REPORT OF DOMESTIC MANUFACTURING OF ITEM HAVING HIGHER IMPORT & SCOPE OF EXPORT

on

STONEWARE JAR

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Introduction:

Stoneware which, though dense, impermeable and hard enough to resist scratching by a steel point, differs from porcelain because it is more opaque, and normally only partially vitrified. It may be vitreous or semi-vitreous. It is usually coloured grey or brownish because of impurities in the clay used for its manufacture, and is normally glazed.

Stoneware is a rather broad term for pottery or other ceramics fired at a relatively high temperature. A modern technical definition is a vitreous or semi-vitreous ceramic made primarily from stoneware clay or non-refractory fire clay. Whether vitrified or not, it is nonporous (does not soak up liquids); it may or may not be glazed. Historically, across the world, it has been developed after earthenware and before porcelain, and has often been used for high-quality as well as utilitarian wares.

As a rough guide, modern earthenwares are normally fired in a kiln at temperatures in the range of about 1,000°C (1,830 °F) to 1,200 °C (2,190 °F); stonewares at between about 1,100 °C (2,010 °F) to 1,300 °C (2,370 °F); and porcelains at between about 1,200 °C (2,190 °F) to 1,400 °C (2,550 °F).

Categorization of Product :

In industrial ceramics, five basic categories of **stoneware** have been suggested:

- Traditional stoneware: a dense and inexpensive body. It is opaque, can be of any colour and breaks with a conchoidal or stony fracture. Traditionally made of fine-grained secondary, plastic clays which can be used to shape very large pieces.**Stoneware Jar** is under this category.
- Fine stoneware: made from more carefully selected, prepared, and blended raw materials. It is used to produce tableware and art ware.
- Chemical stoneware: used in the chemical industry, and when resistance to chemical attack is needed. Purer raw materials are used than for other stoneware bodies.

- Thermal shock resistant stoneware: has additions of certain materials to enhance the thermal shock resistance of the fired body.
- Electrical stoneware: historically used for electrical insulators, although it has been replaced by electrical porcelain.

Usefulness:

Until the introduction of glass, metal, and plastic, stoneware vessels served as universal containers. Small jars (with stoppers of wood, paper, or leaves) held tea, salt, or cooking sauces. Large jars were indispensable for storage of rice and water or of precious possessions such as textiles. Large jars were also used to brew and serve beer made from cooked rice fermented with yeast. The beer, which was thinned with water and drunk from the jars using long straws, played an important role in customs of hospitality and religious ritual.

Some jars, such as the thick-walled bottles or the cylindrical jars, probably transported specific, though as yet unknown, commercial products. Large jars were used and reused as containers for shipboard supplies or trade goods, and are sometimes excavated from shipwrecks full of small ceramic objects. The standardized sizes of such jars were probably universally understood as measures of volume.

Containers for lime paste—made from burned shells and wrapped with areca nuts in betel leaves to make betel quid, a stimulant and emblem of hospitality—were essential elements of social life in the region, and their varied shapes reflect the tastes of different cultural groups. In Cambodian culture, the lime-paste pot is named for the ak, a bird said to cry for its absent mate, and Angkor-period pots often took the bird's form (sometimes misidentified as an owl).

Durable stoneware vessels also served ritual purposes. For example, gourd-shaped bottles with human features may have been used for pouring water during rituals. Lotus motifs adorn the lids of containers that were possibly intended to hold cremated remains. Remains were also buried in jars on the grounds of Buddhist monasteries. Vessels in the form of a stupa (burial

mound of the Buddha) housed small Buddhist images. Finials adorned roofs of monastery buildings. Small sculptures of humans and animals may have been offered at "spirit houses" to honor the lord of the land, or they may have been used in ritual practices.

Nowadays,**Stoneware** Jar is typically used in casual, everyday place settings. Most-quality stoneware is very versatile to use and easy to maintain. It can go in the microwave, dishwasher, oven, and freezer, but always check with the manufacturer for the specific qualities of the product as it is used for food items.

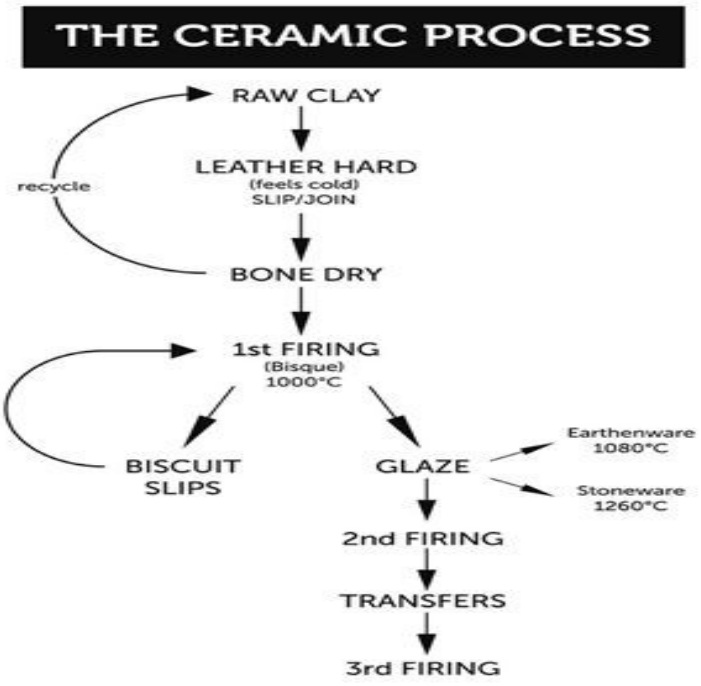
Specification of the product

a) IS 2838 : 1964, amended :June,2007 & October,2011- specification forstoneware containers for general purposes
b) ISO/TC 166 -Ceramic ware, glassware and glass ceramic ware in contact with food

Qualitative Parameters :

Water Absorption = < 0.5%
Apparent Porosity = 2% Maxm
Youngs Modulus = 450Gpa Minm
Bulk Density = 1.9 gms/ CC Minm
Alumina = 30% Minm

Process Flow Chart :



Raw materials:

The sources of the various clay raw materials are shown in Table below. In addition to these, there are other raw materials and also chemicals that are used in the glazes such as zinc oxide, zirconia, barium carbonate, chromium oxide and soda feldspar. A few pottery units are sufficiently large and financially strong, so as to procure the raw material directly from places like Rajasthan, Delhi, Ahmedabad, Bikaner, Bihar etc. and certain chemicals from Agra, and as such do not have to deal with intermediary traders.

Raw materials	**Source**
China clay	Rajasthan, Gujarat, Bihar, Delhi, West Bengal, Kerala, Madhya Pradesh, Jharkhandetc
Plastic ball clay	Bikaner (Rajasthan), Chandia (Madhya Pradesh), Andhra Pradesh, Tamil Nadu, Gujaratetc
Quartz	Rajasthan, Bihar, Andhra Pradesh, Maharashtraetc
Potash feldspar	Rajasthan, Bihar, Uttar Pradesh, Madhya Pradesh etc
Fire clays	Rajasthan, Gujarat, Tamil Nadu, Andhra Pradesh etc
Bikaner clay	Gujarat
Kundan clay	Kerala

Specification for raw materials :

China clay : IS:2840-2002 (Second Revision, Reaffirmed 2008)

Ball Clay : IS:4589-2002 (Third Revision, reaffirmed 2008).

Quartz : IS 1917:1991
Potash Feldspar : IS 9749:2007
Fire clay : BIS has not standardized any specifications

Technical Specification of Raw Materials:

China Clay - White Burning
Ball Clay - Light Yellow Burning

Silica - 99.9% Purity
Feldspar - 13% Alkalies Max

Equipment required for manufacturing:

01. Ball Mills (size1800 x 1800 mm with all accessoriesand 10 HP Motor each)
02. Ball Mills (size900 x 900 mm with all accessoriesand 7.5 HP Motor each)
03. Screw blunger, capacity 5000 Litre with 5 HP Motor and cemented Tank
04. Vibrating screen size900 mm x 900mmwith all accessories and 1 HP Motor
05. Electromagnet withrectifier etc.
06. Agitator with 3 HP Motor and Cemented Tank
07. Diaphragm pump storke 225 mm suction 7.5 mm with 7.5 HP Motor
08. Filter press chamber dia 600 mm number of plates 50 No.
09. De-airing pugmill with vacuum pump etc with 5 HP Motor
10. Disintegrator size 550 cmwithall accessories and 7.5 HP Motor
11. Jigger and Jolly with 5 HP Electric Motor
12. Sagger Press Power operated with 5 HP Motor
13. Water Pump set with 2 HP Motor
14. Pot Mill, Pot No. 6 Pot size 9" x 10" with Electric Motor of 2 HP
15. Ceramic fibre lined push backtunnel Kiln with control system oil storage tank, combustion fan, hydraulic pusher and other equipment Specifications(Length 24000 mm, Setting width 900 mm, Capacity 2.5 MT/Day)

Test facilities required :

There are two type of laboratory set up one for physical testing another for chemical testing facility for product & raw materials. Some of testing facilities are outlined as below:

Physical Testing:

Water absorption: It is calculated as the moisture content, which is equal to: (weight of the container with wet soil minus the weight of the container with dry soil) divided by (weight of the container with dry soil minus the weight of the container), then multiplied by 100 to express it as a percentage.Water absorption test are conducted to determine durability property of product such as degree of burning, quality and behaviorof product inweathering. The waterabsorption by product increase with increase in pores.So,

the stoneware jar which have water absorption less than 3 percent can be called as vitrified.

a) **Apparent porosity**:Apparent porosity defines the relationship between the volume of the mass absorbed to the volume of the water absorbed. Here is the Apparent porosity formula to calculate the apparent porosity. To compute, divide the weight of dry piece by the weight of the soaked piece and subtract the obtained value from the weight of the soaked piece. Again subtract the weight of the piece soaked and immersed from the resultant value. Multiply with 100 to get the result in percentage.
b) **Bulk density** : The dry bulk density of a mass is inversely related to the porosity of the same mass : the more pore space in a soil the lower the value for bulk density. Bulk density = mass of material/volume as a whole.
c) **Young's modulus** : It is a measure of the stiffness of an elastic material, and it is defined as the ratio of stress to strain. Material with low Young's modulus tends to be ductile and material with high Young's modulus tend to be brittle. Generally, brittle materials have better completion quality and are better hydraulic fracturing targets.
d) **Scratchresistance**:The property of a substance that is resistant to repeated rubbing or scratching. In general, it meant the resistance of a (coating) layer or surface against mechanical friction. Abrasion of products is a concept that can't be handled in general.
e) **Sieve analysis**: Particle size of raw materials are analyzed with the help of various size of mesh.

