

(Word Mark)

 Application is hereby made by for the registration in Part A of the Register of the accompanying Geographical Indication furnishing the following particulars:-

Name of the Applicant: Export Commissioner, Uttar Pradesh Government

Address: Export Promotion Bureau, PUCUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow, Uttar Pradesh

List of Association of persons/producers/organization/authonty/ All Control All Congrature Congrate Geographics build be included at the appropriate time.

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Type of Goods:

Class 9: apparatus and instruments for scientific research in research laboratories, weighing, measuring and signalling.

Class 11: apparatus for lighting like electric lamps and CFC lamp shells, electric lamp shades or covers; cooking and sanitary utensils; automobile headlight cover.

Class 21: household or kitchen utensils and containers; Glass Caps, un-worked or semi-worked glass (except glass used in buildings); Glassware; Double walled Glass Refills; Glass Bangles; Beads; Chandeliers; Tumblers, decorative items like Christmas Tree, animals' miniatures, statues of different types like of God & Goddess.

Specification: The product spectrum of Firozabad Glassware is very wide. The specification is followed as per the order for the glassware manufactured. However, the product spectrum can be segregated on the basis of techniques used, glass type and the product types. It can be divided into the following four classes on the basis of the technology applied in their respective classes:

- (a) Bangles (Choori) craft;
- (b) Beads Craft;
- (c) Products manufactured using mouth blowing technique; and
- (d) Products manufactured using machinery.

Soda ash and Silica are the main raw materials used for producing glass in which chemicals of known properties are mixed as raw material for achieving certain properties, like hardness, refractive index and colour, in glass. The glass produced in Firozabad can be categorized into the following three classes based on the raw material used in glass:

(a) Soda Lime Silica Glass (Soda Ash 33%, Silica Sand 66% and chemicals 1%)
 produced at around 1450 degree Celsius;

- (b) Borosilicate Glass (Boron 12%, Silica Sand 82% and Soda Ash 6%) produced at around 1600 degree Celsius; and
- (c) Lead Glass (Soft Glass) in which around 24% Led (Pb) is mixed as a raw material. Most of the products are manufactured using Soda Lime Glass.

The products spectrum of Firozabacl Glassware industry can be broadly divided into the following classes on the basis of the products line:

- (a) Bangles (Chooriware);
- (b) Kitchenware, like flask and containers;
- (c) Tableware, like wine/beer glass and decorative items, like Christmas Tree;
- (d) Electricity equipments, like Bulb Shell and CFC tubes;
- (e) Automobiles items, like headlight lamp cover; and
- (f) Scientific items, like test tubes and beakers.

Name of the Geographical Indication [and particulars]: <u>Firozabad Glass</u> (Word Mark).

Firozabad is well known for its glass goods manufacturing. It is very common to find loads of choori being carried on hand pulled rickshaws on streets [Photograph 90]. It is also known as Glass City and Suhag Nagri [Annexure 7].

Firozabad is a district head quarter in Uttar Pradesh. Agra Road, Station Road, Coal siding, Ashafabagh, Makkanpur, Dholpura and Raja ka Taal are the epicentre of glassware manufacturing in and around Firozabad town. [Annexure 2]

Description of the Goods: Firozabad is the only place manufacturing glass bangles (Choori) and glassware manufactured using mouth blown technique. Firozabad has virtually absolute monopoly in glass bangles and could be named as World Glass Bangles Capital.

- (e) The decorative items like chandeliers, Christmas Tree, animals' miniatures, statues of different kinds like of God & Goddess. The quality of glass, design and creativity of artisans in some total reflects the quality of the items prepared.
- (f) The Borosilicate glass is used for making laboratory glassware. The most of the other type of glassware are manufactured by using Soda Lime Glass. Items like bells and goods requiring clarity in glass are made by Borosilicate glass.

