



## Issue Relating to Agate Industry

Dr. Hitesh N. Jagani<sup>1</sup>, Hetalkumari M. Makwana<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Rural Management and Rural Development, Gujarat Vidyapith, Ahmedabad, Gujarat

<sup>2</sup>Teaching Assistant, Anand institute of social work, Anand (Gujarat)

Corresponding Author – Dr. Hitesh N. Jagani

Email: [hitesh28jagani@gmail.com](mailto:hitesh28jagani@gmail.com)

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### Abstract

According to Economic survey (2018-19), 93% of the total workforce in India is from the unorganized sector and the agate industry is considered as unorganized sector. So we can say that the agate industry played a precious role in Indian economy. Moreover, it is listed out in the list of heritage industry list, so it's our prime duty to protect it. Since the year 1992, the PTRC (People's Training and Research Centre) has been working for the agate workers for their welfare and the development. Also, it fights for their rights. To know the issues relating to the agate industry is the aim of the present study. In this paper, the discussion is also carried out regarding the basic of agate industry, process of agate industry, comprehensiveness of agate industry and the recommendation also mentioned. The problem of this industry is not limited with workers but this industry itself also faced various problems. So, we try to solve the problem faced by both of them. And it's our duty to protect the symbol of heritage industry and take steps to run for a long time.

**Key Words:** Agate, Industry, Worker

### Introduction

There are various kinds of stones available in the world and also, they have their own qualities. But some stones are useful for any building construction, but some gives bread to a person and the name of this stone is "agate" because from this stone the industry is established from the immemorial times and is called the "Agate Industry". It is a very old industry of the Khambhat and through it many more people can survive their life at present also. Not only that few times ago, but this industry also played precious role for the Indian economy. Various characteristics of this industry are noted below:

#### 1.1 Characteristics of agate industry:

1. It is household or cottage industry.
2. It is a heritage industry.
3. It is considered labor intensive.
4. Decentralization
5. No need of any educational qualification.
6. It runs on the demand of the person.

#### 1.2 Agate manufacturing process: (Patel Veribhai 1992, 33-45)

**1. Sun Heat:** After the stones are brought from various places it is necessary that the stone should be soft because it is in raw material form. In spite of this, it requires heat. Not only that, in raw material form, silicosis water inside the cavity was also found. So, before heating, this water must evaporate otherwise there will be cracks in stone while heating. So, the worker spread the stone on a

terrace for some period in the sun. This work cannot be carried out during monsoon.

**2. Proper Heating:** After sun heats, the stones are heated by two methods, that is the pits (Bhalsal) and the earthen pots (Handala).

#### 2.1 The Pits Method (Bhalsal)

In this method, the pits are dug in the ground generally 2ft deep and 3ft. wide. Sometimes it is created on the terrace. The pit should be as dry as possible. In the pits, a layer of ash about 1 inch is spread. About  $\frac{3}{4}$  th of the pit is filled and is covered with goat and cow dung, charcoal, saw-dust etc. Then it is lighted, and the heating continues for about 48 hours.

#### 2.2 The Earthen Pots Method (Handala)

In this method, the pits which are made as above, and the pots are arranged duly filled in with the stone. The mouth of this pit is covered with ash. Sometimes the vacant spaces between the pot and bricks are placed so that the heating materials may not be displaced.

**3. Breaking or Cutting:** Various instruments are utilized for breaking and cutting the stone. The workers who are engaged in this work are known as Pounders, Khandara, Khandiya. Different instruments are utilized, that is iron spike, shingadi, anguthian, files, dhangadhra stone, toothless saw etc...

**4. Grinding:** When the above process is completed, the process of grinding is started. The workers who are involved in it is called "Ghasia." The beauty and attractiveness of agate depends on the need is

carried out during this step. This work is done by two ways, that is (1) with the help of electricity (2) with hand.

**5. Polishing:** Polishing is required for making more attractiveness of the agate. The workers who are engaged in this work are known as polishers. This work is done in different ways like, mende polish method, the mechanical method, the pettimar method.

**6. Drilling:** The stones which are polished as above are to be drilled. The workers who are doing this work are known as “Vindhara”. In the past, this work was carried out by hand but nowadays the drilling machine facility is available.

When the raw material of agate stone is passed from the above process, the necklace, earrings, show piece are obtained.

## 2 Key words:

### 2.1 Agate:

The word agate is described in Census of India 1961 that the word “Achates” is derivative of the Arabic “Akik” means riverbed. So, it is thus Arabic in origin. According to R.K. Trivedi, “agate is composite mineral which contains 70% to 96% of silica with various proportions of alumina colored by oxide of iron.” Agate is one type of natural stone, and it is in raw material. It is in different colors and shapes like water line stone, shadow, eye agate, moss agate, seam agate etc. In simple words, agate is a stone made of raw material and it created when the temperature is high in the sand.

### 2.2 Industry:

According to Industrial Disputes Act 1947, industry means systematic activity carried on, by cooperation between an employer and his workmen for the production, supply or distribution of goods or services with a view to satisfying human wishes.