Chemical testing:

This facility is set up for the chemical analysis of the raw material & product. The analysis may be carries for Silica (SiO2), Loss of Ignition, Insoluble residue. Total Sulphur (as SO3), Calcium Oxide (as CaO), Magnesia (as MgO), Alumina (as Al2O3), Iron Oxide(as Fe2O3), Total Sulphur (as SO3),Magnesia (as MgO) etc

Existing Technology

Readymade age-old process technology is available. Before being shaped, clay is being prepared. Kneading helps to ensure an even moisture content throughout the body. Once a clay body has been kneaded and de-aired or wedged, it is shaped by a variety of techniques. After it has been shaped, it is dried and then fired, glazed & fired if required.

- *Greenware* refers to unfired objects. At sufficient moisture content, bodies at this stage are in their most plastic form (as they are soft and malleable, and hence can be easily deformed by handling).
- *Leather-hard* refers to a clay body that has been dried partially. At this stage the clay object has approximately 15% moisture content. Clay bodies at this stage are very firm and only slightly pliable. Trimming and handle attachment often occurs at the leather-hard state.
- *Bone-dry* refers to clay bodies when they reach a moisture content at or near 0%. At that moisture content, the item is ready to be fired. Additionally, the piece is extremely fragile at this stage and must be handled with extreme care.
- *Biscuit* (or bisque) refers to the clay after the object is shaped to the desired form and fired in the kiln for the first time, known as "bisque fired" or "biscuit fired". This firing changes the clay body in several ways. Mineral components of the clay body will undergo chemical and physical changes that will change the material.
- *Glaze fired* is the final stage of some pottery making, or *glost fired*. A glaze may be applied to the bisque form and the object can be decorated in several ways. After this the object is "glazed fired", which causes the glaze material to melt, then adhere to the object. Depending on the temperature schedule the glaze firing may also further mature the body as chemical and physical changes continue. Sometime, transfer is put on the body and again fired.

Modern technology requirement:

Traditional forming with hand technology requires experienced and proficient workers. It is difficult to control the form precisely to the designed digital model, especially for complex-shaped products. Forming with **3D printing technologies** is helpful for improving the precision of manufacturing. Forming with direct 3D printing is especially appropriate for small volume ceramic product manufacturing. It adds to the number of forming methods available to make ceramic products, improves manufacturing techniques and optimizes the ceramic product design procedure.

Energy Efficient Kilns for firing-Energy costs account for up to 30% of the costs of producing stoneware jar products and improving the energy efficiency of kilns is essential to reducing production costs. Firing can be optimised by: ·Minimising non-payload throughput ·Maximising firing speed and therefore throughput ·Maximising heat recovery. It is possible to improve yields, quality and efficiency by: ·Setting combustion systems correctly ·Optimising kiln temperature control, atmosphere and pressure ·Good routine monitoring and maintenance.Also, the development of low thermal mass (LTM) materials and ceramic fibres has improved kiln efficiency.At the same time, Vacuum Extruders, Roller Head Jiggers (Shaping),and Ultra-Low Density Kiln Furniture are to be made available for efficient operation of the unit.

Commercial Details :

HSN Code of the product : 69120023
(691200 ➔Ceramic tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china Tableware and kitchenware: 69120023➔stoneware)

NIC Code of the product : 23931

Level	Description
Section C	MANUFACTURING
Division 23	Manufacture of other non-metallic mineral products
Group 239	Manufacture of non-metallic mineral products n.e.c
Class 2393	Manufacture of other porcelain and ceramic products
Sub-Class 23931	Manufacture of articles of porcelain or china, earthenware, imitation porcelain or common pottery, including earthen statues

Data of Export & Import:

Data/year	2017-18(Crore)	2018-19(Crore)	2019-20(Crore)
Import	163.65	161.78	146.40
Export	105.96	126.88	-

Registered MSMEs:

Separate information is not available for Stoneware Jar at Udyam Registration site but information related to product group NIC code 23931 is attached (Annexure-I)

Large-scale industries:

As per information available, no large-scale industry is available in this product category (Stoneware Jar). However, the large industries, like M/s Kajaria Ceramics Ltd, HSIL Ltd, H&R Johnson(I) Ltd, Somani Ceramics Ltd, Nitco Ltd etc are engaged in production of Tiles, whitewares, sanitaryware etc , are in a position to produce Stoneware Jar as they have all the set up for production of this product.

Existing Cluster:

As per record available, no such cluster is available for this particular product.

Possibility to create Cluster/new units

As far as information available at pan India basis, many states are engaged with MSME-CDP/SFURTI intervention for Pottery/Ceramic Industries and unit ranges from 10 to 500 nos. These industries can be up-graded for production of Stoneware jar& other items. New industries may be encouraged for this type of production as all the facilities are available.Most promising states are Uttar Pradesh, Tamil Nadu, Odisha, Gujarat & Jharkhand. The states engaged with Pottery/Ceramic Industries are as follows:

Uttar Pradesh – Khurja, Nizamabad, Azamgarh, Shahjahanpur, Gorakhpur, Shahjahanpur Jhansi Lalitpur, Chunaretc

Odisha -Subarnapur, Sambalpur, Deogarh, Nuapada, Malkangiri, Nabrangpur, Keonghar, Boudh, Dhenkanal, Jajpur, Jajpur, Bhadrak, Angul, Mauyrbhanj, Balasoreetc

Gujarat : Vadodara, Thangadh, Himmatnagar, Khambat, Narodaetc

Kerala: Karargode, Kozikode

Tamil Nadu: Cudalore, Dindigul, Kanyakumari, Thnjavur, Tiruvarur, Trichy, Vellore, Villupuram, Virudhunagar,

Puducherry

Jharkhand: Deogarh, Bokaro, Giridih, Palamu, Hazaribagh, Pakur, Dumka, Jamtara, Singbhum

Assam:Dubapara, Palpara, Uzanpara, Hirapur, Chapar, Dhubi

Bihar: Sheohar, Spul, Sitamarhi, Madhepura, Khagaria, Rohtas

Maharashtra: Yavatmal, Gadchiroli

Madhya Pradesh:Betul, Kilodabee, Kannod, Dewas

Telangana: Nizamabad

Some of the most promising location to create cluster :

As discussed with the local industries association, there are some locations where pottery is being produced and many of them are not producing Stone ware jars. These units can be focused for stoneware jars with other items for cluster formation& intervention. The following location may be thought of to introduce cluster development activities:

a) **Khurja, Uttar Pradesh**

Khurja, UP is an oldest clay based industrial hub for last 600 years. There is 400+ nos of MSMEs. Although, there may not be any cluster-based activity for stoneware jar, but can be initiated with the existing facility. Key characteristics of the local industries:

- Low value products for domestic consumption
- Limited exports, indirectly through exporters
- Continuous technology upgradation firing system

b) **Naroda, Gujarat**

There is 35+ nos of clay-based industries at Naroda, Gujarat. They can be brought under cluster development activities with special focus on stoneware jar production. Salient feature of the local industries:

- Skilled manpower
- Constant technology upgradation
- Dedicated State Govt support
- Readily raw materials are available

c) <u>Chunar, Uttar Pradesh</u>

Potters at Chunnar make dense clay toys and dolls, which are cast in charred clay molds. Large porcelains of gods and goddesses are also made in clay and make a lot of income for these descendants. Terracotta pottery has remained called the lyric of handicrafts because of its mouthwatering appeal. A variety of earthen objects are fashioned such as lamps, pitchers, flower vases, pots, musical apparatuses, candle stands etc. They are able to produce stoneware jar if they are brought under cluster mode with necessary support system. Although, there are 30+ MSMEs are present at Chunar, UP but many are shut down nowadays. Main reason for closure of the industry may be for rising cost of raw materials & fuel. Skill manpower, positive mind set and availability of state govt land are some take away for these industries. Entrepreneurs are interested to revive the industries with the following support:

- Dedicated financial support
- Raw material & fuel supply at reasonable price
- Support of modern furnace and plant & m/cs
- Marketing support to be extended

d) <u>Virudhachalam, Tamil Nadu</u>

There is 50+ nos of MSMEs are present but not in a good shape. Change of Govt policy, there is a problem for supply of raw materials. They are not producing any stoneware jars but can take up this product with the following support & cluster initiative activities:

- Smooth supply of raw materials
- Constant training to create trained manpower
- Technology upgradation for firing system
- Support of adequate & timely finance

Stoneware Jar Market Potential:

Stoneware Jar is part of Pottery family. As market potential for Stoneware Jar is not available readily, hence market for Pottery as a whole may be assessed. Pottery making business in India is a beautiful example of the journey covered by an entrepreneur from '***Mud to Money***.' Pottery in India has evolved over the years into magnificent ceramic art. It is not only a piece of clay for daily utility but is also the most significant factor of the source of income for many. Today entrepreneurs are not just exploring their creative side by manufacturing different pottery patterns but also building their careers based on this creativity. The pottery business in India provides mass employment to the people and the upgraded standard of living. Both the rural and city people comprise the massive workforce in the industry and have contributed tremendously to India's economy.

The global earthenware market is expected to drive on account of increasing generic fashion in home decorations. It is made from ceramic material and is mainly used for decorative purposes. Other uses include pottery and dishware for serving food. Amateur pottery and modern crafts are also termed as earthenware.

Globally, there is an increase in trend of unique and vintage decorations in houses which is expected to drive overall market demand over the forecast period. Niche markets such as high design decorative items are expected to positively impact global earthenware industry growth in the future.

Dinnerware made from earthenware is used for daily purposes. These kitchen and table items account for significant share in the global demand and are expected to contribute significantly towards global demand over the forecast period.

Low cost of these products over vitreous tableware is expected to enhance global earthenware market growth. From the past 9000 years, earthenware is considered to be most important and widely accepted form of

pottery. Easily breakable nature of the product as compared to porcelain is expected to restrain the global earthenware market growth in the future.

Among all the materials, china clay is widely used in the global industry and is expected to impact overall product demand in the future. The global earthenware market is segmented on the basis of type and applications. The type segment includes delftware, creamware, raku, victorian majolica, terracotta, ironstone ware, faience, yellowware, and tin-glazed pottery.

Among all these, tableware accounts for maximum share in the global earthenware market followed by home decorations and art ware respectively. The home decorations segment is expected to witness the highest growth rate over the forecast period.

Asia Pacific was the leading regional segment on account of high consumption rates in China, Thailand, Philippines, India, Singapore, and Malaysia. The region is also expected to grow at the highest CAGR over the forecast period owing to developing middle-class population in the above-mentioned countries.

Growing middle-class population in emerging countries of Asia Pacific is developing demand for home decorations which in turn is expected to increase regional market demand in the future. Developed regions such as North America and Europe are expected to show stagnant growth over the forecast period.

India along with several other developing countries of Asia is considered as one of the first Asian countries to manufacture as well as export products of pottery. The important markets for pottery products are USA, Mexico, Hong Kong, Japan, Germany, Italy and France. However, the share of global market of India in pottery products is believed to be less than 1%. The important suppliers list includes China, UK, Japan and USA.