As per the latest data available till June 2008, the total turnover of Firozabad glassware is around Rs 800 Crore in which exports of Rs 62.2 Crore are included. Around one lakh workers are directly engaged in Firozabad glassware manufacturing and around two lakh workers are indirectly involve in glassware manufacturing. There are 421 registered glassware manufacturing units in Firozabad of which 47 units are successfully exporting glassware. [Annexure 1]

Geographical Area of production and map: Firozabad District, Uttar Pradesh. According to a report of the District Industry Centre Firozabad, *Kanch Udhog Ki Adhtan Report*, the glassware manufacturing activities are confined to in and around Firozabad town and a few other nearby places within the boundary of Firozabad district. Agra Road, Station Road, Coal siding, Ashafabagh, Makkanpur, Dholpura and Raja ka Taal are the epicentre of glassware manufacturing in and around Firozabad town. **[Annexure 2]**

Firozabad is located in north central India, in western Uttar Pradesh state, 40 km away from Agra and around 240 km away from Delhi, at the northern edge of the Deccan Plateau, at 27°09'N 78°24'E / 27.15, 78.4. The height above sea level is 164 meters (540 ft). The boundaries of district touch Etah district in north and Mainpuri and Etawah districts in the east. The Yamuna River makes its southern boundary. **[Annexure 4].** The ancient name of this town was Chandwar Nager.

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The name of Firozabad was given in the regime of Akbar by Firoz Shah Mansab Dar in 1566. [Annexure 7]

A Certified Copy of Map of Firozabad District is enclosed herewith as [Annexure 6].

Proof of Origin [Historical Records]: The Firozabad Glass industry is a cottage industry. A report generated by the District Industry Centre Firozabad **[Annexure 2]** says that glass bangles (Choori) making technique originated in Jasrana sub division of Firozabad (Firozabad district was formed in February 1989 carving out areas from Agra and Mainpuri districts) in the eighteenth century. The washer men of Jasrana use to mix dirty clothing with local soil (mud) and use to warm it overnight in containers put on fire. In the morning they use to find that there was a bright glass layer on cloths/container. This was gradually utilized for making joint-free glass bangles. In 1935 an artisan Rustam Ustad is said to have developed the craft of glass bangle making. The Chall Ki Bhatti (local fossil fuel based furnace) was used to make glass bangles. The artisans use to roll glass layer on wooden rods, which were cut into the shape of bangles (choori). After cooling it on the wooden rods it was taken off as joint-free bangle. Green colour joint-free bangles are considered as auspicious in weddings and therefore there is demand for this kind of bangles in marriages.

The historic evidences say that the glass was in use in India since ancient time. Hastinapur (Uttar Pradesh) site is the earliest from where glass in the form of glass bangles from 1100-800 B.C. reported in the review done by D. P. Agarwal and Manikant Shah for *Ancient Glass and India* written by S.N. Sen and Mamta Chaudhary, Published by Indian National Science Academy, 1985 [Annexure 3]. In 800 B.C., during the time of Yajur Veda, glass was one of the articles of which female ornaments were made. It is evident from the archaeological findings at Basti (Uttar Pradesh) that glassware found is about 2000 years old. Alan

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the Regenerative Furnace. The decision to mix a few chemicals in the raw material depends upon the required physical qualities in the glass produced.

The process of bangles manufacturing is entirely different and requires a lot of human skill. It is said that a glass bangles passes through 54 artisans expert hands. The bangle making can be divided into three main parts:

- Bangles manufacturing in which bangles with two angular open ends are manufactured;
- ii. Aligning (Sidhai) the bangle open angular ends, joining (Judai), grooving the designs on the upper side of the bangles and baking the bangles in muffle furnace (Pakki Bhatti) to make them smooth and bright; and
- Decorating the bangles by jari, ceramic work or silver or golden colouring in the grooves.

