



REDEFINING THE PURPOSE OF TRADITIONAL HANDMADE TILES IN INTERIORS

(Athangudi Tiles As and In Wall Partitions)

Athufa Naireen, Cheruvu Srinivas, Srishti Srivastava

First year student, M Arch (Interior Design), Associate Professor and Head (Department of Architecture), Asst. Professor
Department of Architecture,
JNAFAU, Masab Tank, Hyderabad, Telangana, India

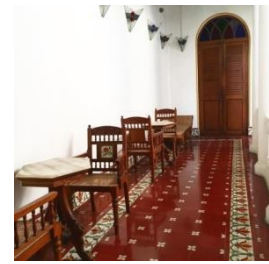
Abstract: Athangudi Village, in the Shivagagai district of Chettinad, is home to various crafts from the region that ranges from culinary expertise to exquisite craftsmanship in architectural marvels. A very important contribution to the Chettinad grandeur is the art of developing and sustaining a tile pattern that is unique to this region of India, now known as Athangudi tiles - an art form that is almost 150 years old. A 150-year-old craft that has been revived as a unique art-deco tile pattern technique from India. While it was earlier regarded as a hallmark of quality, today it is also a mark of sustainable design, for longer the life of the initial investment of efforts, energy, and resources, the more eco-friendly is the material. The Athangudi tiles are completely hand-made using local and eco-friendly materials from the region. Deft hands of the craftsmen use cement, sand, jelly, and water to make the dough. The tiles made are very distinctive and have glossy finishing. Tiles have traditional as well as modern motifs. These handmade tiles are very beautiful and unique in their style and are painted using vivid colors. Now with new design intervention by architects and interior designers in the reuse of period style home decor architecture techniques/style, these tiles have been given a fresh lease of life in the world of architecture. Instead of common usage, these tiles can be utilized peculiarly by constructing modifiable wall partitions. The tiles are placed in pre-cast frames made of wooden or other sustainable materials. The main motive behind this idea is to redefine the classic utilization of tiles and to give production opportunities to - a skill that is so unique which has been declining its popularity in the market over a period.

Index Terms – Handmade tiles, old craft, eco-friendly, interior designers, wall partitions

I. INTRODUCTION

Athangudi is a small rustic village located in the Sivaganga district of Tamil Nadu state. It has a population of about 2,000 people and is famous for its tiles, woodwork, and Chettinad food. Most of the families living here are involved in this trade which is famous for their use of eco-friendly materials and minimal use of resources and energy. The Athangudi tiles are popular handmade decorative floor tiles. Athangudi tiles are completely handmade floor tiles, which add charm to the interiors of a house. These floor tiles of Athangudi stand out for its class, bringing forth the rich cultural heritage of the Chettiar community. The art of making these tiles is a traditional activity at Chettinad. These ethnic hand-made floor tiles are durable and follow traditional floral or geometrical patterns. Though methods of tile production have become mechanized, these special tiles are still following the age-old tradition of being hand-made in simple cottage industries. In the earlier days, these artisans were patronized by the rich and affluent as they were a more expensive option compared to the machine-made tiles.

The raw materials used for making Athangudi tiles are the local soil, cement, baby jelly, and synthetic oxides. It is unique and supreme, as it comes in a variety of colors and patterns made by a distinctive process of making tiles. The charisma of the tiles lies in the local sand used and for the right composition. Cement, baby jelly, and sand along with synthetic oxides make the composition of the tile. The handmade Athangudi tiles of Chettinad are a unique and sophisticated expression of culture and trade. They are a testimony to the rich cultural heritage of the Chettiars, who traded extensively in the days of yore. The traditional designs are still being practiced and discerning members of society use them to create an ethnic ambiance in their homes. A unique feature of these tiles is their smoothness and sheen – not too shiny, nor too dull, but just perfect! And when it comes to design, durability, and quality, these tiles can beat any of the tiles manufactured the modern way; they also make for great sustainable solutions with the world heading towards global warming.