The yearly production of pottery products in the Khurja units of Uttar Pradesh is slated to be around 85 crore. Out of this about 20% is exported in

the international market. Among the pottery products that are exported from India, the most common ones are chemical porcelains, handicraft art ware and more.

In order to improve the overall condition of the India pottery industry, it is important to identify the various requirements of the manufacturing centers, technological development along with advancement of the centers with help structures have also become a necessity. Proper review of the industry, analyzing the need, gap and formulating of a proper plan are also important.

Table no.-1 highlights the segmental market availability at domestic level as there was imported value of $16,893,000.00 which can be tapped by local manufacturers of product :691200 including Stoneware Jar. China & Malaysia are taking lead in this segment and may require extra arrangements to look into tariff pattern & other technical parameters of this product segment.

Table no. -1 :List of supplying markets for a product imported by India

Product: 691200 Tableware, kitchenware, other household articles and toilet articles, of ceramics other than ...

Sources: ITC calculations based on UN COMTRADE statistics since January, 2019..

Unit : US Dollar thousand

Exporters	Imported value in 2015	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019
World	24,745	22,545	20,447	20,278	16,893
China	22,773	20,844	16,384	11,888	11,140
Malaysia	69	1	1,431	3,943	3,304
Thailand	368	424	594	1,081	708
Italy	142	237	424	408	248
Hong Kong, China	48	31	20	101	167
United States of America	149	95	72	156	149
United Kingdom	159	159	433	1,305	146
Indonesia	103	98	93	147	136
Singapore	25	3	5	44	126
Turkey	99	78	46	38	116
Germany	89	49	69	84	91
Viet Nam	83	27	61	68	87
Korea, Republic of	223	16	25	351	79

EXPORT POTENTIAL :

The markets with greatest potential for India's exports of 691200 Ceramic household ware, nes including Stoneware Jar are United States, United Kingdom and Germany. Comparing table no 2 & 3, although United States shows the largest market for this product segment value $ 1,136,479,000.00, Germany $213,201,000.00 & United Kingdom $188,981,000.00 but India could exported for the value of $3,520,000.00, 1,358,000.00 &2,500,000.00 respectively in FY 2018-19. There is huge export potential for this segment of product and local industries can utilize this opportunity with help of all sorts of support available to these industries.

Table no. -2 :List of importing markets for a product exported by India

Product: 691200 Tableware, kitchenware, other household articles and toilet articles, of ceramics other than ...

Sources: ITC calculations based on UN COMTRADE statistics since January, 2019.

Unit : US Dollar thousand

Importers	Exported value in 2015	Exported value in 2016	Exported value in 2017	Exported value in 2018	Exported value in 2019
World	7,387	9,205	11,420	35,656	**17,386**
Brazil	625	1,193	2,707	2,508	**4,729**
United States of America	1,571	1,493	1,787	3,049	**3,520**
United Kingdom	1,714	1,698	2,268	2,916	**2,500**
Germany	990	1,852	1,338	1,552	**1,358**
United Arab Emirates	645	739	809	16,086	**1,136**
Australia	174	289	345	428	**446**
Canada	177	135	254	269	**373**
Sweden	42	133	97	315	**303**
Netherlands	125	45	107	348	**292**
Argentina	18	10	31	345	**203**
Belgium	12	4	16	94	**194**
Mauritius	55	60	72	93	**168**
Nepal	137	296	177	118	**135**

Table no. -3 :List of importers for the selected product

Product: 691200 Tableware, kitchenware, other household articles and toilet articles, of ceramics other than ...

Sources: ITC calculations based on UN COMTRADE and ITC statistics.

Unit : US Dollar thousand

Importers	Imported value in 2016	Imported value in 2017	Imported value in 2018	Imported value in 2019	Imported value in 2020
World	2,989,499	3,205,910	3,529,030	3,478,467	
United States of America	969,819	980,392	1,110,216	1,136,479	978,084
Germany	165,182	192,982	218,479	213,201	225,983
United Kingdom	162,572	167,163	180,962	188,981	167,796
France	136,171	151,167	159,500	152,511	176,195
Canada	128,779	131,549	144,319	136,720	121,759
Netherlands	66,891	86,675	107,089	96,022	138,358
Italy	74,004	72,675	84,755	85,484	64,955
Japan	86,123	81,414	81,695	74,688	63,467
Russian Federation	56,073	81,672	107,038	72,647	71,527
Poland	40,868	51,666	66,812	72,050	76,304
Korea, Republic of	87,333	76,633	79,242	71,225	68,010
Spain	53,340	60,096	66,786	65,020	53,949
Mexico	44,122	44,914	59,340	61,701	
Australia	54,909	55,853	61,810	57,610	56,423
Belgium	46,975	55,077	69,469	56,597	52,759
Sweden	28,746	29,939	33,320	36,768	37,519
Kazakhstan	7,670	13,857	26,755	35,328	16,033
Denmark	30,270	25,815	30,700	34,535	32,606
Austria	23,534	26,790	34,224	34,524	37,774
Hong Kong, China	44,175	39,873	44,405	34,051	
Finland	24,195	35,352	29,862	33,801	26,270
United Arab Emirates	22,727	36,458	28,947	31,785	
Switzerland	22,077	26,449	28,265	30,553	34,050
Czech Republic	26,046	22,194	30,254	30,101	28,811

Existing Schemes to support for MSMEs

The following existing schemes can be utilized for creation, promotion & development this of Stoneware Jar industries:

Scheme of Fund for Regeneration of Traditional Industries (SFURTI)

To organize the traditional industries and artisans into clusters in order to make them competitive and provide support for their long- term sustainability.

• The GoI assistance for various clusters: Regular Clusters (up to 500 artisans) – up to ₹ 2.50 cr. per cluster; Major Clusters (more than 500 artisans) – up to ₹ 5.00 cr. per cluster.

• The scheme supports 'Soft', 'Hard' and 'Thematic Interventions'. Soft Interventions: 10% of Hard Interventions with maximum ceiling of ₹ 25.00 lakhs (100% scheme funding); Hard Interventions: As per project requirement. 90% (95% in case of NER, J&K and Hilly States) of Hard Intervention cost is covered under GoI support. 10%-5% (NER, J&K and Hilly States) is contributed by IA/SPV along with land.

For more details:
https://sfurti.msme.gov.in/WriteReadData/Circular/SFURTI_NEW.pdf
Application can be submitted at:
https://sfurti.msme.gov.in/SFURTI/SfLogin.aspx

Micro and Small Enterprises Cluster Development Programme (MSE-CDP)

• To support the sustainability and growth of MSEs by addressing common issues such as improvement of technology, skills & quality, market access, etc.
• To build capacity of MSEs for common supportive action through formation of self help groups, consortia, upgradation of associations, etc.
• To create/upgrade infrastructural facilities in the new/existing Industrial Areas/ Clusters of MSEs.
• To set up Common Facility Centres (for testing, training, raw material depot, effluent treatment, complementing production processes, etc.).
• Promotion of green & sustainable manufacturing technology for the clusters.

• CFCs: Grant will be restricted to 70% of the cost of Project of maximum Rs. 20.00 Crore. GoI grant will be 90% for special category projects (located in North-East & Hilly States, Island territories, Aspirational Districts/ LWE affected Districts, Clusters with more than 50% (a) Micro/Village, (b) Women owned, (c) SC/ ST units). The cost of Project includes cost of Land (Subject to maximum of 25% of Project Cost).

• Infrastructure Development: Grant will be restricted to 60% of the cost of project (Rs. 10.00 Crore for Industrial Estate & Rs. 15.00 Crore for Flatted Factory Complex). GoI grant will be 80% for special category projects as mentioned above.

• Marketing Hubs/Exhibition Centres by Associations: The GoI grant will be restricted to 60% of the cost of project of maximum Rs. 10.00 crore for Product Specific Associations with BMO rating of Gold Category and above from NABET(QCI) and 80% for Associations of Women Entrepreneurs. Remaining project cost is to be borne by SPV/State Government.

• Thematic Interventions: Grant will be restricted to 50% of total cost of maximum 5 activities not exceeding Rs. 2.00 lakh for each activity. GoI grant under this component for each CFC would be Rs. 10.00 lakh.

• Support to State Innovation Cluster Development Programme: The GoI fund would be limited to State Government share or Rs. 5.00 Crore whichever is lower and the assistance would be 90% of project cost in respect of CFC projects in North-East/Hilly States, 10 Island territories, Aspirational Districts/ LWE affected Districts, as well as for projects where beneficiaries are SC/ ST/ Women owned enterprises.

For more details :Website: http://www. dcmsme.gov.in/MSE-CDProg.htm

Procurement & Marketing Support to MSMEs

- To enhance the marketability of products and services in the MSME sector.
- To promote new market access initiatives, create awareness and educate the MSMEs about various marketing relevant topics

• To create more awareness about trade fairs, digital advertising, e-

marketing, GST, GeM portal, public procurement policy and other related topics etc.

• Participation of Individual MSEs in domestic trade fairs/exhibition: 80% of space rent paid for general category units and 100% for SC/ST/women/NER/PH units limited to Rs. 1.5 lakh for class A city; Rs 1.00 Lakh for class B/J&K/NER/Hilly states and for other cities Rs 0.80 Lakhs -or actual whichever is less.

• Organizing/ Participation in trade fairs/exhibitions (Regional/ National/International) by the Ministry/ Office of DC (MSME)/Government organizations: Maximum budgetary support for space rent and advt. & publicity for Regional/National events will be of Rs 30 lakhs and Rs 40 Lakhs respectively. For international event the budgetary support will be decided by Empowered Committee subject to approval of Department of Expenditure. 80% for General and 100% for SC/ST/Women/NER space rent subsidy.

• Capacity building of MSMEs in modern packaging technique: 80% of total cost paid to empaneled agency / consultancy organisation for General category units and 100% for SC/ST/Women/NER/PH units limited to Rs.1.0 Lakh for ordinary packaging consultancy and Rs 1.5 lakh for green packaging consultancy.

• Development of Marketing Haats: Maximum sanction amount will be Rs.20 lakhs / haat (GIA) for renovation of existing haats and Rs 50 lakh (GIA) for development of New Haats.

• International/National Workshops/ Seminars: Rs. 5.0 Lakh per workshop/seminar anywhere in the country/or actual whichever is lower. An additional cost of Rs. 2.5 Lakh (maximum) towards cost of air travel, boarding & lodging etc. or actual whichever is lower will be admissible for international experts for international level event.

• Vendor Development Programmes: a) State Level – Duration of one day and a sanction of Rs. 1.0 lakh per programme b) National level: Duration of 2 to 3 days and sanction per program for organizing these programmes to be

Rs 10.0 lakhs max. for A class City and Rs 7.00 lakh for other cities including J&K/ NER/HP

For more details :Email: akverma@dcmsme.gov.in
Eligible MSEs may submit their application online at http://my.msme.gov.in/MyMsme/Reg/COM_MatuDomAppFo rm.aspx

Prime Minister's Employment Generation Programme (PMEGP) :

• To generate employment opportunities in rural and urban areas of the country through setting up of new self-employment projects / micro enterprises in non farm sector.
• To provide continuous and sustainable employment to all segments of traditional and prospective artisans and rural / urban unemployed youth in the country, so as to help arrest migration of rural youth to urban areas.
• To increase the wage-earning capacity of artisans and contribute to increase in the growth rate of rural and urban employment.