The colouring of bangles is done by either using coloured glass or applying colours to the top/upper crest of bangle. There are different methods for using colour in the glass. A colour layer (Batti) is sandwiched between two transparent glass layers at the time of making Gulli [Photograph 3]. For making a gulli first ghundi is made from a loam (Melted glass taken on an edge of a stick from the furnace) [Photograph 1]. Melted glass taken from the furnace as unrolled/spread upon a flat metal sheet [Photograph 2] and then it is re-rolled upon an edge/side of a stick. Then it is given a shape by pressing it according to give shape to the bangle. The bangle could be round, flat, oval or spiral on the basis of beating the loam in a particular fashion [Photograph 4]. The colour layer may be sandwiched between two transparent glass layers or may be put at bottom or top. The placing of colour gives different impression to the final glass. The final shaped Melted glass put on an edge of a stick is called Gulli [Photograph 5]. The gulli is put into another furnace in which melted glass wire from the gulli is thrown to the rotating round shape rod (Baelan) [Photograph 86]. The radius of the rod decides the radius of the bangles manufactured. Once a wire from gulli gets

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rolled on the rotating rod (Baelan), it keeps rolling on the rod just like glass wire getting rolled on the rod [Photograph 6] creating a spiral shape ring of glass. A rod full with the rolled glass thread is known as Muttha [Photograph 7]. Two artisans sit on the opposite sides of the furnace. At one side the first artisan, known as Tarkash, puts the gulli inside the hole of the furnace [Photograph 8] and does the process of getting struck glass wire from gulli to the rotating rod (Baelan) [Photograph 9]. Before the first gulli exhausts, the next gulli is attached to the first gulli to keep the wire getting rolled on the rod (Baelan) without a break [Photograph 10]. This keeps the continuity of the wire on a baelan. The second artisan sits with a stick in his hand to make sure that only one layer of the glass wire gets rolled on the rod at a place [Photograph 11]. Once the desired length of spiral ring (Muttha) gets ready, it is taken off and let it get cooled [Photograph 12]. Such spiral rings (Mutthas) are put in a place [Photograph 13] and then the Muttha is cut down into rings with a cut (two open ends at an angular difference) by a diamond cutter [Photograph 14 & 15]. Then the rings are collected, counted and coil of the rings is made by putting a thread into the centre side of the rings to form a Tora [Photograph 16]. The open angular ends of each bangle [Photograph 17] are aligned (Sadhai) in the same direction and joined (Jurai) by warming the open end portion on a burner. This makes a bangle with a joint. Then if grooves are required to be made, it is done [Photograph 18]. The grooving on the upper crest of the bangles is done by exposing the upper crest of the bangle to the design dye attached to the circumference of the rotator wheel. The artisan keeps rotating the bangle to get grooves on the entire bangle [Photograph 19]. The bangles are then baked into the recuperative furnace (Pakai Bhatti) [Photograph 20 & 21]. This smoothens the sharp edges of the grooves carved on the upper crest of the bangles and makes the glass bright [Photograph 22 & 23]. This is the process of bangles manufacturing. There is another part of embroidery/decoration on the bangles [Photograph 24] for making them more attractive.

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The glassware manufacturing by mouth blown technique is explained here as an example for double walled glass refill (flask) without any limitation for the other glassware. Melted glass (loam) is taken from the regenerative furnace [Photograph 83] at an end of a hollow metal stick/rod [Photograph 25]. The loam is blown from mouth [Photograph 26] by raising the loam above face. It is blown keeping the desired size of the flask in mind. The blowing process creates cavity inside the loam [Photograph 27]. Once the desired size is achieved, it is put inside the dye to give it a shape [Photograph 28]. The dye provides the outer surface of the flask and after giving the shape the dye is taken-off. The joint between the stick/rod and the blown glass is cut-off [Photograph 29]. A small loam is placed on the open end created by cutting-off connection between the stick/rod of the shaped glass and the semi-finished vessel [Photograph 30]. The semi-finished vessel is placed on a platform and it is holed softly and a dye is pressed upon the *loam* placed on the open end of the semi-finished flask [Photograph 31 & 32]. This process makes the inner wall of the flask and the desired double walled flask structure gets ready [Photograph 33]. Now for creating vacuum between the two walls of the flask, a tube is added at the bottom side of the flask [Photograph 34 & 35]. All this takes place between temperature range between 1400 degree Celsius and 1200 degree Celsius [Photograph 36]. Then the flask is put upon the conveyer belt of the temperature chamber (Layer) in which its temperature is gradually brought to the normal temperature [Photograph 37]. The temperature control chamber is a long chamber in which the glassware moves on a covered conveyer belt and gradual decline in the temperature is set inside it by the means like thermostat [Photograph 38 & 39]. The proportion of temperature and speed of the conveyer belt is fixed inside the chamber depending upon the desired physical and chemical properties of the glassware. The controlled gradual decrease in glassware temperature inside the temperature control chamber ensures that the warm glassware does not break while cooling down to the normal temperature.