### 2.3 Worker:

According to factories act 1948, worker means any person employed in a manufacturing process whether working for wages or not is a worker. In this paper, the agate worker’s discussion is elaborated.

### (3) Aim and Research Method:

To know the issues relating to the agate industry is the aim of the present study. In this paper, the discussion is also carried out regarding the basic of agate industry, process of agate industry, comprehensiveness of agate industry and the recommendation also mentioned. For this paper, the secondary source of data collection is used by the research scholar, and it is included in research study, article, journals, reports of government and non-government institution’s reports, various websites etc...

### (4) Comprehensiveness of agate industry:

**Dr. Hitesh N. Jagani, Hetalkumari M. Makwana**

### 4.1 In the world:

The agate stones are found all over the world, but the major mines are in India, USA, Russia, Canada, and Europe. In recent times, the industry has grown in the South Dakota area of the USA. The agates are found in different places, like the multicolored agates are found in San Luis Potosi and Aguascalientes state of Mexico, the limestone agate is found in Moscow from 100 km near Okha river. During 1497, the counterparts of the agate industry is found from Germany also (Mahesh Patel, 2018, 4). In Germany, Kachmani, Nilmani and smoke-colored agates are also available. The history of Germany regarding agate industry is very interesting. This industry is established at Baharan field, near Olden Aargadehi in the district of Idar Oberstain of the Germany. Various factors are responsible for the rise of agate industry in Germany and one of the foremost is that the help of German Government for the development of the industry (Veribhai Patel, 1992, 5). Agates are also found in England in the Cheriot Hills which is situated in Staffordshire. In Scotland, it occurs at Montrose, Forfarshire and Perthshire and also found in South Africa and Australia. (Patel Veribhai, 1992, 19 - 20)

### 4.2 In India

In India, also many varieties of agates are found. The state of Gujarat is called the “Hub” for the agate industry of India. Apart from Gujarat, it is also available in Chennai, Bombay, and Orissa. India’s export for last ten years has been extremely profitable to economy. It has made a huge amount of contribution to the economy in the year 2012-13 during the export. (Patel Mahesh, 2018, 4)

### 4.3 In Gujarat

According to the collection of Wilson Makenzi in the eighth century due to the work of agate at Cambay, Gujarat was so much well-known that people called it “the akik Khshetra” (Patel Veribhai, 1992, 22). Mr. Wadia stated that, “the chief place which supplied raw agate is Ratanpur in the Rajpipla, where rolled pebbles of these amygdules are contained in a tertiary conglomerate” (Patel Veribhai, 1992, 20). In 150 A.D. Ptolemy wrote about Agate that there was a hill of agate and is called the hill of Baba Abbas and which is situated on the bank of Narmada near Rajpipla. He also stated that Baba Ghori is the pioneer of this industry. In Gujarat, the availability of agate is seen in Zagadia, Kapadvanj Morbi, Mandvi and Kachh.

### 4.4 In Khambhat

During 10<sup>th</sup> and 11<sup>th</sup> century, the Arab travelers did not mention the existence of this industry at Cambay. Even in the 13<sup>th</sup> century Marco Polo does not seem to have taken note of this industry. But during the 15<sup>th</sup> century, the travelers mentioned the existence of the agate industry at Camby. This industry therefore seems to have

flourished at Cambay in the 16th century and after (Patel Veribhai, 1992, 22).

At present, the agates are mostly brought from Zaghadia. According to Navjivan Vikas Mandal, approximately 20,000 to 25,000 workers are involved in this industry. Due to this industry the Cambay obtained “Geographical Indication Tag”. There is two types of workers found in this industry:

**(1) Household Workers:**

**(2) Factory Workers:**

Not only Khambhat city itself, but nearest villages are also included in this industry. The process of agate breaking, cutting, grinding, polishing, and drilling are carried out by the workers. Shakkarpur village is the prominent place of agate industry.

**(5) PUCL (People’s Union for Civil Liberties) and Agate Industry:**

Gujarat is very proud of the agate industry but has never paid any attention to the workers who are waiting for the death due to the silicosis. “The silicosis Pudit Sangathan (silicosis victim association)” of Khambhat drew the attention of PUCL towards the agate worker so the team conducted an inquiry on 29<sup>th</sup> Sep. 2007. When the team was entering Shakkarpur was surprised because they watched the electricity wire of the power supply fully covered by the dust of silica. Not only that, the roads and the walls were also covered by the powder of silica. The team visited the places where workers are polishing as well as the workers are also suffering from silicosis. During the visit the team analyzed the condition of agate industry, the team recommended the following points:

1. All the workers should be issued with identity card.
2. Worker’s welfare fund should be created with aid of the government and traders.
3. The silicosis patients should be treated free of charge as well as issued health card.
4. The workers dying due to silicosis should be registered by Panchayat, municipal body and the death certificates issued by mentioning cause of death.
5. The minimum wage should be declared for workers.
6. Food and nutrition allowance should be granted to the workers.
7. The government should pay premiums.
8. The workers dying due to silicosis should be paid compensation from the Chief Minister’s Relief Fund.
9. Anganwadi provision should be made for the women agate worker with food.
10. The awareness campaign should be organized by the health department.
11. The widow workers died due to the silicosis should be properly rehabilitated economically.

