Situation Analysis for SME Sector

Firozabad Cluster

Submitted to TERI

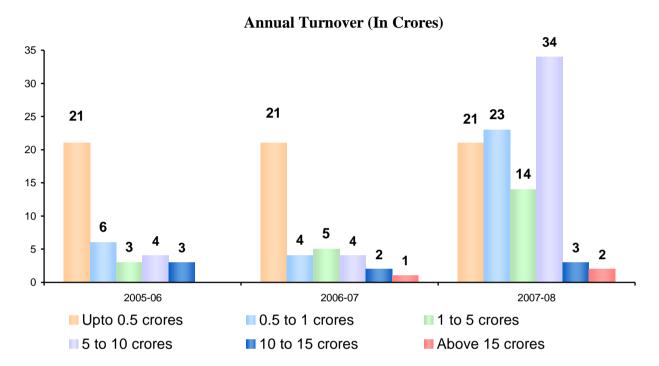
Bv



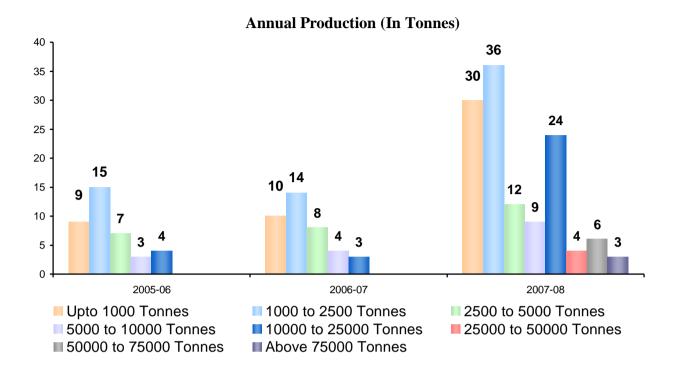
## **SUMMARY OF FINDINGS**

• There are approximately 181 units in this cluster who are engaged in manufacture of various types of glass articles in the glass industry.

# > ANNUAL TURNOVER



## **PRODUCTION**

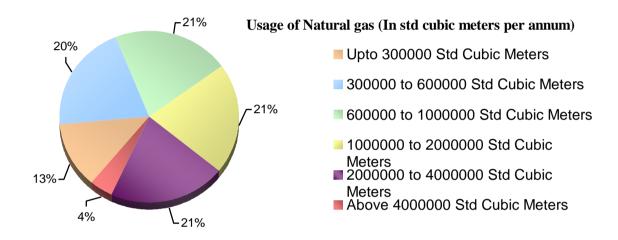


## > ENERGY REQUIREMENTS

#### CUMULATIVE FUEL USAGE

	Qty consumer per annum	Number of Units using the fuel
Natural gas	184602000 Standard Cubic Meters	136

