

# Approval Sheet

## Visual Communication Special Project on **Ceramic Murals : Documentation and Exploration**

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13<sup>th</sup> VC 96-98 Batch



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# Approval Sheet

Special Project in

like to thank my guide Mrs. Vannala for her invaluable guidance throughout the project and help me to complete the project on time. I also like to thank Prof. Hazra and Mrs. Achankar for helping me with some valuable inputs during the project. My invaluable thanks to Mr. Sandeep Manirekar, the muralist who was the first to create in me a liking for this field. My thanks to Patil, the ceramic engineer for helping me throughout the project.

By : Shilpi Agarwal, is approved in the partial fulfilment of the requirements for the masters degree in **visual communication**.

Guide : Vannala Jain

Internal Examiner 1 :

Internal Examiner 2 :



## Acknowledgement

I would sincerely like to thank my guide **Mrs. Vanmala** for her invaluable guidance throughout the project and help me to complete the project on time as a fun loving experience rather than compulsion. I would also like to thank **Prof. Hazra and Prof. Athvankar** for helping me with some valuable inputs during the project. My invaluable thanks to **Mr. Sandeep Manjrekar**, the muralist who was the first to create in me a liking for this field. My thanks to **Patil**, the ceramic incharge for helping me throughout the project with late firings, Mr. Joshi and lastly, all my **friends** for helping me throughout my project.

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merely a painting looked at through a magnifying glass. The principles used in its design, its concerns and considerations are all quite different from ordinary painting. Painting is an independent art, complete in itself, it is independent of its environment and rests on its own merits. A mural on the other hand does not have a separate existence. It is an integral part of the building in which it is placed.

A painting is viewed in stationery. Whereas, a mural artist has no such advantage. It is unreasonable for him to expect that his viewer will get a clear view all the time. Thus, it increases his responsibility in choosing the theme, the size, the colour and the technique.



## Introduction to murals

Mural is something which is an embedded part of a wall of a building. The difference between a painting and a mural is that the painting can be removed, while the mural is done on the wall itself.

Walls fracture and define space in terms of human needs. They establish the boundaries which contain or exclude activities and involvement, thereby becoming a part of the environmental condition. As a result, it is the mural that has the power to make this wall an area of special enrichment.

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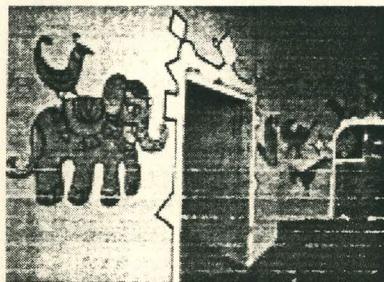


## Materials used for murals

There are basically 3 main types of murals

1. Wall paintings : Murals that are done directly on the wall without adding any extra material. These basically constitute of wall paintings . e.g. cave paintings were the first murals.

2. Murals made out of add-ons : These are murals that are made out of a particular material and then fixed into the wall itself. These could be mud or gobar paintings with abhala, or murals made up of ceramics, metal,etc.



3. Frescoes : These are the murals in which colour is added to the basic material itself and then painted on the wall. e.g. ajanta paintings.



## Materials used for murals

Murals can be made of any material that can be embedded into the wall and that can withstand atmospheric weathering. Most typically used materials are stone, ceramics, metal, glazed tiles, mosaic, stained glass

Also, several other materials like jute, coir, fabrics, plastics, stones, shells, beads, leather, etc. can be used to accompany the basic material to enhance the look of the mural.

The ceramic render surface on an exterior wall can make a commanding statement. Brilliant sunshine on the sculptured surface causes dramatic shadow play that changes throughout the day. When used indoors too, it makes the environment more welcoming and comfortable.

When a ceramic mural is integrated with the commercial building, it not only sets the building apart, but it becomes public art, connecting to the community.