12. Alternative training should be given to the workers.

13. The state government should come up with a policy for occupational health and safety.

14. All public hospitals must have OPD for occupational diseases.

**6. Issue Relating Agate Industry**

**6.1 Issue Relating to Wage:**

The wage rate system of this industry is dependent on peace. The wages provided regularly but not according to minimum wage and due to it resulted in worst economic condition. At any festival, there is no increment made up by the owner. Due to the low wages, they suffer from the debtness. In the study of Mahesh Patel (Problems and prospects of agate industry in Gujarat Nov.2018) shows that 89.6% workers are not satisfied with their wages. Moreover due to the low wages the house hold facilities is limited in their home.

**6.2 Issue Relating to Child Labour:**

Due to the household industry children are also involved in this industry and due to it we can see the existence of child labour. According to the PTRC survey 20.74% children involved for part time work and 70.34% for full time work. (A study of agate industry worker, 2011)

**6.3 Issue Relating to Health:**

Due to the dust of the agate stone, the workers suffer from diseases related to breathiness, respiratory, lungs etc... Sometimes they become the victim of silicosis and due to the low economic condition, they can’t afford treatment and at the end, worker may die. In some cases, the bread winner dies due to silicosis. The information related death due to silicosis is mentioned in NHRC and PTRC study reports. A few times ago, this disease was seen in Ghasiya laborers but due to the invention in working pattern but nowadays it is seen in cutting and drum workers. During the working time if the worker injured by the machinery the owner never helped them even in treatment.

**6.4 Lack of Attention of Government:**

This industry is listed in the heritage industries list but there is no attention of the government rather than attention of other industry.

**6.5 Absenteeism of Social Security:**

None of the social security is provided at any of the time which is aroused by the man made or natural disaster. Any of the situation, the worker survives their life themselves. In the case of death of bread earner due to the silicosis there is no social security provide by the government.

**6.6 Absenteeism of Union:**

With cooperation anything can be done and without cooperation nothing can be done. In this industry, there is no union of the workers and in spite of this, many more problem faces by the worker as well as the industry itself. There are

various reasons responsible for absenteeism of the union.

### 6.7 Issue Relating to Market:

The owner is the central person of the market. The worker only a part of “supply-chain.” Everything is decided by the owner. Many more workers are not aware about the import and export of this industry. Moreover there is more demand outside of the country.

### 7. Recommendation:

#### (A) For workers:

1. To maintain unity with each other.
2. To keep co-ordination and co-operation with each other.
3. To form a union or association.
4. To develop the quality of leadership.
5. To keep in mind that without co-operation nothing can be done and with co-operation everything can be done.

#### (B) For the Government and other institution:

1. To make attention toward agate industry as attention toward other industry.
2. To arrange the exhibition, a handicraft fair to motivate the workers.
3. To declare the minimum wage.
4. To decrease the fee rate in private schools as well as help for higher education.
5. To organize occupational training by coordination with other institutions.
6. To organize employment fair
7. To provide social security.
8. To take up the responsibility of the family whose bread winner died due to silicosis.
9. To give relief in private hospital's treatment in case of silicosis as well as disease regarding breathiness.
10. To build the solar plant.
11. The electricity rate should be at a minimum level.
12. To give LEVS (Local exhaust Ventilation system) where it is necessary.
13. To organize health-check-up camp every month.
14. To provide free safety measures to the workers.
15. To give a first-aid kit to the workers.
16. To compile welfare fund for the worker.
17. To provide loan on basis of low interest rate for social functioning.
18. To develop the hostel facility for children.
19. To implement the law which are enacted for unorganized sector.
20. To focus on vulnerable sections of the society because they are more involved in it.
21. To develop a facility like GIDC.
22. To develop resources from it, the garbage may be reused.
23. To declare a specific area for the work of drum, grinding and cutting.
24. To keep away the children and women form drum, grinding and cutting work.

25. To use present technology.

26. To create a market for purchase and selling.

27. To develop a facility like APMC.

28. To make interest by District Child development committee for to reduce child labor.

29. The labor welfare officer must visit every month and analyze the problems faced by them and try to solve it.

30. To create a committee at Taluka level for workers and evaluation also should be made up by it.

31. To make a law like Madhya Pradesh Act for the welfare of state pencil workers.

32. To run up the awareness programmes regarding addiction.

### 8 Sum Up:

We can sum up that the government as well as the non-governmental institution should coordinate with each other and take steps for solutions regarding issues related to the agate industry. These steps should help industry to grow up and it should inspire the workers to work happily. They should be given respect and self-satisfaction, and we can protect this industry.

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**Field Related Person Visit**

१. Jagadishbhai Patel, Head - Peoples Training & Research Centre.
२. Chandreshbhai Patel, (President, Navajivan Vikas Mandal Trust Akik Association, Khambhat)