Attangudi Hand Made Tiles different patterns and designs

HISTORY AND ETYMOLOGY

A century back the rich residents of Chettinad imported European tiles, probably it was a mark of their richness. But practical difficulties soon set in. they built palatial mansions with wooden pillars, Japanese tiles, Italian marbles, and imported stained glass, but they soon realized that the repairs of these imported tiles were very expensive due to the non-availability of spares. So the enterprising community set up a cottage industry that made replicas of the imported tiles. Thanks to this, the famous Athangudi tiles emerged. These tiles were named after the Athangudi village, where tile-making has become a traditional local craft carried out in the same manner even today. Interestingly, these tiles are known to age beautifully and tend to get shinier with use. The Nagarathar Chettiars of Chettinad traveled far and wide to various South-East Asian countries and their aesthetic eyes invariably picked on all the beautiful items they saw which they selected for bringing back home and skillfully incorporating into the décor of their mansions. Classical English furniture paired with Italian marble intricately carved teak wood from Burma and stained glass windows from Belgium were harmoniously included in the Chettiar's homes and mixed amazingly well with the rest of the décor. The patterned floors of these homes were often made from designed terracotta tiles locally sourced from Athangudi. It's believed that the Athangudi tiles are the result of the inspiration of western and eastern influences; the intricate designs of the English carpets coupled with the glazed finishing of Chinese floorings are hypothesized to be the basis or the Athangudi tiles designing, texture, and smooth finishing.



II. TOOLS AND RAW MATERIALS

The artisans possess expertise in manufacturing these traditional tiles of great quality. The process of making these tiles is done by initially choosing the designs and colors from the existing designs, followed by adding of different colors on the glassed frame in a sequence and designing it. It is layered with a coat of a dry mixture of sand and cement and overlaid with mortar.

The raw materials include local sand that is conducive to the process, cement, glass for the foundation material. Apart from this, the Designs and patterns are still conventional but a few modern modifications are available in the market due to consumer demand.

- **Frame:** Different designs of frames are used to make designs. Geometrical patterns floral motifs are the main design patterns. A wooden frame is used to hold the glass and fire frame. Glass frames are cleaned after every use
- **Colors:** To make the motif. These are chemical oxides mixed with cement to add viscosity. Artisans mainly use basic colors to make beautiful designs. The black color is rarely used in designs. The standard colors used are red, mustard, green, and grey.
- **Ladles:** To transfer the color on to the tiles.
- **Local Sand:** Local sand is sieved/ filtered to remove unwanted material. Clay is procured locally and used while making the tiles.
- **Cement:** Cement is the main ingredient of the tiles.
- **Spade:** Spade is used to properly spread the cement in the frame. Used to spread the mix over the glass frame with the colored pattern.
- **Jigsaw Blade:** Used to remove superfluous material and smoothen the tile.
- **Water Tank:** Used to submerge the tiles for curing. Tiles are dipped in water once these are made. Artisans build a water tank in the vicinity for this purpose.
- **Mixing Machine:** Used to mix cement and sand. The mixing machine used to mix the raw materials.



Sometimes the whole family is involved in the business.

Artisan in his workshop showcasing a tile.

MAKING PROCESS

To appreciate these tiles, you first have to understand how they are made. The process of making these tiles is simple, though painstakingly done; tile by tile the artisans believe that the soil of their village is just the right composition needed to make these tiles and create beautiful patterns on them, making each one unique.

The manufacturing process is carried out with immense skill and precision. This simple yet dexterous process involves creating the tile from scratch to the point of creating designs and finishing the product. Locally procured sand and clay are sieved/ filtered together and then ground to form a fine powder. Cement is mixed with water and then converted into the dough. Glass frames are cleaned and placed on a raised structure. A square wooden frame is placed over the glass to form the tile.

A. To start with, a metal stencil of the desired design (floral or geometric pattern) is prepared within a metal frame with handles.

B. The frame is placed on a glass plate of the same size as the tile. The sheet of glass is cut to tile size.

C. Next, a cement mixture is prepared.

D. Bright colors are added to the cement mixture. An artisan prepares colored cement mixture.

E. A mixture of cement and colored oxide, in a liquid slurry state, is individually poured into patterned molds upon a glass piece. Cement mixture of a different color is ladled into the desired compartments of the template.

F. After a few minutes of setting, the frame is whisked out, leaving a colorful pattern on the glass.

G. A thin layer of local sand is then laid, and the tile is filled with three-fourth inch thickness of cement, sand, and small stone aggregates.

