

**THE GEOGRAPHICAL INDICATIONS OF GOODS
(REGISTRATION AND PROTECTION) ACT, 1999**

FORM GI-1

GI APPLICATION No.

1617

A	Application for the Registration of a Geographical Indication in Part A of the Register
	Section 11(1), Rule 23(2) Fee: Rs. 5,000

Received Rs. 5000 in cash
Cheque/DD/MO on 9-2-09
vide entry no. 0026 in the
register of valuables
Cashier D.D.O.

MORADABAD METAL CRAFT

(Word Mark)

1. 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, PICUP Bhawan, Vibhuti Khand, Gomti Nagar, Lucknow, Uttar Pradesh

LIST OF ASSOCIATION OF

PERSONS/PRODUCERS/ORGANIZATION/AUTHORITY: All related and active industry members would be included at the appropriate time.

TYPE OF GOODS:

Class 6: Common Metals and their Alloys, goods of common metals not included in other classes.

SPECIFICATION: The product spectrum of Moradabad Metal Craft is very wide. The metal(s) and alloys used, dimensions of the good, and designs on and of the metal craft all depend upon the specifications provided in the orders, especially export orders, received from buyers. The goods quality both in material terms and craftsmanship differ for the items manufactured for the open market keeping taste and pocket size of the target customers. However, the product spectrum can be segregated on the basis of techniques used, metal type and the product types.

Sand casting technique is used for giving shape to the goods. Electroplating technique is also used.

NAME OF THE GEOGRAPHICAL INDICATION [AND PARTICULARS]:

Moradabad Metal Craft (Word Mark).

Moradabad, well known for its brassware and is popularly known as *Peetal Nagri*. Gradually more metals have been introduced in the market and thus Moradabad became known for its metal craft. Moradabad metal handicrafts are made for more than hundred years and it is said that the metal craft history in Moradabad date backs to Mughal period.

DESCRIPTION OF THE GOODS: Moradabad is renowned for brass work and has carved a niche for itself in the handicraft industry throughout the world. The modern, attractive, and artistic brass ware, jewellery and trophies made by skilled artisans are the main crafts. With time new products were introduced

time to time and now metals like iron, aluminium, nickel and silver are also used in metal handicraft items.

The attractive brass wares are exported to countries like USA, Britain, Canada, Germany and Middle East Asia. There are about 600 export units and 5000 industries in the district dealing with metal crafts. Moradabad exports goods worth Rs. 2200 crore every year. Recently other products like Iron Sheet Metal-ware, Aluminium Artworks and Electroplated artworks have also been included as per demand of the foreign Buyers **[Annexure 4]**. There are 5250 metal ware and metal craft small scale (SSI) units in Moradabad District. These units are generating revenue worth Rs 3600 crores. These units are providing direct employment to 26800 artisans and 22500 workers and artisans indirectly. **[Annexure 1]**

GEOGRAPHICAL AREA OF PRODUCTION AND MAP: Moradabad District, Uttar Pradesh.

Moradabad city is situated in western U.P. between 28°-21' to 28°-16' Latitude North and 78°- 4' to 79 Longitude East. Ram Ganga River flows in the north east and Ganga River is there in south west of the city. **[Annexure 2]**

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

PROOF OF ORIGIN [HISTORICAL RECORDS]: Moradabad metal craft industry is a cottage industry. It is very common to find small workshops running in the houses of artisans. **[Annexure 1]**

George Watt in his book *Indian Art at Delhi 1903* published by Motilal Banarsidass (ISBN 81-208-027-0) in 1903 (Reprinted in 1987) provides a vivid description of Delhi Exhibition held in December 1902 in the form of a catalogue.