# Why ceramic murals ?

Inspite of the wide variety of materials that can be used for mural making, clay is being increasingly used because of its earthy weighty character. Clay in the form of floor or wall tile is competitive in terms of price with other building materials. Because of the permanence of the material and the colour of its glazes it is quite suitable for being used outdoors as well as indoors.

The ceramic relief surface on an exterior wall can make a commanding statement. Brilliant sunshine on the sculptured surface causes dramatic shadow play that changes throughout the day. When used indoors too, it makes the environment more welcoming and comfortable.

When a ceramic mural is integrated with the commercial building, it not only sets the building apart, but it becomes public art, contributing to the community.



# History of ceramic murals

The first architectural ceramics was produced in the Near East in the fifth millennium BC when the brickmakers in that area decided to strengthen the unfired clay bricks, by firing them, probably in open fire. They soon recognised the advantages of applying potter's techniques, and decorative walls, modelled and glazed, have been found and dated as having been made around 1400 BC.

Within 200 years, the Egyptians had developed the manufacture of tiles to the point where they were acceptable to the Pharaoh for the decoration of his palace. By 580 BC, the Babylonian Empire had developed an architectural style involving the depiction of mythical animals, in a variety of colours. In China, by 3rd century BC tomb figures and tiles were in common use.

Brick and tile making spread throughout Europe under the Greek and Roman Empires. But their architectural purpose remained functional rather than decorative.

The fifth century in Florence saw the development of terracotta, majolica or faience; some of the finest examples come from the della Robbia workshops, which produced large, modelled, polychromatic, semi-structural panels in perfect harmony with the painting and architectural style of this period.

Persia, in the fifteenth century produced lustre tiles which have seldom, if ever, been surpassed. Under Shah Abbas the imperial mosques and palaces were decorated with painted and mosaic tiles and glazed bricks which by this time included a floriated design.



## Process of making a ceramic mural

By the eighteenth century, floors, walls and ceilings of certain rooms in Dutch houses can be found clad entirely in tiles; the decorative technique which became increasingly popular was the painting of a flat tile with under-glaze or in-glaze colours.

With industrialisation and the growth of towns during the late eighteenth and early nineteenth centuries, brick-making became an increasingly important industry. The demand for readily available, durable and cheap building material became an economic necessity, and a determining factor in the growth of cities and towns throughout the United Kingdom.

such was the boom in the building industry that only factory manufacture could meet the enormous demand, and in the tile industry methods of tile-making and decoration was a subject of much research and mechanization. The development of printing for transfer and direct printing on tiles, together with mechanical plastic dust pressing of the tiles themselves, were major factors in the widespread use of tiles within domestic buildings.

The reaction against industrialisation, in the later 19th century, known as the Craft Revival, includes the work of William de Morgan who, obsessed with the re-invention of Islamic glazes and lustres.

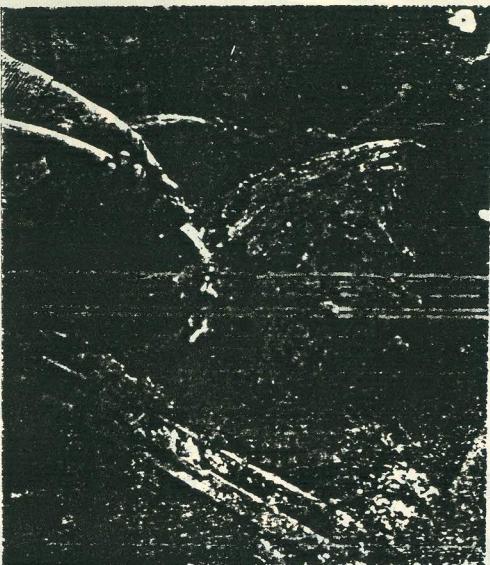
By the 1920s and 1930s the most popular characteristic ceramic facades are found in cinemas, particularly of the Odeon chain, and in large public buildings.