At the other end of the *Layer* the flasks are collected [Photograph 40]. The cracked, broken or deformed pieces are thrown in sink and the rest are collected for the next processing [Photograph 41]. Silver Nitrite is poured into the flask through the tube earlier added [Photograph 42] and then the flasks are placed upon the rotating rods [Photograph 43]. This keeps rotating the flask and thus the inner walls (walls facing each-other) get silver coated. The flasks are checked after this process [Photograph 44]. They are hanged inside an oven to get them dry [Photograph 45 & 46]. Then vacuum is created between the two walls of the flask and then the tube at the bottom of the outer surface is sealed [Photograph 47]. The flasks are tested for keeping liquid, like water, tea, milk, in a desired temperature range [Photograph 48]. The cleared flasks after the testing are send for packaging [Photograph 49].

The other types of goods are manufactured by using machines with minimum human intervention. Generally glassware like bottles [Photograph 87], drinking glass vessel [Photograph 88], automobile headlight lamp cover [Photograph 89] are manufactured by this process. The Melted glass (Loam) taken from the regenerative furnace is pressed and put inside the dye to give it a shape. Then it is placed inside a chamber (Layer) to cool it down to the normal temperature. The automobile headlight lamps are polished to give it a finish [Photograph 50]. The headlight lamp covers for all cars around the world are made in Firozabad and dyes for the same were present in a huge dye warehouse [Photograph 51]. Even the dyes are made in-house and the manufacturers are equipped with the machinery for the same [Photograph 52].

The Beads manufacturing can be divided into two parts. First part holds the manufacturing of hollow tubes measuring around two feet [Photograph 53]. Melted glass is taken from the Pot Furnace [Photograph 54 & 55] and is spread on a flat sheet [Photograph 56]. It is curled up [Photograph 57] to be placed at the mouth of the hollow pipe which is connected to the dye. The glass passes through the dye with compressed air. At the bottom of the dye there is an outlet

from which the glass comes out in the shape of a hollow pipe [Photograph 58]. It is kept running for almost 20-30 meters before cutting it [Photograph 59]. The collected hollow tubes are then screened for the desired radius [Photograph 60]. The selected lot is weighted [Photograph 61] before making their bundles [Photograph 62]. Both hand cutters [Photograph 63] and automatic cutters [Photograph 64] are used for cutting the hollow tubes into small pieces of the desired length [Photograph 65 & 66]. The pieces are then mixed with carbon [Photograph 67] such that carbon gets filled inside the hollow space (pore) in between the circumference. It is then put into an input chamber [Photograph **68]** which passes the cut pieces to a hollow revolving hot metal pipe. In this pipe the pored pieces of hollow glass tube keep revolve with the pipe [Photograph 69]. This makes the sharp edges of the hollow glass tube pieces smooth and they get round shape by the time of coming out of the pipe [Photograph 70]. The carbon inside the hollow glass tube pieces helps in remaining the pore open in the process of rounding the sharp edges. The collected hollow glass tube pieces takes the shapes of beads. They are now washed to remove the carbon from the pore [Photograph 71]. The wet beads are passed through a hot chamber to make them dry [Photograph 72]. This makes the beads ready for packing [Photograph 73].