For dtails :www.kvic.org.in; www.kviconline.gov.in

Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)

The Credit Guarantee Scheme for Micro and Small Enterprises (CGS) was launched by the Government of India (GoI) to make available collateral-free credit to the micro and small enterprise sector. Both the existing and the new enterprises are eligible to be covered under the scheme. The Ministry of Micro, Small and Medium Enterprises, GoI and Small Industries Development Bank of India (SIDBI), have established a Trust named Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) to implement the Credit Guarantee Scheme for Micro and Small Enterprises.

For details :https://www.cgtmse.in/About_us.aspx

Credit Linked Capital Subsidy and Technology Up-gradation scheme (CLCS- TUS)

The objective of this scheme is to facilitate technology to MSEs through institutional finance for induction of technologies in the specific sector. In order to strive in a competitive global environment, any sector would require cutting-edge technology and advanced plant & machinery. The technology up-gradation of both the process of manufacturing and corresponding plant and machinery is necessary for the micro and small enterprises (MSEs) to reduce the cost of production and remain price competitive at a time when cheaper products are easily available in the global market. The following support schemes are available for MSMEs :

Credit Linked Capital Subsidy for Technology Upgradation (CLCSS)

To facilitate technology to MSEs through institutional finance for induction of well established and proven technologies in the specific and approved 51 sub-sector/products. Both upgradation projects (with or without expansion) and new projects are eligible.

Upfront subsidy of 15% on institutional Credit upto Rs. 1.0 Crore (i.e. subsidy cap of Rs. 15.00 lakh) for identified sectors/ subsectors/ technologies. However, to be considered as eligible, for special benefits there is no restriction for identified sector

For details :http://www.dcmsme.gov.in/schemes/credit_link_scheme.htm

Design Expertise to manufacturing MSME sector

To bring Indian manufacturing sector and Design expertise/ Design fraternity on to a common platform and to provide expert advice and cost effective solution on real time design problems, resulting in new product development, continuous improvement and value addition for existing products including new products.

Support for Entrepreneurial and Managerial Development of MSMEs through Incubators

To promote & support untapped creativity of individual and To promote adoption of latest technologies in manufacturingas well as knowledge based innovative MSMEs (ventures) that seek the validation of their ideas at the proof of concept level.

For details link :http://my.msme.gov.in/inc/

Building awareness on Intellectual Property Rights (IPR)

• To enhance the awareness of Intellectual Property Rights (IPRs) amongst the MSMEs to encourage creative intellectual endeavour in Indian economy;
• To take suitable measures for the protection of ideas, technological innovation and knowledge-driven business strategies developed by the MSMEs for;
• To provide appropriate facilities and support for protection and commercialization of Intellectual Property (IP) for the benefit of MSME sector;
• To assist SMEs in effective Utilization of IPR Tools for technology upgradation, market and business promotion and competitiveness enhancement.

Lean Manufacturing Competitiveness Scheme (LMCS)

The objectives of the Scheme is to enhance the manufacturing competitiveness of MSMEs through the application of various Lean Manufacturing (LM) techniques by;

- Reducing waste;
- Increasing productivity;
- Introducing innovative practices for improving overallcompetitiveness;
- Inculcating good management systems;
- Imbibing a culture of continuous improvement

ZED Certification Scheme

The scheme envisages promotion of Zero Defect and Zero Effect (ZED) manufacturing amongst MSMEs and ZED Assessment for their certification so as to:

- Encourage and Enable MSMEs for manufacturing of quality products using latest technology tools & to constantly upgrade their processes for achievement of high productivity and high quality with the least effect on the environment.
- Develop an Ecosystem for Zero Defect Zero Effect Manufacturing in MSMEs, for enhancing competitiveness and enabling exports.
- Promote adoption of Quality and recognizing the efforts of successful MSMEs .
- Increase public awareness on demanding Zero Defect and Zero Effect products through the ZED Rating.

Consultancy Service Provider:

The following institution are extending consultancy & technical support for promotion and development of Pottery Industry in general, Stoneware Jar in particular:

1. CSIR-Central Glass and Ceramic Research Institute (CGCRI), Kolkata, Khurja, Naroda
2. Tata Energy Research Institute (TERI), New Delhi
3. IITs
4. IISc
5. MSME-TCs
6. MSME-DIs
7. National Institute of Design (NID), Ahmedabad
8. National Institute of Fashion Technology (NIFT)
9. Sunset Hill Stoneware, United States

STONEWARE PRODUCTS

Stoneware Plates

Stoneware Jars

Stoneware Dish

Stoneware Jars

Stoneware Vase

Stoneware Jars

Stoneware Jug

Stoneware Crock Pot

A MODEL

DETAILED PROJECT REPORT (DPR)

on

STONEWARE JAR

Product Code (NIC)	2008: 23931
Quality and Standards	AsperIS 2838:1964 Stoneware containers for general purpose
Production Capacity	Qty: 600 MT perannum Value: Rs. 3, 60, 00,000/-
Month and Year of Preparation	April, 2021
Prepared By	Shri P.K.Das, IEDS, Joint Director MSME-Development Institute (Br. DI) RA-39 (Ground Floor), Urvashi (Phase II), Bengal Ambuja, Tarashankar Sarani, City Centre, Durgapur-713216, West Bengal Email: brdcdi-durg@dcmsme.gov.in, Tel: (0343) 254-7129

HIGHLIGHTS OF THE PROJECT:

1. Name of The Unit:	**MODEL DPR ON STONEWARE JAR**
2. Address of the Unit:	***Works Address:***
	Registered Office Address:
3. Promoters Bio Data:	***A 1) Name***: ***2) Qualification***: ***3) Experience:*** ***4) Iduentification document no.***
	B 1) Name: ***2) Qualification***: ***3) Experience:*** ***4) Iduentification document no.***
4. Constitution of the Unit:	Proprietorship/ Partnership/ Private Limited Company/ LLP
5. Production Range:	**STONEWEAR JAR**
6. Utilized Capacity:	1st Year -- 65% 2nd Year -- 70% 3rd Year -- 75% 4th Year -- 80% 5th Year -- 85%
7. Working Days:	300 Days / Year
8. Working Hours	24 Hours / 3 Shifts
9. Employment:	46 Persons / 3 Shifts
10. Cost of Machinery:	` 1,24,00,000
11. Cost of Project:	` 2,50,06,130
12. Total Cost Involvement:	` 2,88,62,260
13. Mode of Finance:	
a) Equity Capital:	` 1,47,68,630
b) Term Loan:	` 1,02,37,500
c) Cash Credit:	` 38,56,130
14. Repayment Period:	5 Years Installment.
15. Turnover/ Sales Value:	` 3,60,00,000
16. Availability of Power:	75 KVA
17. Profit Before Tax (Rs. In Thousand):	5046.59 - 6142.17 - 7066.27 - 7787.49 - 8302.12
18. Profit After Tax (Rs. In Thousand):	3472.05 - 4225.81 - 4861.59 - 5357.79 - 5711.86
19. Return of Sales %	14.02% - 15.84% - 17.01% - 17.58% - 17.64%
20. Return on Investment %	17.49% - 21.28% - 24.48% - 26.98% - 28.76%
21. Break Even Point %	59.84% - 54.13% - 49.81% - 46.74% - 44.66%
22. D.S.C.R	3.73 - 2.77 - 2.8 - 2.79 - 2.74

(A) INTRODUCTION:

Stoneware is vitreous or semi-vitreous ceramic ware of fine texture, made primarily from non refractory fire clay or some combination of clays, fluxes, and silica that, when fired, has properties similar to stoneware made from fire clay. Applications for stoneware include artware, chemicalware, cookware, drainpipe, kitchenware, tableware, and tile. Stoneware is a broad term for pottery or other ceramics fired at a relatively high temperature (2000 - 2400°F). Unlike porcelain, which is almost always white, potters can make stoneware with multiple different clay colors today. We even combine multipleclay colors into some of our stoneware for a truly unique twist.

Stoneware pottery is strong, hard and nonporous. It's durable, elegant and versatile; capable of being anything from a customized trophy to a baking dish. It can also stand up to the heat from a microwave, dishwasher or even an oven under the right conditions. Stoneware also distributes and retains heat more evenly than other types of pottery, so it's perfect for drinking coffee or tea.

Tableware,which comprises crockery items and some other articles made of stoneware. Under the group of tableware cups, saucers, plates, bowls, tea sets, dinner sets, jars, barrels etc. are covered. Stoneware is dense, impermeable and hard. It differs from porcelain because it is more opaque, and normally only partially vitrified. Among all the products of Stoneware, this project profile is on Stoneware Jar and mainly this Stoneware Jar is used in houses, railway, defense, canteens, restaurants, hotels etc.

(B) MARKET POTENTIAL:

Home decoration has become matter of status for people because of which demand for stoneware product like stoneware pots, stoneware jars, stoneware vase has boosted in recent times. Stoneware is clay which is fired at a high temperature, and the result is a piece of pottery that is strong and chip resistant. Stoneware is often used to make mugs and baking dishes and can be safely heated in ovens and microwaves owing to its high heat resistance. Shifting trends of consumer towards traditional table and kitchen ware is projected to boost the market growth for stoneware. Moreover, expansion and

development in home decor and real estate sector is projected to support the growth of stoneware market.

Like all the products of stoneware, the demand of stoneware jar is increasing day by day. Stoneware jar is used in houses, hotels, restaurants, tea stalls, railway canteens, defence canteens etc. On the national level demand of this product is greater than the supply. This product has goodscope in international markets and also demand of this product is increasing day by day. There is a good scope for encouraging new units in this line of activity.

(C) BASIS AND PRESUMPTIONS:

1. The Project Profile has been prepared on the basis of Three Shifts of 8 hrs. a day and 25 working days in a month with maximum 85% efficiency.
2. Depreciation is considered as per WDV method and as per the rate of Depreciation under Income Tax Act.
3. The rates quoted in respect of salaries and wages for skilled worker and others are as perWagesAct of the State Government.
4. Interest rate for the fixed and working capital has been taken @ 12% on an average.
5. The margin money required is minimum (25% of Machinery & Equipment, Other Fixed Assets & Pre-operative Expense and 50% of Working Capital).
6. The rate quoted in respect of machinery, equipment and raw materials are those prevailing at the time of preparation of the Project Profile and are likely to vary from place to place and suppliers to suppliers. When a tailor made project profile is prepared, necessary changes are to be made.
7. The pay back period of Term Loan is considered as 5 years of theProject.
8. The cost of capital for equity /owner's capital is dependent on Dividend and it is assumed that that no definite dividend policy exists for MSME units and therefore the cost of owner's capital is the cost of Term Loan.
9. All supply is considered including GST and Input Tax Credit available from GST is not considered in the project.