## • USAGE OF ELECTRICITY (IN UNITS CONSUMED PER ANNUM)

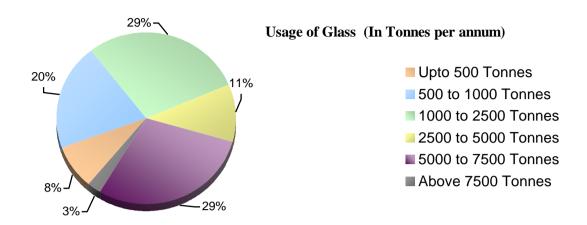


## > RAW MATERIAL REQUIREMENT

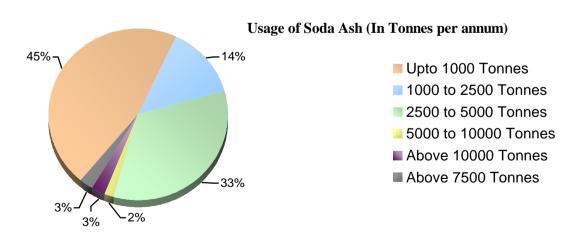
## • CUMULATIVE RAW MATERIAL USAGE

	Qty consumed per	Number of Units using the raw
	annum	material
Glass	12450900 Tonnes	122
Soda Ash	523575 Tonnes	120
Sand	170670 Tonnes	72
Calcite	1479450 Tonnes	63
Felspar	11100 Tonnes	31
Arsenic	35300 Tonnes	22
Silica	99780Tonnes	22
Calcium	18525 Tonnes	16
Sodium Nitrate	24600 Tonnes	8
Sodium Sulphate	2100 Tonnes	8
Potassium Nitrate	9900 Tonnes	8
Borax	7650 Tonnes	5

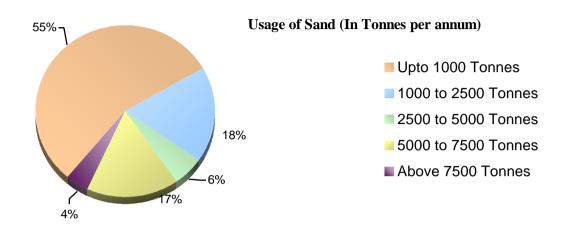
• USAGE OF GLASS (IN TONNES PER ANNUM)



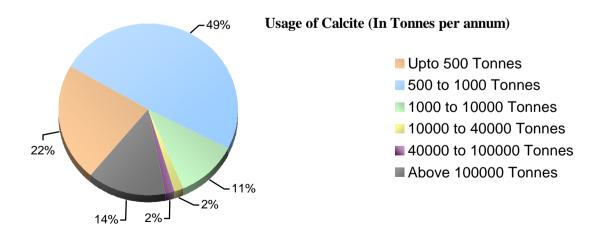
## • USAGE OF SODA ASH (IN TONNES PER ANNUM)



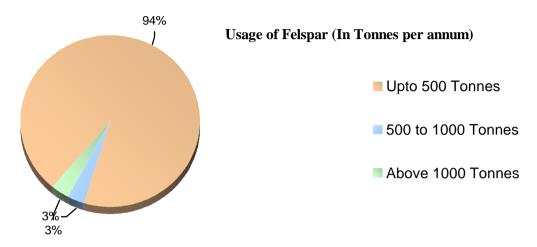
## • USAGE OF SAND (IN TONNES PER ANNUM)



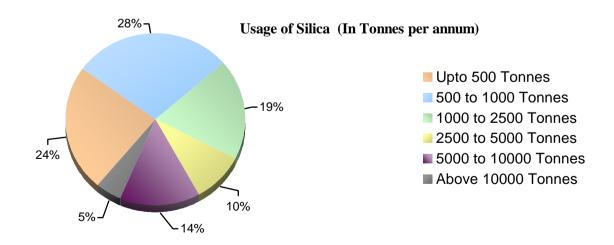
## • USAGE OF CALCITE (IN TONNES PER ANNUM)



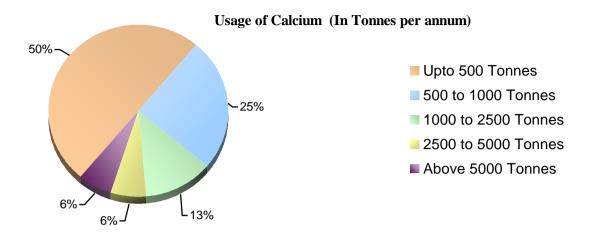
## • USAGE OF FELSPAR (IN TONNES PER ANNUM)