H. A layer of dry sand is put on the wet cement. The artisan neatly takes off the excess sand from the frame.

I. The frame is then packed with cement mortar.

J. Freshly made tiles are left out to dry in the sun.

K. These tiles are stacked and kept in a bath of water for eight to twelve days. They are then removed and allowed to dry for 24 hours, to make the tiles compact.

L. Finished tiles are dried by laying husk over them to soak excess moisture. The innate oils from the husk impart a lovely sheen onto the tiles.



(A)



(B)



(C)



(D)



(E)



(G)



(I)



(J)

III. TILE MAINTAINANCE

Simple tile maintenance, to be cleaned with water only. Custom made designs possible and a variety of designs and colors available. No polish is required after laying and Naturally gets polished with use. Due to less compact layers, cannot take heavy loads. One time laying the tile 100 years lifetime used.

IV. COSTING AND MARKETING AT PRESENT

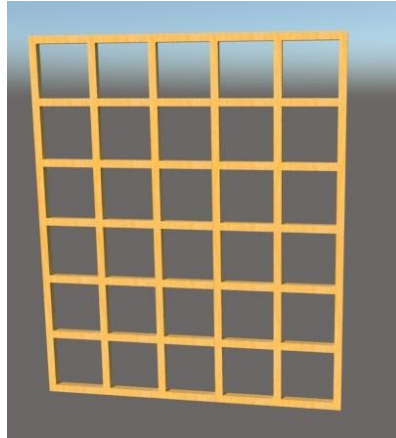
While these tiles are relatively easier to lay compared to an insitu flooring, some skill is required here as well. Tiles may get chipped at the edges during transportation, so the person laying it has to choose the right tiles and align and level them properly, Athangudi tiled floors do not need any polishing. For maintenance, sweeping to get rid of the dust and a gentle swabbing is enough. While the in situ floor is joint-free, Athangudi tiles have joints. Cost-wise, Athangudi tiles are economical and can even be cheaper than some vitrified tiles. Athangudi tiles cost Rs.70-120 per sq. ft. The Athangudi tiles are hand-made. Even before the invasion of the mechanized making of floor tiles such as ceramic, vitrified, marble, and granites, these flowering tiles of Athangudi were a match of its own class and they competed with imported ones of Japan and Italy. The factories are not large; most of them have a few workstations where craftsmen are hard at work using their hands to mold and craft these richly patterned tiles. However, having little shelf life and a relatively slow manufacturing process, these tiles are not much in demand. The situation has led to a decline in the market. Athangudi tiles need revival. One hopes for more awareness and creative usage of these unique tiles to promote a traditional and eco-friendly craft.

V. REDEFINING PROCESS (TILES AS WALL PARTITIONS)

While Generally, the handmade tiles or any other tiles are used for flooring for various spaces, to protect or decorate walls as backsplash and roofs, or as countertops, but with new design intervention by architects and interior designers in the reuse of period style home decor architecture techniques/style, these tiles can be given a fresh lease of life in the world of interior design.

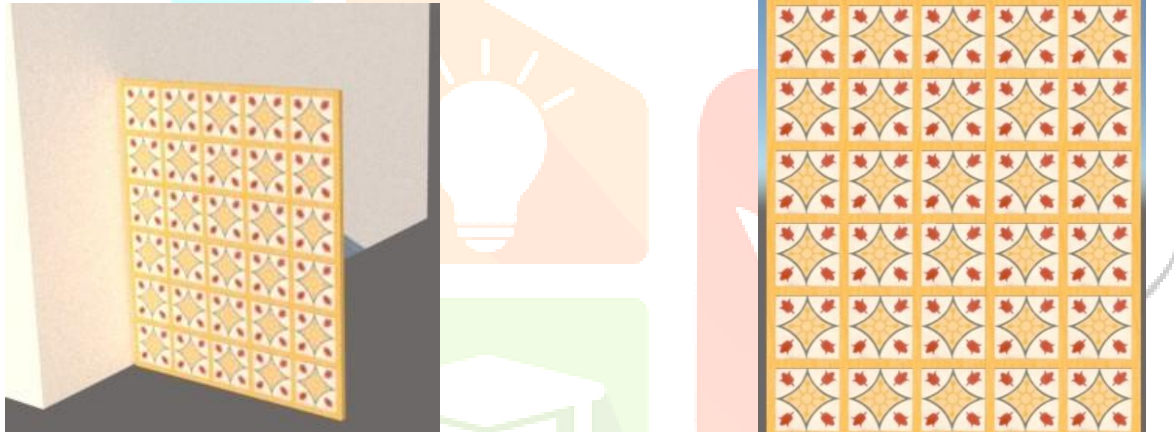
DESIGN-1

Framework:



Timber/wooden frame made of horizontal and vertical members with distance apart, to form a grid-like pattern. The distance between two members is ideal to the size of the tiles. The width of the wooden members is equal to the width of two tiles.

