CHAPTER I

INTRODUCTION
CHAPTER - I

INTRODUCTION

Food, clothing and shelter are the basic essentials of human life. Construction was considered as an activity of prime importance even during the ancient period. Excavations of the ancient civilizations at Harappa and Mehanjodaro and the studies and findings in other countries of the world provide very good proof of development of construction technology during the ancient period. A study of life and culture in ancient India (pre-historic period) shows that the cities, houses and the streets were well designed and well planned. The houses used to have an open court, excellent windows, staircases, separate bathrooms, wells etc. This is clear from the following lines: "The houses were quite commodious, divided into well-sized rooms. The open court was the basic feature of house-planning. The court yard which was paved with bricks was surrounded by chambers. Every house had a separate bathroom placed at the street side. It was well paved with bricks. It contained the drain carrying off waste water." ¹

The study of other ancient civilizations in the world provides sufficient proof of the development of construction activity then. The construction of the 'Great wall of China', construction of the 'Conical tower' in the 'Forgotten Black
Empire' in Zimbabwe etc., reveal the importance given to construction activity in the past.

The history of bricks moves with the history of the construction activity of the ancient period. The following observation provides proof of this phenomenon. "The houses were made of well-burnt good bricks and not stone. They were in sizes from 51.43 centimeters long, 26.67 centimeters broad and 8.89 centimeters thick and 26.03 centimeters long, 12.70 centimeters broad and 6.71 centimeters thick. For pavements smaller bricks of 24.03 centimeters long, 11.16 centimeters broad and 5.8 centimeters thick were used, 'L' shaped bricks were used for corners." This is indicative of the great care taken in the production of bricks during the ancient period.

There is a reference to the use of bricks even in the stories of the Bible. "... Then, one day a group of people were wandering across a stretch of wide, flat land, and there they pitched their tents. Someone said 'let's build a city here', and they all thought it was a splendid idea. They made bricks and mortar to hold the bricks together, and they all worked with a will until the city was built..." It is said the wall in ancient Babylone and ancient Rome were built using both burned and unburned bricks.

Hubli and Dharwad talukas of Karnataka are well-known for production and supply of good quality burned bricks. They
supply bricks to even very distant markets like Hospet, Bellary, Gadag and Hyderabad. The brick industry in this area must be very old. In the villages surrounding these two talukas, old houses are of burnt bricks and some of the houses are more than one hundred years old. Over the years the industry has changed structurally. A few big manufacturers used to work then, but today they are replaced by a large number of small manufacturers. Many new entrepreneurs took to brick-making and found it to be very lucrative and it became a means of livelihood for many families which were thrown out of their original family occupations due to mechanisation and subsequent introduction of new substitutes. The potters, the weavers etc., took to brick-making as it was the only alternative open to them. It can be started without much skill, experience, capital or technology. Since a majority of the brick units were in the nearby areas and they used to employ the village labourers, the village people got the opportunity to work in the brick units and were naturally trained in brick-making work. After working in the brick units for a few years, many of the workers started their own units and thus the number of brick units functioning in the area went on increasing day by day. The growth of the twin cities of Hubli-Dharwad and the increased population automatically increased the pressure on the construction activity. The increased demand for bricks gave a boost to brick production.
Today the industry is at cross-roads and faces different problems especially due to the emergence of new substitutes. Many institutions are busy with the conduct of research for the development of cheap and better construction materials and this has resulted in the invention of new substitutes for bricks, too. An attempt is made in this study to analyse the problems and the prospects of brick industry in Hubli, Dharwad talukas in Karnataka.

There are about 200 brick units in these two talukas. They operate for six to seven months every year. It is a small-scale, labour-intensive home/cottage industry. The production is seasonal as the bricks are not manufactured during the rainy season because of rain, lack of labour due to farming operations etc., during the rainy season. The facilities necessary for brick making during the rainy season like sheds for the brick kilns etc., are not developed by the entrepreneurs so far. Three to five lakh bricks are produced on an average by each of the majority of manufacturers but there are a few units that produce as much as twenty lakh bricks in a particular year (one season).