# Process of making a ceramic mural

1. Design is made on a sheet of good thick paper.
2. Dry clay is dumped into the dough mixer.
3. Water is added and mixed with the clay, until the clay is ready to use.
4. The consistency is wet enough so that the material sticks to itself and not so wet that moisture glistens on the surface.
5. The slab is cut from a mound or column of clay into a manageable size.
6. The clay is walked on or otherwise pressed down until each of the slabs is adhered to the others.
7. The relief design develops as the background is laid out in clay.
8. The relief is refined and finished by cutting, shaping, and smoothing with small tools such as a ceramic loop tool or wire tool.
9. Finally the finished wall is cut into tile like shapes that are in keeping with the image.
10. Each tile is carefully numbered according to the map. The numbering is done with black iron oxide.
11. First-fire glazes are brushed on and then allowed to dry.
12. Large thick tiles are hollowed out to reduce the danger of explosion in the kiln, and a map is made of the location of each piece. Butcher paper and waterproof ink is used for the map so that it is sturdy enough to last until the installation, when it will be indispensable.
13. Glazing is completed.
14. The dried tiles are loaded into the kiln and fired.
15. At the installation site, the tile men unload the pieces with a wheelbarrow and reassemble them on a flat surface near where the mural will be adhered to the wall.
16. Each row of tiles is taken from the assembled mural and adhered to the wall, starting at the bottom.

