cape, making it less dependent on imports and raw material suppliers. The Bellville number one furnace was rebuilt and expanded at a cost of R410-million and completed in July 2007 adding 60 000 tons of capacity.

2. The South African Bottling Industry

According to the Glass Industry's Employer's Association, the glass and glass products manufacturing industry in South Africa can be divided into four main sub-sectors (Manufacture of Glass and Glass Products, Who Owns Whom, 2016)

- Glass manufacturing
- Glass processing and distribution
- Fibreglass manufacturing and
- Industrial mineral and manual glass production

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Gauteng has the highest number of registered companies (head offices) in the manufacture of glass and glass products.

2.1 Key companies with respect to producing glass packaging in South Africa

Consol Glass is the largest producer of glass packaging products in Africa and supplies to the food and beverage industry. The company has a turnover of R4.5bn, has an estimated 78% share of the glass packaging market in South Africa and exports to 17 countries.

Consul glass has five glass manufacturing sites, 15 furnaces and 36 production lines with a capacity of 950,000 tons of glass per annum or 3.5 billion glass bottles. It has retail outlets in both Gauteng and the Western Cape.

Nampak is South Africa's largest packaging company but it has also experienced and increase share of the glass packaging market recently. According to estimates, Nampak packages one-third of all glass bottle products in South Africa.

The company's glass plant in Germiston experienced capacity constraints towards the end of 2014 because of the late commissioning of the newly installed third furnace at a cost of R1.2bn.

The new furnace will make bottles for the beverage industry and it is anticipated that the new third furnace will boost market share which currently stands at 20%.

The company's glass division receives derives most of its revenue from bottling spirits, food and soft drinks, although wine is a high margin part of its business.

Growth in the manufacturing sector in the country remained flat in 2015, and the glass industry growth was in line with this at 0.1%. According to Stats SA, seasonally adjusted sales for the glass and glass manufacture of products sector for the five months from August 2015 to December 2015 represent a 3.8% decrease month-on-month.

Sales decreased from R790m in August to R776m in December. The utilisation of domestic production capacity dropped by 0.5% from 81.1% in 2014 to 80.6% in 2015, mainly due to insufficient demand, which can in part be attributed to the import of glass products which are cheaper than locally manufactured goods.

The table below shows the Import and Export Values for Glass bottles, flasks, jars, phials, stoppers, etc.

SOUTH AFRICAN TRADE DATA OF GLASS BOTTLES, FLASKS, JARS, PHIALS, STOPPERS							
EXPORTS	VALUE 2005 (ZARm)	VALUE 2014 (ZARm)	VALUE 2015 (ZARm)	IMPORTS	VALUE 2005 (ZARm)	VALUE 2014 (ZARm)	VALUE 2015 (ZARm)
Glass bottles, flasks, jars, phials, stoppers etc.	79.97	495.06	643.96	Glass bottles, flasks, jars, phials, stoppers etc.	108.82	303.71	376.41

Source: Who Owns Whom, 2016

With flat demand and growth in South Africa, many of the larger glass companied are looking to the rest of Africa for growth opportunities. African markets are appealing for their high growth rates, the increase in per capita income and the growing youth population. According to Nampak, the company's "rest of Africa" operations contributed 49% to the operating profit for the 2014 year.

3. Corporate Actions

Consol Glass is to be sold by Brait as the company is seeking to acquire majority stakes in overseas companies. Brait IV Fund has owned 30% of Consol Glass since 2007 and Brait currently owns 10% of the Brait IV Fund. Consol Glass is expected to list on the JSE in 2017 once Brait exits its investment.

Consol Glass purchased East African Breweries' glass subsidiary, Central Glass Industries (CGI) in 2015, as well as acquiring Glassforce in Nigeria.

Nampak, as part of its expansion plans for the continent, is planning to build glass manufacturing plants in Nigeria and Ethiopia. Thus far, a partner has been found for the US$68m factory in Ethiopia. (Manufacture of Glass and Glass Products, Who Owns Whom, 2016).

4. Regulations

All glass products produced locally are subject to the regulations of the South African Bureau of Standards (SABS), which determines the products' compliance with the South African National Standards (SANS), listed in Appendix 1. One of the most important for the glass manufacturing sector is SANS 10400 XA: Energy Usage in Buildings legislation which was introduced in November 2011. This legislation is the first set of minimum standards for environmentally sustainability regulating how buildings are designed and built, including minimum requirements for glazing. (Manufacture of Glass and Glass Products, Who Owns Whom, 2016)

Occupational Health and Safety Act (No 85 of 1993)

In terms of the Act, the onus is placed on the employer to provide and maintain a safe working environment without risk to the health of employees. Measures that need to be taken are outlined in the hazardous chemical substance regulations. (Manufacture of Glass and Glass Products, Who Owns Whom, 2016)

The National Environment Management Waste Act (59 of 2008) (RSA 2009)