He writes that Moradabad is the original and to this day the chief centre of lac-coloured metal craft (p 18). He reports that from Moradabad several examples of a crafts have come belonging to the tinned, painted and Lac-coloured wares and Tinned metal (copper) (p 15). There is also mention of a large settee made by Niaz Ullah of Moradabad who was awarded for his craft brought to the exhibition (p 18). [Annexure 3]

Tirthankar Roy in his book *Traditional Industry in the Economy of Colonial India* (ISBN 0 521 65012 7) published by Cambridge University Press (1999) writes that brassware in this town (Moradabad) was an old industry, but the pre-seventeenth-century history is undistinguished. The later growth came through a combination of brass casting initially for firearms, engraving on coins, and an attempt to reproduce a zinc *hukka* made in Bidar. Groups of artisans' families, courtiers at Delhi, and their patrons are credited with the development of these skills here. In the eighteenth century, Moradabad traded with, and probably received engraving designs from, Persia, Turkey, and Egypt. However, the most spectacular period of growth began in the late nineteenth century as, within a few decades, two crucial railways intersected here, the East Indian towards Calcutta and Aligarh, and the Avadh-Tirhut with an access to the hills. With the railways came not only easier transport, but also go downs and storage space. For the bulk-intensive industry this was important. An essay in the 1885 issue of the *Journal of Indian Art* mentions that lacquerware in the town saw 'great strides during the last few years', resulting in expansion and diversification into 'an infinite variety of articles both for ornaments and for utility'. This was an effect of a widening long-distance trade. In 1945, railway returns show that Moradabad wares went to 226 towns, no one destination being dominant, spread all over the north from Karachi to Calcutta. In 1924, the town had 7-8,000 full-time brass workers, in 1945 and 1960 about 10,000 and in the late 1970's 13,500 (p 137-138) [Annexure 4].

The official website of Moradabad District says that present Moradabad city was established as the head office of Chaupala Pargana during Emperor AKbar's regime. In 1624, Rustom Khan, the governor of Sambhal, captured it and set up a fort at this place and named it as Rustom Nagar. Later on it was named as Moradabad after the name of Shahjahan's son Murad Bux and this name still persists. Physical development of the city was started after the construction of Jama Masjid by Rustom Khan in 1632. **[Annexure 1]**

The senior members of the metal industry say that Mughals brought *Kansa* (an alloy of copper, zinc and tin) kitchen utensils (*Bartan-Bhanda*) from Iran, Turkey and Egypt to India. Some of the migrants who brought the utensils to India settled in Moradabad. They started manufacturing these utensils at Moradabad. There were no designs (engravings) on such utensils. Gradually the infusion of Iranian craftsmanship was reflected in Moradabad made metal utensils in the form of engravings on the utensils. Till the decade of 1970s metal (brass or Kansa) utensils with engravings on them were made at Moradabad. The decade of 1980s brought decline in demand of engraved utensils and once again plane utensils came back in demand.

The metal craft of Moradabad is based on casting technology which is said to be an Iranian craft.

Haji Kallan was the first exporter of metal ware from Moradabad in the decade of 1950s. The beginning of export was by exporting brass trays for carrying *attar* (perfume) bottles and brass containers for carrying *Damdham* (Holy water of Mecca) on which *hajib* (prayers from Holy Quran) were engraved to the Arabian countries.

Till 1990 mostly only brass ware were made at Moradabad. In 1991 iron items in handcraft items were introduced at Moradabad by a few innovative manufacturers and exporters. Items made of alloy of brass and iron and power coated items were introduced. Next year in 1992 aluminium items came in

demand and Moradabad complied with the demand. Later on iron rusting handicraft items were introduced and appreciated by the world.

The Export Promotion Bureau (EPB) in a letter certifies the existence in working condition of registered 5250 (five thousand two hundred and fifty) small scale metal craft units at Moradabad. The annual production of registered metal craft units is around Rs 3800 (Three Thousand and Eight Hundred) crore. The Moradabad metal craft is exported around the world and UK, US, Canada and Gulf Countries are the main countries where the exported metal crafts assignments are sent. The letter of the EPB is supported by five industry registration certificates of Moradabad metal craft units which are existing for a long time [**Annexure 1**].

METHOD OF PRODUCTION:

Sand based metal casting process is used in making metal handicraft items. The sand mold casted goods are produced by forming a mold cavity from a sand mixture and pouring molten liquid metal into the cavity in the mold. The mold is then cooled until the metal has solidified and then separated from the mold.