There is another kind of beads which look like artificial diamond [Photograph 74]. The manufacturing process is simple for it. Transparent glass solid rods [Photograph 75] are placed inside a hot chamber where the temperature is enough to melt the placed rods [Photograph 76] to the desired extent of securing impression of the dye on it. The melted rods are passed through a dye which gives a shape and impression up on the melted rod. The output is a long strip with dye impression [Photograph 77, 78, 79 & 80]. The output material is placed in a smooth crusher who crushes the waste material around the beads and the output is the final beads [Photograph 81].

Articles like statues of God and Goddess are also manufactured [Photograph 82] using dyes and mouth blown technique.

The technological development saw introduction and use of Japanese Pot, Monkey Pot and now Regenerative Tank Furnace [Photograph 84] respectively. The use of fossil fuel has seen a low since the introduction of natural gas as fuel. Now natural gas burners [Photograph 83] are in use in Regenerative furnaces. The methods explained above are examples of different categories of glass goods manufacturing and do not represent method of manufacturing of entire range of glass goods manufactured at Firozabad.

Uniqueness: Generally an artisan works on a particular process of a product manufacturing and masters the technique in long run by continuous practice of the process. A bangle as a final product passes through 54 expert hands before becoming a finished product. Further the technique of taking out melted glass on a hollow metal stick side and blowing it by mouth using mouth blowing technique is very dangerous and accident prone and therefore needs very high quality skills. Further the entire manufacturing process for any goods takes place at a very high temperature and thus all is done swiftly before letting deterioration in the temperature of the glass to the point below which it becomes useless for giving a shape. It in itself signifies that craftsmanship of the highest order is required for accomplish any task. The craftsmanship of the product line is so unique that even dye for giving a particular shape to the glass is made in Firozabad only. There are industries at Firozabad which have earned high integrity and reputation for particular segments of glassware and they deal only in that segment. The goodwill and reputation earned in long run is the fuel for propelling the engine of glassware economy of Firozabad.

Inspection Body: The export orders mostly come with their own specifications and samples of the products manufactured in compliance to such orders are tested and certified for the specified parameters mentioned in the order specification by The Technology Development Centre, Firozabad. The Central Government runs this facilitation centre. A proper system for stimulating quality in glassware is under consideration of the U.P. State Government.

Other: The Firozabad glassware spectrum is as lengthy and wide as the customers' base. Therefore glassware for all kind of customers are made and hence quality of the goods differ. Glassware made on order with quality specification is honoured as such.

Along with the Statement of Case in:

- i. Classes 9 in respect of apparatus and instruments for scientific research in research laboratories, weighing, measuring and signalling.
- Class 11 in respect of apparatus for lighting like electric lamps and CFC lamp shells, electric lamp shades or covers; cooking and sanitary utensils; automobile headlight cover.
- Class 21 in respect of household or kitchen utensils and containers; Glass
 Caps, un-worked or semi-worked glass (except glass used in buildings);
 Glassware; Double walled Glass Refills; Glass Bangles; Beads; Chandeliers;
 Tumblers, decorative items like Christmas Tree, animals' miniatures,
 statues of different types like of God & Goddess.

in the name of Exports Commissioner, Uttar Pradesh Government whose address is Export Promotion Bureau, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow (Uttar Pradesh) who claims to represent the interests of the producers of the said goods to which the geographical indication relates and which is in continuous use since in respect of the said goods.

- The application shall include such other particulars called for in rule 32(1) in the Statement of Case. [Annexure 10]
- All communications relating to this application may be sent to the following address in India:

Intellectual Property Lab

2/11, Vishwas Khand-2, Gomti Nagar,

Lucknow - 226010, U.P.