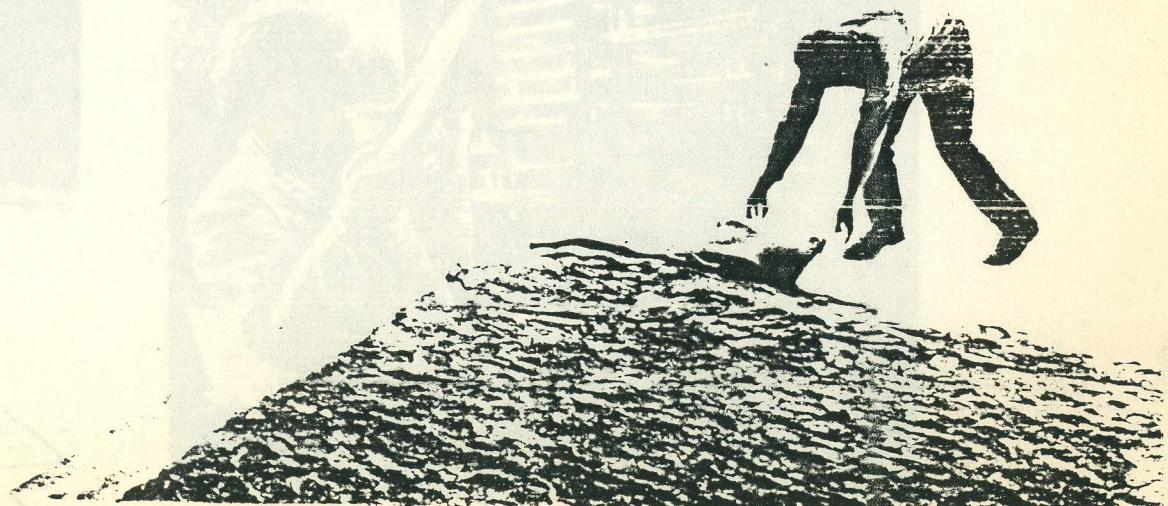




1. Water is added and mixed with clay until ready to use.



2. The slab is cut from a mound of clay into a manageable size.



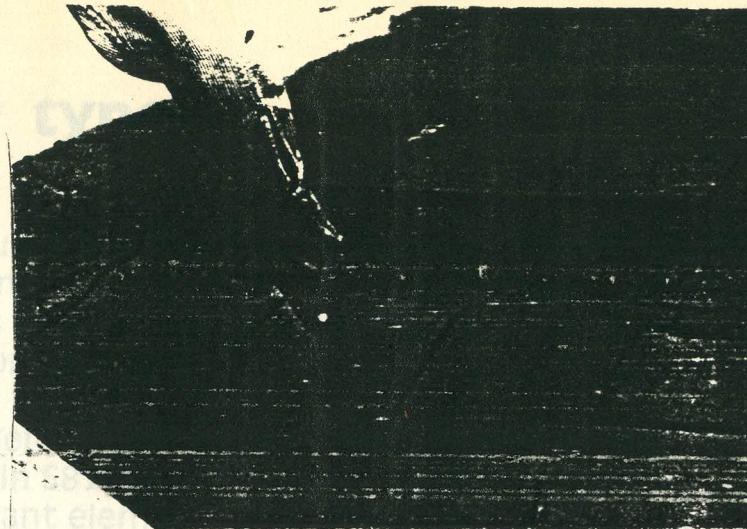
3. Each slab is carefully removed and placed on top of the other to form the base of the pyramid.



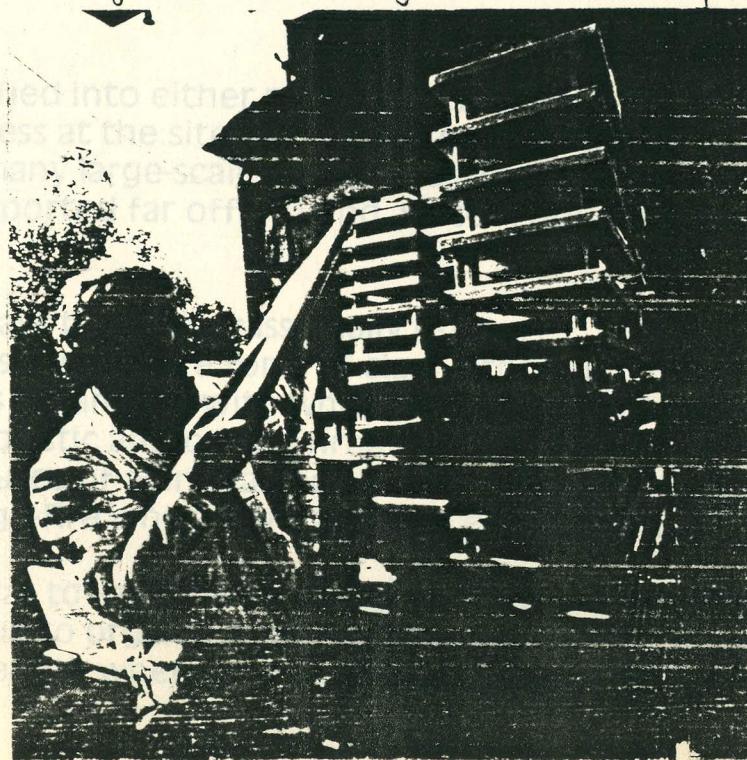
4. The design is completed.



6. Each tile is carefully numbered.



5. The wall is cut in tile like shapes regular or irregular according to design.



7. The tiles are loaded in a kiln & fired.

# Clay body types

Clay is not a single substance but a mixture of several substances; while the chief ingredient being aluminium silicate, impurities are always present. However, all clay has two essential properties - when moist it is plastic, and when heated it becomes hard.

Out of the over 90 elements that are contained in the earth's crust, silicon (Si) which is present in 58% is of great importance to us. The next most plentiful and important element is aluminium (Al), 15%. These elements are usually found in combination with oxygen,  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ .

## Types of Clays

All clays can be classified into either residual or sedimentary. Residual have remained more or less at the site of original rock formation. They are less plastic and contain many large-scale particles. Sedimentary clays are those that have been transported far off by wind, water, etc. They are fine and more plastic.

Some sedimentary clays that are occasionally used are :



1. **Plastic kaolin** : It is a very pure form of clay. Although never used alone as a body, it serves as a standard with which to compare other clays. It is white in colour, not plastic and can be fired to an extremely high temperature. It provides a source of alumina and silica for glazes and is an important ingredient in high-fire white ware and porcelain bodies.