The casting process is conducted in a container which is known as flask or molding box. It is a tool used to contain a mold covered with sand mixture in metal casting. The flask can be any size so long as it is bigger than the pattern being used to make the sand mold. Flasks are commonly made of steel, aluminium or even wood. A simple flask has two parts, the cope (upper part) and the drag (lower part). In casting, a sprue is the passage through which a molten metal alloy is introduced into the mold cavity. The uniqueness of the flask used in Moradabad is its side sprue [**Photograph 29**].

The mold is known as pattern as it carry the replica of what is to be made by casting. The pattern designing is done using Computer based designing software like Computer-aided design (CAD). A slightly over-sized master pattern is made of wood, wax, metal, plastic or other material. Both the Computer-aided Machine (CAM) manufacturing and the manual manufacturing of pattern are common in Moradabad. From the master pattern, patterns are made. The Moradabad metal industry generally uses wooden patterns. The pattern needs to incorporate suitable allowances for shrinkage which is known as contraction allowances. The exact value of contraction allowance depends on the alloy being cast.

The use of sand mixture in sand casting is known as binder. The impression of pattern is taken over the binding metal or alloy. The binder is made using Ram Ganga sand (80% to 95%), black clay (2% to 4%), mustered oil (5%) and molasses (2% to 10%) for sand casting. Sand is used as a refractive material in sand moulding system. Fine sand of Ram Ganga has proved very good for the sand casting. Molasses is used as a binding material.

In the sand casting procedure, first, the mold is placed on a board **[Photograph 24]**. Sand binder material is sifted over the pattern until the model is covered by a few inches of sand and the outer circumference of the same is covered by a round metal ring **[Photograph 25]**. It is reversed and put into the molding box (cope) and covered with the binder sand and pressed **[Photograph 26]**. This process creates an impression on the binder material filled in the mold **[Photograph 27]**. This creates the upper portion of the sand mold. Similarly the lower mold (drag) is prepared by making the impression on the sand binder material **[Photograph 28]**. The upper half of the mold (cope) is placed over the lower half of the mold (drag). Both carry their respective mold impression on the sand binder material. The mold after the integration of the both halves (cope and drag) looks like as shown in the **[Photograph 29]**. The bowl like opening, known as sprue, is the inlet for the molten metal to be poured inside the mold and to fill-up the space (cavity) created by the mold impression. The metal of which the

desired sand casted good is to be made is melted and poured in the mold box through sprue [Photograph 30]. The mold box is left in open for cooling down and providing time for the molten metal poured in to solidify and take the desired shape. The mold box is opened and the binding material is removed to secure the good prepared [Photograph 31] by sand casting technique.

The granules appear on the surface of casted goods and the surface use to rough [Photograph 1]. The requirement for making the surface of the good is fulfilled by scratching the surface by an edge tool with flat steel blade with a cutting edge known as chiseling tool [Photograph 2]. The good is fixed in the jaws of the wooden mold at an edge of the turning machine and then the rotating surface of the casted good is scratched by the pointed side of the chiseling tool [Photograph 3]. In the chiselling process the upper crest of the surface, at which the process is applied, gets peeled-off and unwanted material gets removed [Photograph 4 & 5]. This makes the surface of the good smooth and bright [Photograph 6, 7 & 8]. The turning machine and chiselling tool are also used for giving curves and threading in goods to achieve the desired texture in the surface of the goods [Photograph 9, 10 and 11]. The Grinding or Buffing machine is used for polishing the surface of the finished goods [Photograph 12 & 13]. The items which do not require colouring are sent for the silica polishing [Photograph 14]. Else after colouring the goods, if required, the goods are finally polished. The finished goods, after periodic checks at each stage for the quality, go for the packaging [Photograph 32].

The colouring on the goods is done for many purposes and different techniques. First and the foremost, there are goods on which some kind of carving (especially hand carving) has been done. It may be the carving on a metal sheet and then the metal sheet is given a shape [Photograph 15] or a casted good on the surface of which carving is done. After the carving, the carved portion of the good is coloured. For colouring, it is dipped into a container filled with hot colour for some time. This process provides colours the surface of the dipped goods and

then heating process is applied to the goods to fix the colour. The process of powder coating is also in practice.