Tile Fixing:

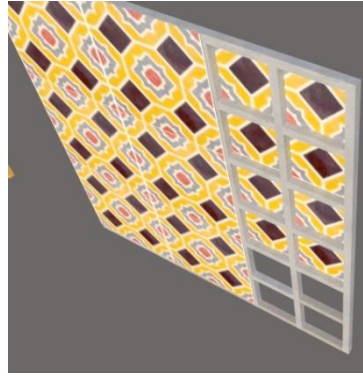


After the construction of the frame the tiles are fixed in between the individual desired shapes created by the two wooden members. The tiles are properly fixed into the frames by using tile adhesive on the corners of the tiles while fixing so that they can be fixed permanently. The frame can be made according to the desired design and the tiles can be fixed in peculiar manners depending upon the structure design. Different shapes and sizes can be customized like modifiable wall partitions.

DESIGN-2

Framework:

This design method is similar to the drywall installation where Aluminum Tubes partition is made of anodized aluminum hollow tubes or wooden members are used to forming a grid, Frame joint together using L clamp. These frames are fixed to the floor and soffit at centers with nylon sleeves and wood screws.

Tile Fixing:

The tiles are fixed on to the grid by using strong tile adhesives. They are fixed on both sides of the frame, the advantage of this process is that the frame is invisible and the partition wall will give a clean look.

VI. PRODUCTION COST

The total production cost will be not more than compared to the partition walls made of different materials like wood, aluminum, iron, or PVC, WPC...etc. The construction of the partition wall is easy as it is a built-in site situation and they can be unmolded easily. The wooden frame costing depends upon the type and quality of wood used. For a 8 x 8 ft. partition walls the pine wooden sticks of 2in x2in x8ft inch would cost around 600-700 rs/-. The number of tiles used will be 32. Each cost of the tile is around 100-120 rs/-. Labor charges depend on the location approximately charging of 800-1000 per day. The time taken for completion of work would be 2-3 days.

So approximate total cost of construction - $600+32 \times 100+ 800 \times 2=5400$ per 64 sqft. (Excluding the miscellaneous materials and expenses)

VII. CONCLUSION

The manufacturing of Attangudi tiles is slowly declining due to various reasons like the 20 steps long manufacturing process, or the old artisans not passing the art to the future generation as the labor work only produces 60 to 70 tiles per day and a factory can produce approximately 1,500 sq. ft. worth of tiles per day. If the tiles are used more for various design inventions than just for flooring or cladding, the production value increases giving more opportunities to the people of the attangudi village as well as it helps in recreating the interior spaces with the new thought process of redefining the art and usage of handmade tiles.

VIII. ACKNOWLEDGEMENT

I would like to express my deepest gratitude to Cheruvu Srinivas Associate Professor and Head of the Department of Architecture, Jawaharlal Nehru Architecture and Fine Arts University who gave me an opportunity to work on this project. I would also like to extend my gratitude to Srishti Srivastava, Asst. Professor, Department of Architecture for patient guidance, enthusiastic encouragement and useful critiques of this research work. I would also like to thank my parents and friends for constant support and encouragement.

IX. REFERENCES

- [1] Dastkari haat samiti, New Delhi, Chettiar craft: At the tile workshop, Google art & culture
- [2] Suvasini sridharan, Chennai, Published on 02 August 2013, Floored by tradition, The Hindu
- [3] Chidambara villas, Legacy of attangudi tiles
- [4] Prof. Bibhudutta Baral, Mr. J. Antony William and Mr. Susanth C.S., NID, Bengaluru, Athangudi Tiles Making of Athangudi Decorative Floor Tiles, D' Source.
- [5] Hardik Patel, Most beautiful tile crafting village in India- Attangudi, Explore the world