2. **Ball clay** : It is similar to kaolin after firing. However, in its unfired clay its colour is dark grey due to organic material. Ball clay imparts increased plasticity and dry strength when used as a body component.

3. **Stoneware clay** : This clay is of special interest to the potter, because they're generally plastic and have firing temperatures from cone 6 to cone 10. Depending on the atmospheric conditions of the firing, the colour will vary from buff to gray. The clays differ in comparision with kaolin they contain impurities ,like calcium, feldspar and iron that lower the maturing temperatures and impart colour to the clay.

4. **Fireclay** : It is a high- firing clay commonly used for insulating brick, hard firebrick, and kiln furniture. It's physical characteristics vary; some have a fine plastic quality, while others are coarse and granular and unsuitable for throwing. These clays generally have iron as impurity but seldom have calcium or feldspar.

5. **Earthenware clay** : It constitutes a group of low-firing clays that mature at temperatures ranging from cone 08 to cone 02. They contain a high percentage of ironoxide, which serves as a flux ( a substance that lowers the maturing temperature of the clay ), so that when fired they're rather fragile and quite porous.



# Glazes

murals in day-to-day lives

A glaze is something which has melted into a liquid and on cooling has hardened into a glossy coating on a piece of ceramic ware. It serves to make the ware waterproof at the same time give it a more pleasing appearance.

The 3 essential ingredients of glazes are flux, alumina and silica. The alumina and silica in glazes are obtained from feldspar, clay and flint. The fluxes, however, come from various sources. According to the flux used glazes are categorised.

**Methods of glazing** : There are basically 4 essential methods of glazing. Dipping, pouring, brushing and spraying.

**Dipping** : It is probably the simplest glazing method. Its chief drawback is the amount of glaze required.

**Pouring** : It requires less glaze than dipping and the technique can be applied to a greater variety of shapes, even inside of vessels and deeper bottles.

**Brushing** : It is easy and can be used by a beginner. It is specially used for glazing large pieces that are difficult to pour or dip.

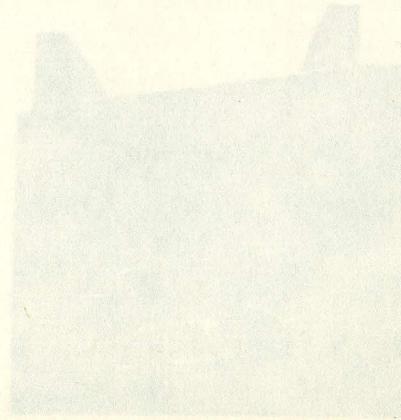
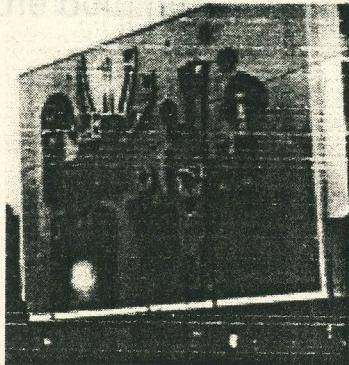
**Spraying** : Permits subtle variations in colour and more definite control over glaze thickness and coverage.



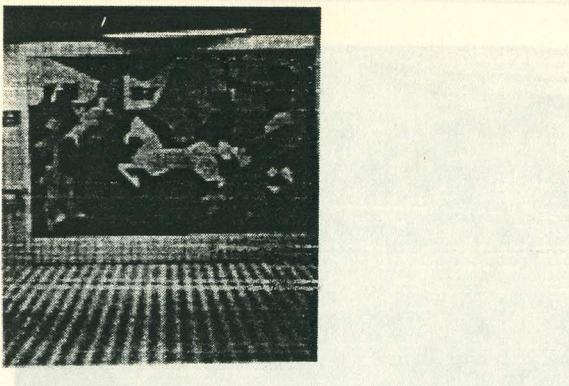
## Uses of murals in day-to-day lives

2. **Governmental** : A government setting consists of law courts, city halls, Murals have the potential of making a dead wall alive. Any wall can command attention, depending on its texture, colour or relief pattern. It can be transformed into a significant point of interest with a potential of dramatic effect due to light and shadow at different places at different times of the day. Murals give a face-lift to any place. They help giving the place an identity of its own. They're used extensively in the interiors as well as exteriors. These days they've found their place in the following places :