The method for colouring the goods is using electroplating technique. Electroplating is a process of using electrical current to reduce cations of a desired material from a solution and coat a conductive object with a thin layer of the material, such as a metal. Electroplating is primarily used for depositing a layer of material on an object. The process used in electroplating is called electro-deposition. The part to be plated is the cathode of the circuit. The anode is made of the metal to be plated on the part. Both components are immersed in a solution called an electrolyte containing one or more dissolved metal salts as well as other ions that permit the flow of electricity. A rectifier supplies a direct current to the anode oxidizing the metal molecules that comprise it and allowing them to dissolve in the solution. At the cathode, the dissolved metal ions in the electrolyte solution are reduced at the interface between the solution and the cathode such that they plate out onto the cathode. The rate at which the anode is dissolved is equal to the rate at which the cathode is plated, vis-à-vis the current flowing through the circuit. In this manner, the ions in the electrolyte bath are continuously replenished by the anode. This process is generally used for placing a thin coating of nickel [Photograph 19], copper [Photograph 20] and silver [Photograph 21]. For an example a handicraft made of aluminium [Photograph 22] is electroplated and a thin layer of copper is coated [Photograph 23] on it.

Antique finish metal handicrafts [Photograph 33] are also in great demand which is done by paint and plating. The antique finish is also given by different process and in one such process the goods [Photograph 17] are coloured [Photograph 16 & 18] before giving the antique look. The metal sheets [Photograph 37] are cut into different shapes [Photograph 34 & 42] and then these pieces are either pressed to make a doll on a double action and then spin to give a shape with the

help of a die. The left over scrap [Photograph 35 & 36] after cutting the metal sheets is recycled.

Moradabad metal craft industry makes the metal alloys, especially brass, bricks [Photograph 38] and sheets [Photograph 39]. The raw material is melted in furnace [Photograph 40] and the molten metal is poured into the bricks mold boxes as shown in photograph 40. On cooling, the molten metal gets solidifies and metal bricks [Photograph 41] get made. Both the hot and cold pressing machines are used to press the metal bricks to give them metal sheets shape of the desired width. Unique items like brass made light lamp covers for ship [Photograph 43] are also made in Moradabad purely due to excellent craftsmanship and superb knowledge of metal craft.

Although brass is an alloy of Copper (60%) and Zinc (40%). However, the copper to zinc ratio may differ to give different properties to the brass produced by melting them together. Moradabad based metal crafts industry makes metal brick shaped bars [Photograph 38 & 41] by pouring in melted brass (mixture of copper with zinc). Brass has higher malleability than copper or zinc. The relatively low melting point of brass (900 to 940°C, depending on composition) and its flow characteristics make it a relatively easy material to cast. By varying the proportions of copper and zinc, the properties of the brass can be changed, allowing hard and soft brass making.

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 manufacturing process. The uniqueness of Moradabad metal craft is in the Ram Ganga river sand and inlet of the mould used for metal casting. The sand is so thin and soft that it helps in forming perfect binding material used in metal casting process.

It in itself signifies that craftsmanship of the highest order is required for accomplish the desired task.

The goodwill and reputation earned in long run is the fuel responsible for propelling the engine of metal ware handicraft centric economy of Moradabad. The most of the processes are pure handicrafts with minimum or no machine intervention. The process knowledge is mostly transmitted by practice exposure to the new artisans by the master craftsmen. There is hardly any literature or vocational training schools where the knowledge is imparted.

INSPECTION BODY: The export orders mostly come with 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 Technology Development Centre, Moradabad. This is a Central Government facilitation centre. The Government of Uttar Pradesh may consider a system for maintaining the quality and standards for the goods made for the open market.

OTHER: The Moradabad metal ware spectrum is very lengthy and wide as the customers' base. The metal ware handicrafts for all kind of customers are made and hence quality of the goods may differ.

Along with the Statement of Case in Classes 6 in respect of Common Metals and their Alloys, goods of common metals not included in other classes 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.

2. The application shall include such other particulars called for in rule 32(1) in the Statement of Case. **[Annexure 7]**
3. 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 day 26 of January 2009



Markandey Singh
Additional Exports Commissioner
Uttar Pradesh Government