10. Income Tax rate is considered at higher rate, i..e 30% with 4% cess (as applicable to other than companies). However, as per present Income Tax Act, the surcharge (as applicable over turnover Rs. 1 Crore) shall be subjected to marginal relief and the surcharge is not taken into consideration for profitability purpose.

(D) IMPLEMENTATION SCHEDULE

1.	Building construction	:3Months
2.	Preparation of Project report	: 1 Week
3.	Financial assistance	: 1Month
4.	Arrangement of power	:1Month
5.	Acquisition of Machinery	:1Month
6.	Installation of Machinery & Kiln	: 2 Months
7.	Appointment of Staff and Labour	:1 Month
8.	Trial production and shooting problems	: 2 Weeks
9.	Commercial production	:1Week after trial production
10.	Total time to start commercial production	:6to9 Months

(E) TECHNICALASPECTS

The raw materials like quartz, feldspar, ball clay, fire clay etc. are charged in ball mill in desired proportion with 30- 40% water and ground to the fineness of 100-120 No. mesh. China clay and other plastic clays which are white burningareblungedinblungerwith30- 40%water.Theslurryfromballmilland blunger is mixed and passed through fine mesh and electromagnet in order to remove the iron particles from the slurry. It is mixed properly in agitator tank from where it is passed through filter press for dewatering to make filter cakes. These cakes are fed into de-airing pug mill to extrude the compact body. The shapes of stoneware jar are made by slip casting process. For casting, slip is made and poured into the moulds of plaster of paris. Then articles are finished, glazed, and fired at the temperature of 2000 - 2400° F. Fired stoneware jars are taken out from the kiln and then sorted and packed for selling.

(F) QUALITY CONTROL AND STANDARDS

The Bureau of Indian Standards has laid down the following specifications for Stoneware containers for general purposeIS 2838:1964

(G) ProductionCapacity

(a) Production per Annum

	Qty.per annum	*Valueper annum (InRs.)*
Stoneware Jar	600MT	3, 60, 00,000/-

(b) Motive Power: 75 KVA

(c) Pollution Control

For the purpose of pollution control, it is advisable to provide dust collecting system and necessary retrofitting with the kiln to reduce waste gas pollution. Entrepreneurs should obtain NOC from concerned State Pollution Control Board.

(d) Energy Conservation

Stoneware industry needs energy conservation in fuel as well as electricity.

Proper insulation is to be made to reduce the heat loss during firing processes.

(H) MACHINERY UTILIZATION

The proposed unit will utilize 85% of the installed capacity at 5th year of operation after gradually increasing.5% of capacity each year starting from 65% capacity at the beginning.

I) FINANCIAL ASPECTS

A. NON-RECURRING EXPENDITURE

1. LAND & BUILDING

Sl No:	*Description*	*Value*
1. LAND		
a.	Land lease rent 2 acres @ Rs. 2, 00,000/ acre/ year (Not considered under Fixed Capital and Lease Rent considered under Recurrign Expenditure, on monthly proportional basis)	
	Total = `	
2. BUILDING		
a.	Factory/shed 600 sq mtr. @ Rs. 4000/ sq. mtr	` 24,00,000
b.	Kiln Shed 250 sq mtr. @ Rs. 4000/ sq. mtr	` 10,00,000
c.	Raw Materials shed 250 sq mtr. @ Rs. 4000/ sq. mtr	` 10,00,000
d.	Finished goods godown 200 sq mtr. @ Rs. 4000/sq. mtr	` 8,00,000
e.	Office/Laboratory/Fuel Storage 250 sq mtr. @ Rs. 8000/sq. mtr	` 20,00,000
f.	Boundary Walls etc. LS	` 3,00,000
	Total = `	**75,00,000**

2. MACHINERY & EQUIPMENT:

Sl No:	*Description*	*Qty.*	*Value*
i.	Ball Mills (size 1800 x 1800 mm with all accessories and 10 HP Motor each)	2	` 9,00,000
ii	Ball Mills (size 900 x 900 mm with all accessories and 7.5 HP Motor each)	1	` 2,00,000
iii	Screw blunger, capacity 5000 Litre with 5 HP Motor and cemented Tank	2	` 4,00,000
iv	Vibrating screen size 900 mm x 900mm With all accessories and 1 HP Motor	2	` 1,20,000
v.	Electromagnet with rectifier etc.		` 50,000
vi	Agitator with 3 HP Motor and Cemented Tank	1	` 1,20,000
vii	Diaphragm pump storke 225 mm suction 7.5 mm with 7.5 HP Motor	1	` 1,50,000
viii	Filter press chamber dia 600 mm number of plates 50 No.	1	` 3,50,000
ix	De-airing pugmill with vacuum pump etc with 5 HP Motor	2	` 9,00,000
x.	Disintegrator size 550 cm with all accessories and 7.5 HP Motor	1	` 1,50,000
xi	Jigger and Jolly with 5 HP Electric Motor	2	` 4,00,000
xii	Sagger Press Power operated with 5 HP Motor	1	` 1,50,000
xiii	Water Pump set with 2 HP Motor	1	` 50,000
xiv	Pot Mill, Pot No. 6 Pot size 9" x 10" with Electric Motor of 2 HP	1	` 60,000
xv	Ceramic fibre lined push bat tunnel Kiln with control system oil storage tank, combustion fan, hydraulic pusher and other equipments Specifications (Length 24,000 mm, Setting width 900 mm, Capacity 2.5 MT/Day)		` 75,00,000
xvi	Laboratory equipments (water absorption, apparent porosity, apparent relative density and bulk density, Modulus of rupture and breaking strength, Impact resistance by measurement of co-efficient of restitution, tiles, tiles, resistance to thermal shock, moisture expansion, crazing resistance for glazed tiles etc.)		` 6,00,000
xvii	Pollution Control Equipments (Dust collector etc.)		` 3,00,000
		Total:	` **1,24,00,000**

3. OTHER FIXED ASSETS:

Sl No:	*Description*		*Value (Rs.)*
i.	Misc. tools, Racks, Trolleys etc	`	2,50,000
ii	Cost of office equipments	`	2,00,000
		Total = `	**4,50,000**

4. PRE-OPERATIVE EXPENSES:

Sl No:	*Description*		*Value (Rs.)*
a.	Electrification and installation charges @ 10% on cost of machinery	`	4,00,000
b.	Legal expenses, start-up expenses, establishment cost, Consultancy fee, estimate fee, interest and trial runs, etc.	`	4,00,000
		Total = `	**8,00,000**

5. TOTAL NON-RECURRING EXPENDITURE/ FIXED CAPITAL

1. LAND & BUILDING	`	**75,00,000**
2. MACHINERY & EQUIPMENT:	`	**1,24,00,000**
3. OTHER FIXED ASSETS:	`	**4,50,000**
4. PRE-OPERATIVE EXPENSES:	`	**8,00,000**
Total:	`	**2,11,50,000**

B. RECURRING EXPENDITURE

1. RAW MATERIALS CONSUMPTION & UTILITY:

A) RAW MATERIAL CONSUMPTION (INCLUDING GST)

1. RAW MATERIALS CONSUMPTION & UTILITY:

ITEMS		*Value (Rs.)*
A) RAW MATERIAL CONSUMPTION (PER MONTH)		
(Basis: i) First Year)		
1) 13 MT Quartz/ Silica Sand @ Rs. 3000/ MT	`	39,000
2) 10 MT Feldspar @ Rs. 3,500/ MT	`	35,000
3) 10 MT China clay @ 5,000 / MT	`	50,000
4) 5 MT Ball Clay @ 3,500/ MT	`	17,500
5) 20 MT Fire Clay @ 2,000/ MT	`	40,000
6) 750 Kg Marble/ Calcite @ 6,000/ MT	`	4,500
7) 50 Kg Zinc Oxide @ 200/ Kg	`	10,000
8) 250 Kg Zirconium opacifier @ Rs. 150/Kg	`	37,500
9) 75 Kg Barium Carbonate @ Rs. 100/ Kg	`	7,500
10) Colouring agents (Lumpsum)	`	25,000
11) 2 MT Plaster of Paris @ Rs. 5,000/ MT	`	10,000
12) Kiln furniture (Lumpsum)	`	3,00,000
13) Packing materials (Lumpsum)	`	50,000
Total:	`	**6,26,000**

B) UTILITY (PER MONTH)

(Basis: i) 60% Capacity Utilisation)

a) Power (10,000 KWH @ Rs. 8.5 per/Unit)	`	85,000
b) 10 KL Light Diesel Oil (Fuel) @ Rs. 35,000/ KL	`	3,50,000
Total:	`	**4,35,000**

[*Basis: Annual Increase of Utility = 10% per Annum]

C) TOTAL RAW MATERIALS & UTILITY (PER ANNUM) :

` In Thousands:

	1st Year 65% Cap	2nd Year 70% Cap	3rd Year 75% Cap	4th Year 80% Cap	5th Year 85% Cap
(RAW MATERIALS)	7512.00	8089.85	8667.69	9245.54	9823.38
(UTILITY)	5220.00	5742.00	6316.20	6947.82	7642.60
(TOTAL)	**12732.00**	**13831.85**	**14983.89**	**16193.36**	**17465.99**

2. SALARY & WAGES (PER MONTH, FIRST YEAR):

DESIGNATION	**No.**	**Salary (Rs.)**	**Total**
DIRECT WAGES			
a) Floor Manager	1	` 35,000	` 35,000
b) Supervisor - Operation	1	` 30,000	` 30,000
c) Ceramic Technologist	1	` 30,000	` 30,000
d) Maintenance Enginteer	1	` 30,000	` 30,000
b. Skilled Worker	10	` 20,000	` 2,00,000
c. Semi-Skilled Worker	10	` 15,000	` 1,50,000
d. Un-Skilled Worker	15	` 12,000	` 1,80,000
Sub Total =	**39**		**6,55,000**
ADMINISTRATIVE SALARY			
a. Works Manager	1	` 40,000	` 40,000
b. Accountant	1	` 18,000	` 18,000
c. Store Keeper	1	` 15,000	` 15,000
d. Sales Supervisor	2	` 15,000	` 30,000
e. Security Guards	2	` 12,000	` 24,000
Sub Total =	**7**		` **1,27,000**
GRAND TOTAL =	**46**		` **7,82,000**
Add: Fringe Benefit @		15%	` 1,17,300
			` **8,99,300**

TOTAL SALARY & WAGES (PER ANNUM) :

` In Thousands:

	1st Year 65% Cap	2nd Year 70% Cap	3rd Year 75% Cap	4th Year 80% Cap	5th Year 85% Cap
SALARY & WAGES =	9384.00	10322.40	11354.64	12490.10	13739.11
FRINGE BENEFIT =	1407.60	1548.36	1703.20	1873.52	2060.87
Sub Total =	**10791.60**	**11870.76**	**13057.84**	**14363.62**	**15799.98**