The South African government has approved various pieces of legislation to facilitate responsible waste management and enforce environmental liability among industry members. The extended producer responsibility (EPR) approach specified in the Waste Act requires business practitioners to maintain responsibility for their products in the post-consumer stage. In this regard, businesses are required to put into place waste management programmes, facilitate the recycling of their products and invest financially in this process. They are also required to inform the public of the advantages of recycling, as well as the environmental hazards posed by the product waste. The Waste Management Amendment Bill was approved by Parliament in 2014. (Manufacture of Glass and Glass Products, Who Owns Whom, 2016)

Nampak invested R1.26bn in a new glass furnace at its bottling facility in Roodepoort in 2014. This will increase the company's capacity to 315,000 tons. The furnace is one of the most environmentally friendly and technologically advanced in the world. (Manufacture of Glass and Glass Products, Who Owns Whom, 2016)

5. Production in the Western Cape

Glass manufacturing operations are usually located in dense urban areas as it is uneconomic to transport float glass long distances. Most of the glass manufacturing companies are headquartered in Gauteng. Consol has its own silica sand opencast mine in the Western Cape (Bellville), making it less dependent on imports and raw material suppliers. The Bellville number one furnace was rebuilt and expanded at a cost of R410-million and completed in July 2007 adding 60 000 tons of capacity.

The industry is dominated by three major PG Glass, Consol and Nampak. Egypt and South Africa are the only countries in Africa that export glass.

PG Group

- It is the only manufacturer of float and patterned glass, as well as being the largest distributor and installer of building and automotive glass.

Consol

- Consol Glass is the largest producer of glass packaging products in Africa and supplies to the food and beverages industry. Consol Glass has a glass factory near its Industrial Minerals plant in the Western Cape, as well as ones in Midrand and Pretoria. Nampak
- Nampak is South Africa's largest packaging company and has experienced an increasing share of the glass packaging market recently. According to estimates, Nampak packages one-third of all glass bottle products in South Africa.

6. Industry Challenges

The volatile exchange rate and the weaker rand has meant that price increases have had to be passed on to customers. Despite this, imported finished products are, in general, cheaper than locally produced products. Furthermore the glass packaging industry is experiencing increasing competition from other forms of packaging such as polyethylene terephthalate (PET) bottles, aluminium cans and paper products. Research has shown that the flexible bag in which wine is packaged in a bag-in-box format allows wines to stay fresher for longer than in bottles improving the argument for exporting wine in bulk. However, glass is increasingly being used for high value alcoholic drinks, wine and spirits, baby foods, perfume and pharmaceutical products.

However, the Economic Partnership Agreement (EPA) South Africa signed with the EU in 2014 means that the 110 million litres of bottled wine can be exported duty-free to the EU. The EPA is expected to enable producers to bottle locally and still export to the EU at less than the current cost of exporting in bulk. As mentioned earlier, Nampak is expecting to double production of wine bottles from 20,000 to 40,000 during 2016 as a result of the EPA. According to a news report, “The Rand’s 40% pounding against the dollar and its 37% slump against the euro will further boost such growth.”

China exports manufactured goods to South Africa while importing raw materials. The rapid rate of growth in imports from China over the past decade is seen by analysts as being key to the relatively low growth in output and decline in employment in the manufacturing sector. The importation of glass and glass products from China has risen from 6.7% in 2000 to nearly 40% in 2014. The penetration of cheap imported glass into the South African market makes it hard for local manufacturers to compete. According to an industry commentator, government’s lack of action to protect local manufacturers from cheap imports could be due to the government’s fear of offending China, one of its largest investors. South Africa and China have 26 bilateral trade agreements valued at R94bn. In March 2013, a provisional duty of 40.2% was also imposed on imports of unframed mirrors from China after an application by the only South African manufacturer of this product. The importation of glass and glass products from China has risen from 6.7% in 2000 to nearly 40% in 2014.

Barriers of Entry

- Significant capital investment it requires. A glass furnace alone costs in the region of R1bn.
- The growing availability of cheaper imports;
- The large quantities of stock that need to be kept to achieve economies of scale;
- Access to low-cost energy sources; and high transport costs, manufacturing facilities have to be built close to customers
- High transport costs, so manufacturing facilities have to be built close to customers.

7. Tariff Imposed on Glass Imports

In February 2013, the International Trade Administration Commission (ITAC) increased the import duty on automotive glass from 15% to 30% as part of an initiative to grant tariff support to domestic producers threatened by imported products.

8. Trends

Some countries have introduced legislative requirements for the use of energy-saving technologies, such as making insulated glazing units mandatory or necessitating energy efficient coated glass. This has boosted demand for low-emissivity glass (Low-E), solar control glass and PV panels.

Opportunities

- Expansion into new industries such as the solar sector
- Possibilities of supplying or setting up a manufacturing concern in the rest of Africa
- Newly implemented import duties on some glass products will provide opportunities for local manufacturers to recapture market share lost to imports.
- Government policy targeting the automotive manufacturing industry promises to benefit the suppliers of automotive parts such as windscreen and window suppliers.
- Range of glass bottles aimed at the micro-brewery market.