1. **Commercial** : A commercial setting is one associated with office buildings, shopping centres, restaurants, hotels, cinema halls or any other retail outlet that deals with the general public on a personal level, which is frequented by a large number of people, from all walks of life.



The work of art in such a setting needs to be quite visible, both in terms of scale and colour. The aim is to attract customers to particular establishment or something which would make it worth remembering. As a result, the subject matter is often linked to the corporate symbol.

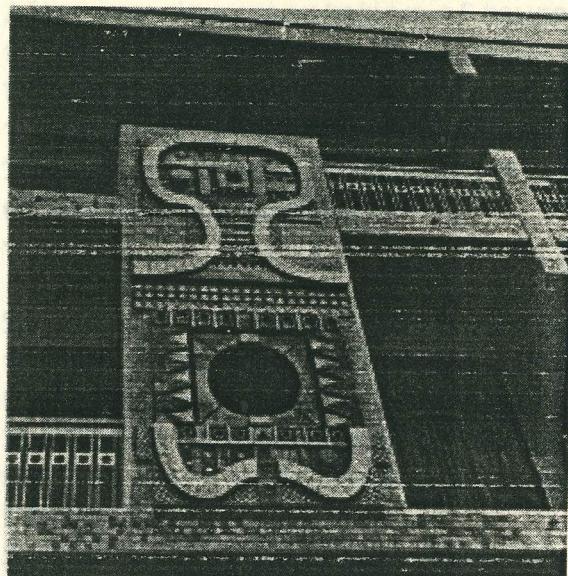


**5. Religious** : These are associated with the interiors and exteriors of temples, churches, mosques, etc. Stained glass panels and windows have been used since centuries as church murals. These days the walls along the pavement are painted with gods and goddesses to restrict people from spitting and urinating in public places. Also, beggars use it to display religious beliefs and exploit religious sentiments of the people.



**6. Residential** : These include interiors and exteriors of homes, buildings, residential complexes, community halls, etc.

## Ceramic murals : Exploration



As a result, when I started my exploration, I made a list of possibilities of techniques and materials that can be used with ceramic mural making. They are as under:

1. Use of textures (inscribing).
2. Creating 3d through relief.
3. Creating 3d through engraving.
4. Adding definite shapes of clay.
5. Use of coils.
6. Use of wheel-work.
7. Making use of ready-made tiles.
8. Using ceramic chips for mosaic.



# Ceramic murals : Exploration

After my documentation of murals in various places from actual shoots, from books ,after meeting architects and interior designers, I found that the contemporary trend in mural making was two fold :

1. Use of one and only one material in one mural generally.
2. Two variations in ceramic murals. Either only terracotta without glazing or glazing completely.

So, my exploration work consisted of 3 folds.

1. Explore various techniques used in decorating murals such as with the use of textures, inscribing, relief work, coil work, etc.
2. Explore other combinations of materials that can be used with ceramics such as glass, powdered glass, metal sheet, metal wire, bamboo, leather, beads, etc.
3. Trying out a different style for glazing. The mixed combination of terracotta with restricted glazing at certain places only.