Email: mail@iplab.in

Phone: +91-522-2309704

Fax: +91-522-4078338

Dated this 28 day of January 2009

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Markandey Singh Additional Exports Commissioner Uttar Pradesh Government

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A STATEMENT OF CASE

- The application is being filed for and on behalf of the Firozabad Glassware Industry by the Export Commissioner, U.P. State Government for promoting exports from the State and for preserving the hard earned reputation and goodwill secured in a long period by consistent craftsmanship by the means of intellectual property rights.
- 2. The secret of uniqueness preserved in and around Firozabad town for glass craftsmanship is easy availability of all resources in Firozabad excluding raw material and orders for the finished products. Fifty Four expert craftsmen work upon a glass bangle (choori) to give it final shape and look. The entire range of craftsmen for bangle manufacturing does not sit under a single roof. After manufacturing the bangles with two open ends (one angular cut), small segments of work are outsourced for different processes to the different craftsmen working from different cottage industries. The interdependency of manufacturers and craftsmen is so deep that both are made for each-other and their indigenously developed glassware manufacturing process economically possible only at Firozabad. The glassware range is so wide and vivid that no other place could have come to compete with Firozabad glassware industry.
- 3. Mostly a craftsman devotes his entire career in learning and mastering a single process. This provides perfection in his work, excellent craftsmanship and therefore high appreciation for the glassware. Almost entire craftsmanship is learned and mastered in real working conditions, so the most of the craftsmanship knowledge has orally transmitted from one

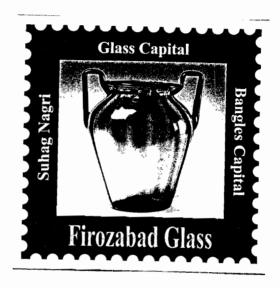
generation to the other. This may also be another reason for remaining craftsmanship confined to Firozabad only.

- 4. The standard, quality and integrity of the products depend up many factors. The orders come with their own specifications for quality and standards and they are followed, samples are tested at MSME Technology Development Centre a Government laboratory and certified before sending the consignment. The product range for the open market is manufactured for all kind of customers and their quality vary with price.
- 5. Three certified copies of Firozabad district are enclosed.
- 6. The ingenuity of Firozabad glassware is entirely based on excellent craftsmanship and practical knowledge of glass articles manufacturing.
- An inspection structure is proposed and under consideration with the State Government for setting benchmark for the glass articles manufactured at Firozabad.
- 8. All the people and organizations related to the glassware manufacturing will be included after securing the registration of geographical indication and the same shall be made available to the Geographical Indication Registry at the time of filing requests for the registration in the Part B of the register.

REPRESENTATION

(Both Word and Logo Marks)

FIROZABAD GLASS



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APPLICANT	Export Commissioner, U.P. Government
ADDRESS	U.P. Export Promotion Bureau, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow
GOODS	apparatus and instruments for scientific research in research laboratories, weighing, measuring and signalling; apparatus for lighting like electric lamps and CFC lamp shells, electric lamp shades or covers; cooking and sanitary utensils; automobile headlight cover; AND household or kitchen utensils and containers; Glass Caps, un-worked or semi-worked glass (except
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Glass Bangles; Beads; Chandeliers; Tumblers, decorative items like Christmas Tree, animals' miniatures, statues of different types like of God & Goddess.

CLASSES 9, 11, and 21

SPECIFICATION

The product spectrum of Firozabad Glassware is very wide. The specification is followed as per the order for the glassware manufactured. However, the product spectrum can be segregated on the basis of techniques used, glass type and the product types. It can be divided into the following four classes on the basis of the technology applied in their respective classes:

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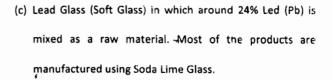
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- (e) Automobiles items, like headlight lamp cover; and
- (f) Scientific items, like test tubes and beakers

PERIOD OF USE

Proposed to be used.

NAME AND ADRESS OF THE AGENT

Rahul Dutta, Advocate Intellectual Property Lab 2/11, Vishwas Khand-2, Gomti Nagar, Lucknow-226010, U.P. Phone: +91-522-2309704 Fax: +91-522-4078338 Email: mail@iplab.in

Date: August 3, 2009 Place: Lucknow <u>المحمد لمحمد المحمد المحم المحمد المحم المحمد المحم المحمد المحم المحم المحمد المحمد المحمد المحمد المحمد المحمد المحمد المحمامحمد المحمد المحم المحمم المحمم المحم</u>

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