[*Basis: Annual Increase of Salary & Wages = 10%]

3. OTHER CHARGES (PER MONTH, FIRST YEAR):

a) Lease Rent	`	**33,333**
b) Advertisement and Publicity	`	**20,000**
c) Consumable Stores & Spares	`	**25,000**
d) Repair & Maintenance	`	**15,000**
e) Insurance	`	**10,000**
f) Telephone, Broadband Charges	`	**5,000**
g) Postage, Stationary & Printing Charges	`	**5,000**
h) Transport/ Carriage Inward & Outward	`	**70,000**
i) Sales Expenses	`	**25,000**
j) Misc. Un-Seen Expenses	`	**30,000**
	`	**2,38,333**

TOTAL OTHER CHARGES (PER ANNUM) : ` In Thousands:

1st Year 65% Cap	2nd Year 70% Cap	3rd Year 75% Cap	4th Year 80% Cap	5th Year 85% Cap
2860.00	2910.00	2960.00	3010.00	3060.00

[*Basis: Annual Increase of Other charges = ` 50,000]

A) RECURRING EXPENDITURE (MONTHLY BASIS)

[On 1st Year basis]

1. RAW MATERIALS CONSUMPTION:	`	**6,26,000**
2. UTILITY:	`	**4,35,000**
3. SALARY AND WAGES:	`	**8,99,300**
4. OTHER CHARGES:	`	**2,38,333**
	Total = `	**21,98,633**

4. MEANS OF FINANCE:

` In Thousands:

Particulars	OWN SOURCE Total	Margin	Amount	FINANCIAL INSTITUTE/ BANK Margin	Amount
1. LAND & BUILDING	7500.00	100.00%	7500.00	0.00%	0.00
2. MACHINERY & EQUIPMENT:	12400.00	25.00%	3100.00	75.00%	9300.00
3. OTHER FIXED ASSETS:	450.00	25.00%	112.50	75.00%	337.50
4. PRE-OPERATIVE EXPENSES	800.00	25.00%	200.00	75.00%	600.00
5. WC MARGIN (Rounded)	7712.26	50.00%	3856.13	50.00%	3856.13
	28862.26		14768.63		14093.63

C) COST OF PRODUCTION (PER ANNUM)

` In Thousands:

	1st Year	2nd Year	3rd Year	4th Year	5th Year
1. RAW MATERIALS CONSUMPTION:	7512.00	8089.85	8667.69	9245.54	9823.38
2. UTILITY:	5220.00	5742.00	6316.20	6947.82	7642.60
3. SALARY AND WAGES:	10791.60	11870.76	13057.84	14363.62	15799.98
4. OTHER CHARGES:	2860.00	2910.00	2960.00	3010.00	3060.00
Total =	**26383.60**	**28612.61**	**31001.73**	**33566.98**	**36325.97**

D) TURNOVER (PER ANNUM)

1. ANNUAL PROJECTED PRODUCT FOR 1'ST YEAR (MONTHLY)

Description	*Qty. (MT)*	*Rate (` / Kg)*	*Value (`)*
1. Stoneware Jar	50	60	30,00,000
			30,00,000

2. TOTAL ANNUAL TURNOVER=

` In Thousands:

1st Year 65% Cap	2nd Year 70% Cap	3rd Year 75% Cap	4th Year 80% Cap	5th Year 85% Cap
36000.00	38769.23	41538.46	44307.69	47076.92

E) PROJECT COST

		TOTAL
I) FIXED CAPITAL		
1. LAND & BUILDING	`	75,00,000
2. MACHINERY & EQUIPMENT:	`	1,24,00,000
3. OTHER FIXED ASSETS:	`	4,50,000
4. PRE-OPERATIVE EXPENSES:	`	8,00,000
Total =	`	**2,11,50,000**
BLOCK CAPITAL		
5. WORKING CAPITAL MARGIN	`	38,56,130
PROJECT COST =	`	**2,50,06,130**
6 BANK FINANCE FOR WORKING CAPITAL	`	**38,56,130**
Total =	`	**2,88,62,260**

F) TOTAL CAPITAL INVESTMENT

A. NON-RECURRING EXPENDITURE	`	**2,11,50,000**
B. WORKING CAPITAL ASSESSED	`	**77,12,260**
Total =	`	**2,88,62,260**

G) ASSESSMENT OF WORKING CAPITAL

` in Thousands:

Particulars Heads	Basis Days	Basis Months	Total	Own	Bank
			(100 %)	(50 %)	(50 %)
1. Stock of Raw Materials		1	626.00	313.00	313.00
2 Stock of Finished Goods		1	3000.00	1500.00	1500.00
3. Work - In - Progress		1	2198.63	1099.32	1099.32
4. Debtors (25 % of Sales)		1	750.00	375.00	375.00
5. Expense (Salary + Others)		1	1137.63	568.82	568.82
		TOTAL =	**7712.26**	**3856.13**	**3856.13**
TOTAL W.C. REQUIREMENT (Rounded) =			**7712.26**	**3856.13**	**3856.13**

1. WORKING CAPITAL (YEAR WISE)

` in Thousands:

	1st Year 65% Cap	2nd Year 70% Cap	3rd Year 75% Cap	4th Year 80% Cap	5th Year 85% Cap
1. Stock of Raw Materials	626.00	674.15	722.31	770.46	818.62
2 Stock of Finished Goods	3000.00	3230.77	3461.54	3692.31	3923.08
3. Work - In - Progress	2198.63	2367.76	2536.88	2706.01	2875.13
4. Debtors	750.00	807.69	865.38	923.08	980.77
5. Expense (Salary + Others)	1137.63	1225.14	1312.65	1400.16	1487.67
TOTAL W.C. (YEAR-WISE)	**7712.26**	**8305.51**	**8898.76**	**9492.01**	**10085.26**

2. MODE OF FINANCE

` in Thousands:

Particulars	Total	OWN SOURCE		FINANCIAL INSTITUTE/ BANK	
		Margin	Amount	Margin	Amount
1. LAND & BUILDING	7500.00	100%	7500.00	0%	0.000
2. MACHINERY & EQUIPMENT:	12400.00	25%	3100.00	75%	9300.000
3. OTHER FIXED ASSETS:	450.00	25%	112.50	75%	337.500
4. PRE-OPERATIVE EXPENSES:	800.00	25%	200.00	75%	600.000
3. WORKING CAPITAL MARGIN (Rounded)	7712.260	50%	3856.13	50%	3856.130
	28862.26		**14768.63**		**14093.630**

		RATIO
Own Capital:	` 1,47,68,630	**0.51**
Term Loan:	` 1,02,37,500	**0.35**
Cash Credit:	` 38,56,130	**0.13**
Debt Equity Ratio:	0.95 : 1	

3. COST OF CAPITAL

	WEIGHT	WEIGHTED PERCENTAGE
1. TERM LOAN = 12%	0.35	4.200%
2. CASH CREDIT = 12%	0.13	1.600%
3. OWN CAPITAL = 12%	0.51	6.100%
COST OF CAPITAL =		**11.900%**

** Note: The cost of capital for equity (owners capital) is dependent on Dividend and it is assumed that that no definite dividend policy exist for MSME units. It is therefore assumed that the cost of owners capital is the cost of Term Loan.

H) DEPRECIATION ANALYSIS (WDV METHOD)

(AS PER RATE OF DEPRECIATION UNDER INCOME TAX ACT FROM THE AY 2018-19 ONWARDS)

` in Thousands:

HEADS	BUILDING	MACHINARY	POLLUTION CONTROL EQUIPMENT	FURNITURES	TOTAL
DEPRECIATIONS	10.00%	15.00%	40.00%	10.00%	
Beginning	7500.00	12100.00	300.00	450.00	20350.00
DEPRECIATIONS	750.00	1815.00	120.00	45.00	2730.00
1st YEAR	6750.00	10285.00	180.00	405.00	17620.00
DEPRECIATIONS	675.00	1542.75	72.00	40.50	2330.25
2nd YEAR	6075.00	8742.25	108.00	364.50	15289.75
DEPRECIATIONS	607.50	1311.34	43.20	36.45	1998.49
3rd YEAR	5467.50	7430.91	64.80	328.05	13291.26
DEPRECIATIONS	546.75	1114.64	25.92	32.81	1720.12
4th YEAR	4920.75	6316.27	38.88	295.24	11571.14
DEPRECIATIONS	492.08	947.44	15.55	29.52	1484.59
5th YEAR	4428.67	5368.83	23.33	265.72	10086.55

I) REPAYMENT SCHEDULE & INTEREST CALCULATIONS ON LOANS

(Only interest is calculated as payable for first 6 months moratorium period)

A) EQUATED QUARTERLY REPAYMENT SCHEDULE PLANNING ON TERM LOAN

1. TERM LOAN = ` 1,02,37,500 **2. RATE OF INTEREST = 12.00 %**

Year	Installment	Interest Content	Principle Content	Loan Outstanding
Beginning	-	-	-	**` 1,02,37,500**
1st Quarter	` 3,07,125	` 3,07,125	-	` 1,02,37,500
2nd Quarter	` 3,07,125	` 3,07,125	-	` 1,02,37,500
3rd Quarter	` 6,88,121	` 3,07,125	` 3,80,996	` 98,56,504
4th Quarter	` 6,88,121	` 2,95,696	` 3,92,425	` 94,64,079
1st Year: Total	**` 19,90,492**	**` 12,17,071**	**` 7,73,421**	**` 3,97,95,583**
1st Quarter	` 6,88,121	` 2,83,923	` 4,04,198	` 90,59,881
2nd Quarter	` 6,88,121	` 2,71,797	` 4,16,324	` 86,43,557
3rd Quarter	` 6,88,121	` 2,59,307	` 4,28,814	` 82,14,743
4th Quarter	` 6,88,121	` 2,46,443	` 4,41,678	` 77,73,065
2nd Year: Total	**` 27,52,484**	**` 10,61,470**	**` 16,91,014**	**` 3,36,91,246**
1st Quarter	` 6,88,121	` 2,33,192	` 4,54,929	` 73,18,136
2nd Quarter	` 6,88,121	` 2,19,545	` 4,68,576	` 68,49,560
3rd Quarter	` 6,88,121	` 2,05,487	` 4,82,634	` 63,66,926
4th Quarter	` 6,88,121	` 1,91,008	` 4,97,113	` 58,69,813
3rd Year: Total	**` 27,52,484**	**` 8,49,232**	**` 19,03,252**	**` 2,64,04,435**
1st Quarter	` 6,88,121	` 1,76,095	` 5,12,026	` 53,57,787
2nd Quarter	` 6,88,121	` 1,60,734	` 5,27,387	` 48,30,400
3rd Quarter	` 6,88,121	` 1,44,912	` 5,43,209	` 42,87,191
4th Quarter	` 6,88,121	` 1,28,616	` 5,59,505	` 37,27,686
4th Year: Total	**` 27,52,484**	**` 6,10,357**	**` 21,42,127**	**` 1,82,03,064**
1st Quarter	` 6,88,121	` 1,11,831	` 5,76,290	` 31,51,396
2nd Quarter	` 6,88,121	` 94,542	` 5,93,579	` 25,57,817
3rd Quarter	` 6,88,121	` 76,735	` 6,11,386	` 19,46,431
4th Quarter	` 6,88,121	` 58,393	` 6,29,728	` 13,16,703
5th Year: Total	**` 27,52,484**	**` 3,41,501**	**` 24,10,983**	**` 89,72,347**
1st Quarter	` 6,88,121	` 39,502	` 6,48,619	` 6,68,084
2nd Quarter	` 6,88,127	` 20,043	` 6,68,084	` -
6th Year: Total	**` 13,76,248**	**` 59,545**	**` 13,16,703**	**` 6,68,084**