## • USAGE OF SILICA(IN TONNES PER ANNUM)



# • USAGE OF CALCIUM (IN TONNES PER ANNUM)

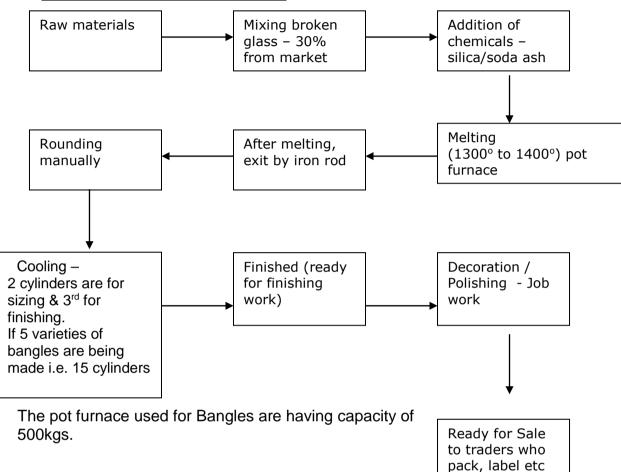


#### FIELD OBSERVATIONS

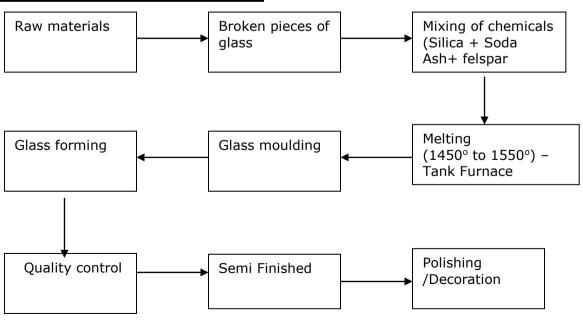
- Total units in operation currently are 181 wherein 149 units are getting full fledged gas supply whereas 32 units are getting only for processing or sizing not for melting due to availability issues.
- The units are in operation since last 25-30 years and its been there traditional business, only hands have changed after the 1986 supreme court order of converting the coal based units to gas based ones.
- These units are spread across Agra Road, Dholapur road, Raja ka Tal, Bhau ka Nagla, S.N. Rd, Coal shed area while in Makhanpur the units are in Jijoli, Nawada Mohamadpur.
- There are additional 12 units which are coal based, involved only in cutting, molding & do job work only for bangles. They are not involved in any process.
- The entire cluster comprises of Decorative glass, Tableware and bangles. The
  maximum units are of bangles app 95 followed by decorative glass (40). There
  are some units of decorative beads, Kanchas, bulbs.
- In case of bangle segment which is spread across karbala, katra pathan, mathura nagar, azad nagar, kabir nagar majority of the cash flow is for cutting, moulding, decoration, packing rather than actual production. (Melting).
- Joining / Decoration are mainly cottage industry which is by & large in each and every household – app. 3500 plus units are there, all low income population is engaged in this which is spread across Mathura nagar, azad nagar, kabir nagar, bhagwan nagar, humayanpoor, kaushalya nagar, sant nagar, chandwar gate, shyam nagar etc.
- There are certain units 70 to 75 across Mohalla Gadhaiya ,hajipura,badi chopati,
   choti chopati which are engaged in spray polish 300 bangles set.
- The big units in Forozabad are engaged in decorative / table ware galss wherein they are using Tank furnace whereas for bangles which is the major industry in Firozabad -pot furnace of 7-12 pots are used.
- There are some 350 400 plus traders spread across Gali Bhoran who pack the bangles, private labeling & sell the same.
- There is no bank support to any of the units; hardly 10% of the entire units have taken some loan that too for DG set.

- Majority of the units are running in general or 2 shift except for certain EOU units engaged in glass ware & table ware articles which run round the clock.
- Electricity situation is very grim, its available for maximum 12 –14 hours in a day and 5/6 interruptions a day are normal.
- With the introduction of gas instead of coal there have reduction in employment by nearly 30%.
- There are couple of units in Makhanpur which are manufacturing the glass bottles –refills for flasks.