Studies are made at national and international levels for finding better alternatives for bricks. The existing method of brick-making consumes much fuel and creates a lot of environmental problems like air pollution. United Nations Industrial Developmental Organisation (UNIDO) has published
detailed information on small-scale brick-making and it has also published detailed information on small-scale manufacture of stabilised mud blocks. These publications which are called technical memorandums contain a lot of information about brick-making and on manufacturing of stabilised mud blocks. The stabilised mud blocks are found to be cheaper and they are said to have more strength when compared to the traditional ones. It is also said that the stabilised mud blocks are fuel-saving. The various steps involved in brick-making like soil testing, mixing of coal ash, the different machines that are available for manufacturing of table-moulded bricks, the process of manufacturing stabilised mud blocks, the machines and their use in the manufacture of stabilised mud blocks and the details of the suppliers and the advantages and disadvantages etc., are given in these memorandums. The Centre for Application of Science and Technology in Rural Areas (ASTRA) in India is conducting research for the development of low cost building materials. Efforts are being made by other institutions like Housing and Urban Development Corporation (HUDCO), Zilla Parishads etc., for the development of new and cheap construction materials. These institutions are imparting training and arrange workshops on manufacture of low cost building materials including the manufacture of bricks and stabilised mud blocks (SMB).
A seminar of Brick-kiln Co-operatives was held on the 15th and 16th of March, 1967 at Vithalbhai Patil House, Rafi Marg., New Delhi, under the Chairmanship of Shri K. Arunachalam, who was the Vice-Chairman of Khadi and Village Industries Commission of India at that time. The seminar concentrated on the problems of Brick-kiln industries in India with special emphasis on the problem of finance. The non-availability of fixed assets to raise loans, the brick industry not being treated as an industry in some of the states like Punjab, the non-availability of suitable soil, irregular supply of coal ash, the poor quality of the coal supplied, (i.e., the coal with high ash content), were the main topics of discussion at the said seminar. Certain recommendations like provision of capital and provision of credit by banks to brick kiln industries in the country, different types of assistance to be extended by the Government to the industry, formation of Federation of brick-kiln co-operatives at state and national levels, exemption of the brick kilns from sales-tax etc., were made at the said seminar.

OBJECTIVES OF THE STUDY

The objectives of the study are:

1. to study the problems of the brick kiln units in Hubli-Dharwad talukas like procurement of the basic inputs like
coal ash, soil, water, labour, funds etc., and the problems associated with the marketing of bricks,

2. to study the peculiar characteristics of the brick industry and its impact on financing, marketing and the socio-economic conditions of the workers depending on this industry,

3. to analyse the break-up of the cost of production and cost of distribution of bricks with the ultimate intention of estimating the normal and abnormal losses/wastages and the measures, if any, taken by the manufacturers to control such wastages,

4. to analyse the influence of moneylenders on the pricing of bricks and its impact on profit,

5. to study production methods and the marketing practices prevalent in the brick industry in the areas under study,

6. to study the impact of changes in the supply of basic inputs like raw materials, finance etc., on the functioning of the brick units,

7. to study the structural changes that have taken place in the brick industry over the last 25 years,

8. to study the effect of the brick industry on employment and income generation,

9. to forecast the prospects of the industry in the wake of new substitutes, and

10. to study any other problem germane to the study and suggest recommendations.
AREA OF THE STUDY

The study mainly concentrates on the brick units in Hubli-Dharwad talukas. These two talukas are very popular for quality bricks and the bricks are supplied from these two talukas to distant markets like Hospet and Bellary. There are about 200 units of which six units are quite big, manufacturing upto 20 lakh bricks each per year and each of the remaining units manufacture about 5 lakhs per year. Only 19 units are found to have fixed locations and the rest are mobile. All these units are covered in the present study.

LIMITATIONS OF THE STUDY

1. Ignorance and illiteracy of the respondents posed a great challenge to the researcher in the collection of the data.

2. A majority of the respondents were hesitant to respond as they mistook the researcher to be a Government official. Hence, they were sceptic about the purpose of the visit of the researcher.

3. None of the respondents has maintained books of accounts or other records. They supplied information to the researcher relying upon their memory. Hence, the data collected is based on oral information given by the respondents.
RESEARCH METHODOLOGY

Census method was adopted for collection of the primary data from all 200 respondents. The data so collected was cross checked with the help of the data collected from the friends and relatives of the brick manufacturers. The secondary data for the study were collected from District Industries Centre, Small Industries Service Centre, Karnataka Financial Corporation, Bank branches, middlemen dealing in building materials, suppliers of coal ash to brick units, civil contractors, Government statistical and Geological departments. The respondents were illiterate and therefore the questions contained in the questionnaire schedule were explained in Kannada.

CHAPTER SCHEME

The first chapter addresses the research design.

The second chapter is connected with the types of bricks and the multifarious uses to which bricks can be put and the advantages of the bricks as construction material as compared to other substitutes.

The third chapter discusses the brick manufacturing process. Different stages involved in the production of bricks, different types of kilns in use in different parts of the world are analysed in this chapter.
The fourth chapter which is connected with the analysts of the problems of brick industry in Hubli and Dharwad talukas of Karnataka State constitutes the core chapter. The nature of the industry, its working in the study area, the prevailing production process and the problems of the industry are detailed in this chapter. It also contains the analyses of the cost structure of the brick. The future prospects of the industry are analysed in the same chapter.

The fifth chapter details the findings and also contains suggestions.
REFERENCES


6. ILO-Technical Memorandum No. 8-*Manufacture of stabilised Mud Blocks* (Geneva, 1987.)


*************