B) ANNUAL REPAYMENT PLANNING ON WORKING CAPITAL LOAN INTEREST

3. W.C Loan= ₹ 38,56,130 **4. RATE OF INTEREST = 12.00 %**

Year	Opening Balance	Loan Receipt from Bank	Closing Balance	Intrest Content (WC Loan)	Total Interest (Term + WC Loan)
Beginning	-	` 38,56,130	` 38,56,130	-	-
1st Year	` 38,56,130	-	` 38,56,130	` 4,62,736	` 16,79,807
2nd Year	` 38,56,130	-	` 38,56,130	` 4,62,736	` 15,24,206
3rd Year	` 38,56,130	-	` 38,56,130	` 4,62,736	` 13,11,968
4th Year	` 38,56,130	-	` 38,56,130	` 4,62,736	` 10,73,093
5th Year	` 38,56,130	-	` 38,56,130	` 4,62,736	` 8,04,237

J. PROJECT PROFITABILITY ANALYSIS

` in Thousands:

PARTICULARS	I st Year	2nd Year	3rd Year	4th Year	5th Year
Annual Turnover	36000.00	38769.23	41538.46	44307.69	47076.92
NET SALES	**36000.00**	**38769.23**	**41538.46**	**44307.69**	**47076.92**
A) VARIABLE COST					
1. Raw Materials	12732.00	13831.85	14983.89	16193.36	17465.99
2. Salary/ Wages @ 75%	8093.70	8903.07	9793.38	10772.72	11849.99
3. Other Charges @ 75%	2145.00	2182.50	2220.00	2257.50	2295.00
4. Interest on Working Capital	462.74	462.74	462.74	462.74	462.74
	23433.44	**25380.15**	**27460.01**	**29686.31**	**32073.71**
B) FIXED COST:					
1. Salary Wages @ 25%	2697.90	2967.69	3264.46	3590.91	3950.00
2. Other Charges @ 25%	715.00	727.50	740.00	752.50	765.00
3. Depreciation @ 100%	2730.00	2330.25	1998.49	1720.12	1484.59
4. Interest on Term Loan	1217.07	1061.47	849.23	610.36	341.50
5. Pre-operative Expense W/o	160.00	160.00	160.00	160.00	160.00
	7519.97	**7246.91**	**7012.18**	**6833.89**	**6701.09**
C) COST OF PRODUCTION (A+B)	30953.41	32627.06	34472.19	36520.20	38774.80
D) PROFIT BEFORE TAX (Net Sales-Cost of Production)	5046.59	6142.17	7066.27	7787.49	8302.12
E) TAXATION LIABILITY (30% Tax + 4% Cess)	1574.54	1916.36	2204.68	2429.7	2590.26
F) PROIT AFTER TAX	3472.05	4225.81	4861.59	5357.79	5711.86
G) ADD: DEPRECIATION	2730.00	2330.25	1998.49	1720.12	1484.59
H) NET CASH ACCRUED	6202.05	6556.06	6860.08	7077.91	7196.45
I) LOAN REPAYMENT	773.42	1691.01	1903.25	2142.13	2410.98
J) RETURN ON SALES (%)	14.02%	15.84%	17.01%	17.58%	17.64%
K) RETURN ON INVEST.(%)	17.49%	21.28%	24.48%	26.98%	28.76%
L) BREAK-EVEN POINT (%)	59.84%	54.13%	49.81%	46.74%	44.66%
M) D.S.C.R	3.73	2.77	2.80	2.79	2.74

J-1) BREAK-EVEN ANALYSIS

` in Thousands:

PARTICULARS	**Ist Year**	**2nd Year**	**3rd Year**	**4th Year**	**5th Year**
Utilized Capacity:	*65% Cap*	*70% Cap*	*75% Cap*	*80% Cap*	*85% Cap*
A) NET SALES	**36,000**	**38,769**	**41,538**	**44,308**	**47,077**
B) VARIABLE COST					
1. Raw Materials	12,732.00	13,831.85	14,983.89	16,193.36	17,465.99
2. Salary/ Wages @ 75%	8,093.70	8,903.07	9,793.38	10,772.72	11,849.99
3. Other Charges @ 75%	1,845.00	1,882.50	1,920.00	1,957.50	1,995.00
4. Interest on Working Capital	462.74	462.74	462.74	462.74	462.74
	23,133.44	**25,080.15**	**27,160.01**	**29,386.31**	**31,773.71**
C) FIXED COST:					
1. Salary Wages @ 25%	2,697.90	2,967.69	3,264.46	3,590.91	3,950.00
2. Other Charges @ 25%	615.00	627.50	640.00	652.50	665.00
3. Lease Rent @ 100%	400.00	400.00	400.00	400.00	400.00
4. Depreciation @ 100%	2,730.00	2,330.25	1,998.49	1,720.12	1,484.59
5. Interest on Term Loan	1,217.07	1,061.47	849.23	610.36	341.50
6. Pre-operative Expense W/o	160.00	160.00	160.00	160.00	160.00
	7,819.97	**7,546.91**	**7,312.18**	**7,133.89**	**7,001.09**
D) COST OF PRODUCTION (B + C)	30,953.41	32,627.06	34,472.19	36,520.20	38,774.80
E) CONTRIBUTION: (A - B)	12,867	13,689	14,378	14,921	15,303
F) PROFIT BEFORE TAX (A - D)	5,047	6,142	7,066	7,787	8,302
BREAK-EVEN POINT =	Fixed Cost x 100 / (Fixed Cost + Profit)		OR	Fixed Cost x 100 / Contribution	
G) BREAK-EVEN POINT (%)	60.78%	55.13%	50.86%	47.81%	45.75%

J-2) DSCR ANALYSIS

DEBT SEVICE COVERAGE RATIO (DSCR) = Net Cash Accrued + Capital Interest / Installment

H) PROIT AFTER TAX	3472.05	4225.81	4861.59	5357.79	5711.86
I) ADD: DEPRECIATION	2730.00	2330.25	1998.49	1720.12	1484.59
J) NET CASH ACCRUED (H + I)	6202.05	6556.06	6860.08	7077.91	7196.45
K) CAPITAL INTEREST	1217.07	1061.47	849.23	610.36	341.50
L) INSTALLMENT	1990.49	2752.48	2752.48	2752.48	2752.48
M) D.S.C.R	3.73	2.77	2.81	2.80	2.75

J-3) NET PRESENT VALUE (NPV)

` in Thousands:

COST OF CAPITAL = 11.90% (PV = "Present Value")

PARTICULARS Utilized Capacity:	**Ist Year** 65% Cap	**2nd Year** 70% Cap	**3rd Year** 75% Cap	**4th Year** 80% Cap	**5th Year** 85% Cap
A) PROIT AFTER TAX	3472.05	4225.81	4861.59	5357.79	5711.86
B) ADD: DEPRECIATION	2730.00	2330.25	1998.49	1720.12	1484.59
C) NET CASH FLOW (A) + (B)	6202.05	6556.06	6860.08	7077.91	7196.45
D) DISCOUNTING FACTOR	0.894	0.799	0.714	0.638	0.570
E) PV OF NET CASH INFLOW	5542	5236	4896	4514	4102
F) PV OF FIXED ASSETS AT THE END OF 5TH YEAR:					5749
G) PV OF NET INFLOW (E) + (F)	5542	5236	4896	4514	9851

H) TOTAL PRESENT VALUE (PV) OF NET INFLOW: 30,039.24

I) PRESENT VALUE (PV) OF NET OUTFLOW: 25,006.13

J) PROFITABILITY INDEX (PI): 1.20 **(P.I. >1 => THE PROJECT IS VIABLE)**

K) NET PRESENT VALUE (NPV) = ₹ 50,33,110

(I) - (H) **(NPV POSITIVE, PROJECT VIABLE)**

J-4) INTERNAL RATE OF RETURN (IRR)

DISCOUNTING FACTOR FOR IRR = 19.00% (PV = "Present Value")

PARTICULARS Utilized Capacity:	**Ist Year** 65% Cap	**2nd Year** 70% Cap	**3rd Year** 75% Cap	**4th Year** 80% Cap	**5th Year** 85% Cap
A) PROIT AFTER TAX	3472.05	4225.81	4861.59	5357.79	5711.86
B) ADD: DEPRECIATION	2730.00	2330.25	1998.49	1720.12	1484.59
C) NET CASH FLOW (A) + (B)	6202.05	6556.06	6860.08	7077.91	7196.45
D) DISCOUNTING FACTOR	0.840	0.706	0.593	0.499	0.419
E) PV OF NET CASH INFLOW	5212	4630	4071	3530	3016
F) PV OF FIXED ASSETS AT THE END OF 5TH YEAR:					4227
G) PV OF NET INFLOW (E) + (F)	5212	4630	4071	3530	7242

H) TOTAL PRESENT VALUE (PV) OF NET INFLOW: 24,684

I) PRESENT VALUE (PV) OF NET OUTFLOW: 25,006

I.R.R. OF THE PROJECT:

AT 19% NPV = (` 3,21,820)