## Manufacturing process (Bangle)



## Manufacturing process (Glassware)



## **Equipments**

- ❖ Furnace (Capacity 5 ton per shift, temperature depends upon gas pressure at 1300°C)
- Conveyer belt
- ❖ Motor
- Conveyor & Cross Conveyors
- Batch conveyors

## Raw materials required

- ✓ Broken Glass (Collect from local traders)
- ✓ Soda Ash ✓ Silica
- ✓ Calcium

# Approx consumption of raw materials

Broken (recycled) glass -15% Soda Ash 15% Sand 50% Sodium Sulphate -1% Lime stone 4% Dolomite 15%



Raw material mixing



**Conveyor belt for grinding** 



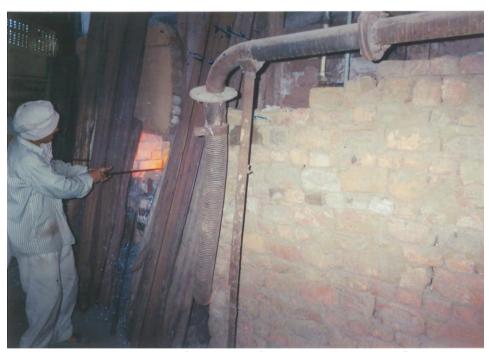
**Grinding machine (mixer)** 



**Conveyor Belt to hot furnace** 



Way to hot furnace



Hot furnace (1150 to1350 °C)



**Process of Cooling after melting** 



Manufacturing process



**Cooling & finishing** 



Sample product

#### **SERVICE PROVIDERS**

- ✓ United Chemicals
   Agra road, Bhaw Ka Nagnla
   MR. PRadeep Kumar (M- 09837035452)
- ✓ Hariom Chemical Traders
   Labour Colony
   Mr. Hariom (09219175416/9837153946)
- ✓ Manoj Chemicals Hanuman Ganj Mr. Manoj
- ✓ Glass Chemical Nanumal Radhakishan, 17, Bazaria street, Clock tower 9219426001, 6002
- ✓ Kamlesh Trading company Station road, Firozabad
- ✓ Ashok Chemical Agra Gate, Firozabad
- ✓ Yogesh Aggarwal & co M-9837049634

#### Soda Ash supplier

Gujarat Heavy Chemicals Ltd. B- 38, Institutional Area, Sector-1 NOIDA-201 301, Ph-120 2536572, 2535335 (Branch office at Firozabad)

Tata chemicals ltd Agra office Flat No. 3, 7th floor,Padamdeep Tower, Sanjay Palace,Agra 282 002. Tel: (0562) 252 1936 / 1938

## Equipment supplier

T.N.F. ENGINEERING PLOT NO. 20/5, T.T.C. Industiral Area, M.I.D.C., Turbhe, Village Bonsary, Navi Mumbai 400 705. Ph-022-27684582, 27619185, 27670780, 27688705 SUPERTECH ENGINEERING & SYSTEMS 247, UDYOG VIHAR, PHASE-I, DUNDAHERA, GURGAON - 122016 Ph-0124-4003914/4003915/4001019

## Fire brick supplier

Gupta fire bricks store Station road, Firozabad 05612-242480

Durgesh Brick works Station road, Firozabad Vinod Kr. Agarwal : 897646145/937037456

## **Association**

The Glass Industries syndicate, Firozabad.

Mr. Ashok Upadhya (M-09410665334)

Mr. Manwander Singh (05612-241319)

Glass City & Glass Manufacture syndicate Mr. Hement Aggarwal (09897087000)

UP Glass Manufacturer Syndicate Firozabad

## **BANKERS**

✓ Hardly 10% of the units are associated with banks. Mostly all the units deal in cash and have not taken any loan except the EOU units as well as some for DG sets.

Bank of Baroda Industrial area, Firozabad

Canara Bank Dakiyan Street, Firaozabad. FIROZABAD

Punjab National Bank Station road, Firozabad

State Bank of India Firozabad Town, Firozabad

Bank of Maharastra
Oriental Bank Of Commerce

Central bank of India Firozabad

State Bank of Patiala Main branch, Firozabad.