

# THE GLASS MANUFACTURING UNITS AND QUALITY OF GLASS IN DISTRICT FIROZABAD, UTTAR PRADESH, INDIA.



## Geography

**KEYWORDS:** Manufacturing, Legends, Wrapped.

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## ABSTRACT

The manufacturing of glass is one of the arts based on fire and sand. Its discovery is wrapped up in many legends which explain how the manufacturing of glass was accidentally discovered. The classification of glass industry in Firozabad is determined by the quantity of its production i.e. Large scale, Medium scale and Small scale while, the quality of glass is based on the Higher quality, Medium quality and Low quality glass. Almost three hundred glass manufacturing units are registered in Firozabad producing various types of glass products using natural gas as a fuel, not only for the inland supply but also for abroad as well..

## INTRODUCTION

Firozabad is a part of Ganga-Yamuna doab and a newly originated district during 1989 in Uttar Pradesh. Geographically, it lies in the northern central part of India (Figure-1), 40 km. away from Agra and 240 km. away from Delhi. The study area extends  $21^{\circ} 27'N$  to  $24^{\circ} 24'N$  latitudinally while, longitudinally, it is  $70^{\circ} 08'E$  to  $77^{\circ} 06'E$ . The average height A.S.L. is 169.47 metre and the total area is 2361 km<sup>2</sup>. Including three tehsils i.e. Firozabad (820.59 km<sup>2</sup>), Shikohabad (744.24 km<sup>2</sup>), and Jasrana (833.07 km<sup>2</sup>). The glass industry in Firozabad district is highly concentrated in Firozabad settled area (Figure-2). Nearly 85.5 per cent of the total glass manufacturing units of Uttar Pradesh employing about 80.0 per cent of the total labours, are in Firozabad. The significance of glass industry in the study area has led to increase many folds on account of a rapid growth in employment generating potentials. More than half of the workforce is engaged directly or indirectly in this activity, out of which approximately half of the production is exported in abroad. The study area is also known as the capital of beads which fulfils six per cent of the total demand of electric-bulbs. About three hundred industrial units are registered in Firozabad, manufacturing variety of glasses, are using natural gas as an operational fuel. However, the implementation of the modern technology during the year 1989, the output is exceptionally enhanced.



Figure 2



Figure 1

## OBJECTIVES

The main objective of the study is to identify the industrialization with particular emphasis on the status of basic and a large scale industrial units, the expansion of employment opportunities and the distribution of economic power in the district of Firozabad.

## CLASSIFICATION OF GLASS MANUFACTURING UNITS

The glass industries in Firozabad can be categorised as follows:

- The glass blowing factories employing 600 to 1200 workers having gross capital investment of Rs. 25 lakh.
- The glass units with average number of workers employed, equal to 200 and capital investment of Rs. 10 to 25 lakh, the main industrial units of the area.
- The glass units having gross capital investment of less than Rs. 4 lakh and the average number of employed workers are 50. The unit manufactures the decorative items, are less in number.

At present, the all registered units (Table-1) engaged in glass and ceramic manufacturing, comprised of 158 glass bangle units, 40 block-glass units, 5 units of glass-were, 19 units of glass-shades and 32 units are manufacturing potteries and ceramics. In Makkhanpur, there are nearly 30 to 35 glass manufacturing units while, in Firozabad, there are 20 to 30 glass manufacturing units which comprise of glass bangles and glass-were. In Firozabad, there are 1322 small scale units including 5703 dartakari units in which more than 2 lakh workers are employed.

**Table-1: The Status of Glass Industry in Firozabad.**

S. No.	Industry	No.of units	Installed capacity	Production	
				Quantity	Value (Rs. in millions)
1.	Glass-hollow were & pressed were	48	70,000 Tones	36,000 tones	125,00
2.	Composite were	—	—	—	6,00
3.	Glass bulb shells	20 CU	4,000 Pcs.	8,00 lakh Pcs.	20,00
4.	Chandelier & electric appliances	35	—	—	6,00
5.	Bangles	177	100,000 tonnes	50,000 tonnes	260,000
6.	Block glass	40	39,000 tonnes	9,000 tonnes	30,00
7.	Hollow and solid glass beads	19	306	126	1.5
8.	Signal glass	3 CU	-	300 tonnes	1.5
		342			450.00

**Table-2: Industries of Firozabad District.**

Tehsil / District	Units	Employment
Firozabad	595	26514
Jasrana	201	730
Shikohabad	656	7946
District	1452	35190

Firozabad district is almost self-reliant in respect of the major items of glass products. The organized sector is based on the adoption of modern technology which consequently brings forth the export potentials while, the small scale industries provide the opportunity of employment (Table-2).

#### PRODUCTS MANUFACTURED BY THE FIROZABAD GLASS INDUSTRIES

The distinctive feature of modern economic growth is the frequent combination of high growth of the total population and per capita product implying even high rate of growth of total product (Kuznets S. p.13). Firozabad has a global recognition on account of its glass products. The majority of manufacturing units are registered and producing the variety of its glass related products world-wide (Table-3). The products are as follows:

##### Glass Hard-wares:

The multi-angled, cylindrical and hand-knobs design glass used for house-decoration purposes.

##### Glass Art-Wares:

The toys, candle-stands, crosses, Christmas trees, fruits, image of birds and animals, God and Goddesses are made for marketing in the county and abroad.

**Domestic glass-ware:** The drinking-glasses, beer-glasses, wine-glasses, dinner-sets are manufactured in cottage as well as in factories.

##### Scientific and Laboratory glass-ware:

The test-tubes, beakers, flasks, containers and other scientific-ware are being manufactured here to fulfil the demand of colleges, universities and laboratories.

##### Automobile glass-ware:

The light bulbs, minor battery bulbs and other light equipments are manufactured here for two-wheelers and four-wheelers.

##### Street and domestic light glass-ware:

For the lightening purposes in rural and urban areas and for several utility and artistic purposes many glass items are being produced including miniature bulbs and the high voltage bulbs estimated for fulfilling six per cent of demands.

##### Glass Chandeliers:

Firozabad glass industry is producing the hanging chandeliers of various shapes, sizes, and shades from the Mughal periods, and many geometrical designs have been added to give a modern look even today.

##### Marriage glass-ware:

In Firozabad units, the bangles, Kangnas and Kadas were made for the use of ornaments, shapes like pearls, seeps, and golden shades are being added in glass to attract new Indian and foreign markets.

**Table -3: Number of Glass Based Units at Firozabad.**

Category	No. of Units
Glass Bangle Production	130
Glass Blowing	37
Block Glass	26
Glass Beads	8
Potteries and Ceramics	10
Total	211
Muffle Furnaces	1000

#### CONCLUSION

In the present study it is found that the glass industry is highly concentrated in Firozabad district. Nearly 85.5 per cent of the total glass industrial units of U.P. are found only in study area, employing 80 per cent of the total labours employed in the state of Uttar Pradesh, are engaged in glass industry here. The industry is broadly classified in two categories:

1. Glass and Bangles producing units,
2. Glass-ware and other articles of glasses producing units,

The glass-bangle section requires the number of processes to be completed before its final finish, while, glassware industries are comparatively organized and mechanized units.

The glass manufacturing industry on the whole, is a peculiar type of industry which takes several days to bring a glass furnace to the requisite temperature and utilized round the clock for several weeks. These units are located in Firozabad city and its vicinity within the radius of 25 km. including the township of Etmadpur, Tundla, Hirangaon, Makkhanpur and shikohabad.

## REFERENCE

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