AT 11.9% NPV = ` 50,33,110

I.R.R. = 18.57%

K. PROJECTED BALANCE SHEET

	Beginning	1st Year	2nd Year	3rd Year	4th Year	5th Year
I. LIABILITIES						` in Thousands:
1. CAPITAL & SHAREHOLDERS FUNDS						
a) Capital	14768.63	14768.63	14768.63	14768.63	14768.63	14768.63
b) Reserve and Surplus	0.00	3372.05	4125.81	4761.59	5257.79	5611.86
SUBTOTAL =	**14768.63**	**18140.68**	**18894.44**	**19530.22**	**20026.42**	**20380.49**
2. LOAN FUNDS						
a) Secured Term Loan from Bank	10237.50	9464.08	7773.07	5869.81	3727.69	1316.70
b) Cash Credit from Bank	3856.13	3856.13	3856.13	3856.13	3856.13	3856.13
c) Unsecured Loans	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL =	**14093.63**	**13320.21**	**11629.20**	**9725.94**	**7583.82**	**5172.83**
3. CURRENT LIABILITIES AND PROVISIONS						
a) Creditors	0.00	0.00	0.00	0.00	0.00	0.00
b) Provision for Taxation	0.00	1574.54	1916.36	2204.68	2429.70	2590.26
c) Bank Interest	0.00	1679.81	1524.21	1311.97	1073.09	804.24
d) Provision of Un-Secured Loan Repayment	0.00	0.00	0.00	0.00	0.00	0.00
e) Proposed Dividends/ Drawings	0.00	100.00	100.00	100.00	100.00	100.00
SUBTOTAL =	**0.00**	**3354.35**	**3540.57**	**3616.65**	**3602.79**	**3494.50**
TOTAL LIABILITY =	**28862.26**	**34815.24**	**34064.20**	**32872.81**	**31213.03**	**29047.82**
II. ASSETS						
1. FIXED ASSETS						
a) Land & Development:	0.00	0.00	0.00	0.00	0.00	0.00
b) Building - Internal Construction:	7500.00	7500.00	6750.00	6075.00	5467.50	4920.75
c) Machinery & Equipment:	12100.00	12100.00	10285.00	8742.25	7430.91	6316.27
d) Kiln	0.00	0.00	0.00	0.00	0.00	0.00
e) Furniture & Fixtures:	450.00	450.00	405.00	364.50	328.05	295.24
(Add: Tax & Duties)	0.00					
f) Less: Depreciation	0.00	2730.00	2330.25	1998.49	1720.12	1484.59
g) NET BLOCK [a+b+c+d+e-f]	**20050.00**	**17320.00**	**15109.75**	**13183.26**	**11506.34**	**10047.67**
2. INVESTMENTS	0.00	0.00	0.00	0.00	0.00	0.00
3. CURRENT ASSETS						
a) Stocks (RM, Finished Goods,WIP) & Debtors	7712.26	7712.26	8305.51	8898.76	9492.01	10085.26
TOTAL =	**7712.26**	**7712.26**	**8305.51**	**8898.76**	**9492.01**	**10085.26**
4. CASH AND BANK BALANCE	300.00	9142.98	10168.94	10470.79	10054.68	8914.89
5. PRELIMINARY & PRE-OP. EXPENSES	800.00	640.00	480.00	320.00	160.00	0.00
TOTAL ASSETS =	**28862.26**	**34815.24**	**34064.20**	**32872.81**	**31213.03**	**29047.82**

` in Thousands:

L) PROJECTED CASH FLOW STATEMENT

SOURCE OF FUNDS	Starting Period	1st Year	2nd Year	3rd Year	4th Year	5th Year
1. Net Profit Before Interest & Tax	0.00	6726.40	7666.38	8378.24	8860.58	9106.36
2. Increase of Share Capital	14768.63	0.00	0.00	0.00	0.00	0.00
3. Un-Secured Loans	0.00	0.00	0.00	0.00	0.00	0.00
4. Depreciation	0.00	2730.00	2330.25	1998.49	1720.12	1484.59
5. Increase of Term Loan	10237.50	0.00	0.00	0.00	0.00	0.00
6. Increase of Cash Credit	3856.13	0.00	0.00	0.00	0.00	0.00
7. Increase in current Liability	0.00	3354.35	186.22	76.08	-13.86	-108.30
8. Pre -Operative W/o	0.00	160.00	160.00	160.00	160.00	160.00
TOTAL SOURCES (A):	28862.26	12970.74	10342.85	10612.81	10726.85	10642.65

DISTRIBUTION OF FUNDS

1. Pre-operative Expenditure	800.00	0.00	0.00	0.00	0.00	0.00
2. Increase in Fixed Assets	20050.00	0.00	0.00	0.00	0.00	0.00
3. Increase in Current Assets	7712.26	0.00	593.25	593.25	593.25	593.25
4. Total Interest on Loan	0.00	1679.81	1524.21	1311.97	1073.09	804.24
5. Taxation Liabilities	0.00	1574.54	1916.36	2204.68	2429.70	2590.26
6. Repayment of Term Loan	0.00	773.42	1691.01	1903.25	2142.13	2410.98
7. Reserve at the Beginiinng	0.00	0.00	3372.05	4125.81	4761.59	5257.79
8. Dividend to Share-Holders/ Drawings	0.00	100.00	100.00	100.00	100.00	100.00
TOTAL DISTRIBUTIONS (B):	28562.26	4127.77	9196.88	10238.96	11099.76	11756.52
OPENING BALANCE	0.00	300.00	9142.98	10168.94	10470.79	10054.68
NET SURPLUS (A - B)	300.00	8842.98	1145.96	373.85	-372.91	-1113.87
CLOSING BALANCE	300.00	9142.98	10168.94	10470.79	10054.68	8914.89

(J) MACHINERY AND EQUIPMENT SUPPLIER

1. M/s.Laxmi Engineers, Basni,Jodhpur,Rajasthan.
2. M/s. VarahiIndustries,Vatwa,Ahmedabad.
3. M/s. Precious Mech Tech,Bareja,Ahmedabad.
4. M/s Barkat Hitech Engineering,Subhasnagar,Delhi
5. M/s. Tridev Industries, Vatwa,Ahmedabad.
6. M/s. Filter Machines Pvt. Ltd.,Salvav,Vapi,Gujrat
7. M/s. Hydro Press Industries, Kurichi, Coimbatore
8. M/s. BKS Engineers, Kurichi, Coimbatore
9. M/s. Jayveer Filter Press, Gandhinagar,Gujrat
10. M/s. Ever Shine Industries, BhayandarEast,Thane,Mumbai
11. M/s. Jay AmbeEnterprise,Ahmedabad,Gujrat
12. M/s. Shree Mona Fabricators,Ahmedabad,Gujrat
13. M/s. Biswas Engineering Works,Salkia,Howrah

Tunnel Kiln/Shuttle Kiln Suppliers

1. M/s. Sharma Kiln Technologies, Ahmedabad,Gujrat
2. M/s. Kiln &Machinaries, Sarkarpara, Hoogly, West Bengal
3. M/s. Delta Furnaces, Rai Industrial Estate, Sonipat,Haryana
4. M/s. Shivang Furnaces and Oven Industries, KhokhraMehmadabad, Ahmedabad,Gujrat
5. M/s. Ashwin Ceramics, Choolaimedu,Chennai

Raw Material Suppliers

1. M/s. Guru Corporation,Prahladnagar,Ahmedabad, Gujrat
2. M/s. Goyal Enterprises, Murlipura,Jaipur,Rajasthan
3. M/s. N K Minerals, Lajpat Nagar,Alwar,Rajasthan
4. M/s. Raviraj Mineral Industries, Udaipur,Rajasthan
5. M/s. Lion Minerals, Nava, Naroda, Ahmedabad,Gujrat
6. M/s. Devraj Minerals, Surat,Gujrat
7. M/s. Allied Mineral Industries ,Udaipur,Rajasthan
8. M/s. Siddhi Vinayak Industries, Ahmedabad,Gujrat
9. M/s. Gayatri Microns, Gandhinagar,Gujrat
10. M/s. Bharat Heavy Chemicals,ChandniChowk,Delhi
11. M/s. Tripta Chemical Works,Alwar,Rajasthan

ANNEXURE -I

Statewise total number of applications with 5digits NICcode(23931-Manufacture of articles of porcelain or china, earthenware, imitation porcelain or common pottery, including earthenstatues) Under Udyam Registration(UR) and Udyam Aadhar memorundam(UAM)

S.No.	StateName	Micro		Small		Medium		Total	
		UR	UAM	UR	UAM	UR	UAM	UR	UAM
1	ANDHRAPRADESH	2	**9**	1	**2**	0	0	3	**11**
2	ARUNACHALPRADESH	0	**0**	0	**0**	0	**0**	0	**0**
3	ASSAM	2	**77**	0	**1**	0	**0**	2	**78**
4	BIHAR	4	**13**	0	**0**	0	**0**	4	**13**
5	CHHATTISGARH	4	**21**	0	**0**	0	**0**	4	**21**
6	GOA	1	**1**	0	**1**	0	**0**	1	**2**
7	GUJARAT	56	**72**	10	**62**	0	**4**	66	**138**
8	HARYANA	7	**29**	0	**1**	0	**1**	7	**31**
9	HIMACHALPRADESH	0	**1**	0	**0**	0	**0**	0	**1**
10	JHARKHAND	0	**131**	0	**1**	0	**0**	0	**13**
11	KARNATAKA	21	**120**	0	**5**	0	**1**	21	**126**
12	KERALA	11	**51**	1	**1**	0	**0**	12	**52**
13	MADHYAPRADESH	12	**31**	0	**3**	0	**0**	12	**34**
14	MAHARASHTRA	157	**528**	2	**21**	0	**0**	159	**549**
15	MANIPUR	5	**25**	0	**4**	0	**0**	5	**29**
16	MEGHALAYA	0	**2**	0	**0**	0	**0**	0	**2**
17	MIZORAM	0	**1**	0	**0**	0	**0**	0	**1**
18	NAGALAND	1	**1**	0	**0**	0	**0**	1	**1**
19	ODISHA	27	**22**	0	**0**	0	**0**	27	**22**
20	PUNJAB	8	**9**	0	**0**	0	**0**	8	**9**
21	RAJASTHAN	48	**87**	2	**5**	2	**2**	52	**94**
22	SIKKIM	0	**1**	0	**0**	0	**0**	0	**1**

23	TAMILNADU	310	**141**	0	**6**	0	**0**	310	**147**
24	TELANGANA	5	**12**	1	**6**	0	**2**	6	**20**
25	TRIPURA	0	**3**	0	**0**	0	**0**	0	**3**
26	UTTARPRADESH	79	**334**	1	**37**	0	**0**	80	**371**
27	UTTARAKHAND	1	**4**	0	**1**	0	**0**	1	**5**
28	WESTBENGAL	26	**284**	2	**4**	0	**0**	28	**288**

S. No	**State Name**	**MICRO**		**SMALL**		**MEDIUM**		**TOTAL**	
29	ANDAMANANDNICOBARISLANDS	0	**2**	0	**0**	0	**0**	0	**2**
30	CHANDIGARH	1	**1**	0	**0**	0	**0**	1	**1**
31	DADARANDNAGARH	0	**0**	0	**0**	0	**0**	0	**0**
32	DAMANANDDIU	0	**0**	0	**0**	0	**0**	0	**0**
33	DELHI	11	**34**	1	**0**	0	**0**	12	**34**
34	JAMMUANDKASHMI	2	**0**	0	**0**	0	**0**	2	**0**
35	LADAKH	0	**0**	0	**0**	0	**0**	0	**0**
36	LAKSHADWEEP	0	**0**	0	**0**	0	**0**	0	**0**
37	PUDUCHERRY	3	**3**	0	**0**	0	**0**	3	**3**
	Total	**804**	**2050**	**21**	**161**	**2**	**10**	**827**	**2221**