As a result, when I started my exploration, I made a list of possibilities of techniques and materials that can be used with ceramic mural making. They are as under :

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6. Use of wheel-work.
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9. Making use of more than one type of clay. Use of white burning and red burning clay together.
  10. Adding stain in the body itself, thus working with coloured body.
  11. Cutting mural into regular pieces.
  12. Cutting it into irregular pieces.
  13. Cutting through completely.
  14. Using glazing variations such as under-glazing, only line glazing, brushing, spraying, wax-resistant, limited glazing, etc.
  15. Making use of ready ceramic transfers.
  16. Cold ceramics.
  17. Fresco making.
  18. Use of several add-ons such as metal foil, copper/nichrome wires, glass pieces, powdered glass, textiles such as jute, bandhani, coir, bamboo, beads, leather, etc.
  19. Different clay bodies - white burning, red burning, raku .
  20. Use of different type of colouring agents like poster colour instead of ceramic glazes. .
  21. Trying out metal enamelling with ceramic base.
  22. Trying various combinations of these.



## Conclusions

I decided to work on one particular theme and make all murals with different techniques in that theme in order to restrict the variables. Since ceramic blends very well with traditional art and since it is the age of revival of terracotta and traditional art, I decided to take up a village theme which includes trees, mountains, river, sun, plains and a small hut.

Inspite of the time limitation, I successfully completed my exploration in the areas of :

1. Texture variations
2. Relief work
3. Engraving
4. Use of coils
5. Add ons of particular shapes
6. Cut-outs
7. Glazing variations like under-glazing, poster-colour, line glazing, brushing, limited glazing.
8. Different clay bodies white burning, red burning.
9. Use of mixed clay bodies.
10. Raku body.
11. Use of several add-ons such as metal foil, metal wire, glass pieces, powdered glass, bamboo and beads.
12. Cut into irregular shapes.
13. Metal enameling.
14. Use of poster colour.



# Conclusions

1. Mural definitely gives a face-lift to any place. It helps giving the place an identity of its own. The difference in a building or a room with and without a mural is quite evident.
2. While designing a mural, the designer should consider its surrounding, as an integral part. A mural can never be independent of its environment.
3. Also, the size and design of the mural shall depend on the location of the building, its surrounding, purpose of the mural, type of visitors and cost.
4. The material to be used for the mural should be guided by the size of the mural ( if very large, lighter material should be used ), the cost, the atmospheric conditions of the place ( humid, dry, etc), and availability of material.
5. Clay, as a material itself has no value. It is very cheap and is quite easily available at almost all places. It's not very heavy. It's ideal for outdoors because it can withstand atmospheric conditions. Has no maintenance problems like rusting or white ants as in metal or wood. Colour variations are enormous. As the basic material is cheap, one can think of replacing these murals with time, although not necessary, again unlike any other material. As a result, by far and large, ceramics is the ideal material for murals.
6. Ceramics can be combined with several other materials like glass, leather, beads, metal, shells, stones, fabric, etc as a jewellery to the basic design.
7. Clay as a material is easy to work with. It is quite plastic and offers a lot of decorative possibilities through the use of textures, engraving, relief work, coil work, wheel-work, cut-through to create negative and positive spaces, mosaic chips or even ready-made tiles and transfers, use of a combination of different clay bodies, unlike wood, metal or stone.
8. The options for colours are enormous. Almost any colour can be achieved through ceramic stains. Also, several techniques of glazing such as spraying, dipping, pouring, engobing, wax-resistant, slip trailing,



## References

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majolica, underglazing, overglazing, etc can be used to add a new dimension to the design, again a unique feature of clay stains. Also, there are different types of glazes such as salt glaze, raku , etc.

9. Since the material is so plastic, the time consumed in making a mural is much less as compared to a mural of similar size in a different material.

10. The colour of terracotta gives an ethnic look to the mural, which is becoming increasingly popular these days. But one drawback in ceramic murals is that in order to achieve good results, the most important thing is to have a good kiln. If the kiln is electric due to shortage of space , then mural baking becomes an expensive affair.

11. And lastly, glaze proportions offer so much flexibility, that in order to be creative, a mural designer cannot depend on the time-old glaze formulas given in books. He must research himself.

6. The art news magazine of India, vol2, issue 2  
- page nos. 72 - 75.

7. Inside outside, Vol

8. Inside outside, nov 97, pg 224-225

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