ПАМЯТНИК

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AN INSIGHT TO REMNANT HUES OF SOUTH EAST ASIA, CASE EXAMPLE OF INDIA

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A unique traditional ceramic technique, which transformed the architecture of Iran and Central Asia, displayed its influence in Pre Mughal (1206–1526) and Mughal era (1526–1857) thus forming the integral part of architectural vocabulary of Indian subcontinent. It represents a significant period when craftsmen largely came from Central Asia. The existing remains of glazed tile works on structures along the trade routes linking India, Pakistan, Afghanistan, Uzbekistan and other countries strengthens the historic cultural linkages with the Central Asian countries.There is deficient documentation and research regarding culture and performance of ceramic glazed tiles in reference to the Indian context. Thus, this paper attempts to fill in the existing gaps and would present a comprehensive picture through the chronological journey of the art from with special emphasis on its present condition by means of analysing issues related to the art form. It would also formulate a statement of significance to create an avenue of awareness towards this lost craft.

Key words: kashi, binai, under glaze, bisque, premughal, Mughal, Timurid.

Evolution of architectural ceramics in India

An overview of historical evidence suggests that development of architectural ceramic is closely related to the development of utilitarian pottery. Since terracotta is considered impure in Hindu tradition and can be used only once[1], ceramic tiles had little or no role to play in Indian Hindu architecture. Secondly, Indian architecture was primarily built in stone and therefore preferred decoration in masonry unlike the brick architecture of Persia where workmen and infrastructure already existed leading to the development of separate glazed tile workshops, which gradually emerged as the primary decorative element.

Although glazed tile technique is established to be of Iranian origin, traces of tile work in Indian subcontinent can be traced back to Kushan period (late first to third dynasty A.D.), concrete evidence of which can be drawn with the findings of glaze brick with inscriptions in Kharosthi script during archaeological excavations at Shah ji ki Dheri near Peshawar, present day Pakistan[2].

The application of glazed tile work as an architectural element was intermittent before the spread of Islam in India and only took over after the synthesis of Indo–Persian culture in art and architecture where architectural elements like decorative brackets, balconies, pendentive decorations were borrowed from traditional Indian style and Persian decorative art forms

[1] *Degeorge G., Porter Y.* The Art of Islamic Tile. Paris, 2002. P. 224.
[2] Ibid.

like that of glazed ceramics came into use to liven up the facades. Earliest, in situ glazed architectural ceramics in India can now only be traced back to the 13th century and the establishment of Delhi Sultanate, due to fragmented array of evidences left by continuous invasions and raids over the Indian subcontinent, thus leaving the art form catalogued under Pre Mughal (1206–1526) and Mughal era (1526–1857).

Traces of tile work during Pre Mughal era (1206–1526):

Tile work under Delhi Sultanate

The Delhi Sultanate is a term used to cover five short-lived dynasties, namely Mamluk dynasty (1206–1290); the Khilji dynasty (1290–1320); the Tughlaq dynasty (1320–1414); the Sayyid dynasty (1414–1451); and the Afghan Lodi dynasty (1451–1526).

Initiation of ceramic glazed tile during the Pre Mughal era work began under the reign of Ala- ud-din Khilji and can be seen at *idgah* Ala-ud–din at Rapri[3], Haryana but the prime examples of ceramic glazed tile work in Delhi can be found under the following Tughlaq and Lodi dynasties. The earliest example of ceramic works under the leadership Ghiyas-ud-din Tughlaq can be seen in Rukn-i-Alam (1320–1324) in Multan, southern part of Punjab and modern day Pakistan.

19th century historian Zafar Hassan in his work describes the presence of glazed tile works in Begumpuri Mosque (1325 — incomplete) constructed under the reign of Ferozshah Tughlaq. It is undoubtedly the first building in Muslim India to adopt Iranian four-*iwan* arch plan with small turquoise ceramic tiles to enliven the construction.

Shish Gumbad (fig. 1) with its alternate cobalt and turquoise blue tile band, Tomb of Sikander Lodi, Bhure Khan kaGumbad, Moth ki Masjid, Pavilion tomb near Rajaon ki Baoli, Chotte Khan ka Gumbad represents the few examples of ceramic glazed tile work during the Lodi period most of which is now lost and can be seen only in fragments.

Fig. 1 Shish Gumbad with alternate cobalt and turquoise tile bands, Delhi, 2013. (Photograph by: Author, February 2013)

[3] Ibid. P. 228.

Another magnificent example during the reign of Sikander Lodi can be seen in Man Mandir Palace fort Gwalior, built under Maharajah Man Singh where turquoise, yellow and green coloured ceramics can be found inlaid in the masonry walls and yellow duck friezes over turquoise ground, appears in the centre of the wall of the main façade. Ceramics also appeared in the palaces' central court in smaller quantities above the openings. Introduction of ceramics in conjunction with masonry can also be seen in Rajput palaces of Orchha c. 1600 and Datia (c. 1620) as well as fort of Ranthambore[4].

Tile work under Independent Sultanates

Late 14th century invasion by Timur led to the fall of Delhi Sultanate and emergence of many princely states that thrived to establish their own identity, especially in the fields of art and architecture. Few stunning examples of ceramic glazed tiles of this era can be seen in the tombs and palaces in Bengal, Deccan and Malwa regions. Unfortunately, most of this is now lost owing to negligence and poor conservation efforts.

Bengal Sultanate

Ceramic glazed tile decoration was widespread in Gaur Sultanate of Bengal. As brick was already the primary construction material and familiar to the workmen, the stage was already set for this decorative art form. The earliest example of glazed tile decoration can be seen in Eklakhi Tomb of Sultan Jalal-ud-Din of Gaur (1415–1431)[5].

Bengal tiles showed striking similarity with that of Timurid tiles both in terms of manufacturing and decorative techniques. Some of these tiles were molded in relief and under glaze painted; while others were made specifically to cover architectural moldings, painted blue and white like they were once presumed to cover Firuz Minar at Gaur.

Final typology of Gaur tile represents tiles in the shape of niche or spandrel, on an even ground and polychrome decoration of 'black line type'[6]. Evidence of similarity in manufacturing techniques of Gaur ceramics to that of Timurid tradition can also be drawn from the archaeometric analysis carried out by researchers at University College of Arts London on Gaur and Pandua tiles[7], published in July 2005 which indicates the low flux tin alkali glaze and firing through bisque technique clearly signifying the Iranian origin. Mosques of Tantipara and Lotan are few other examples of ceramic decorations in Bengal[8].

Deccan Sultanate

The Qutab Shahi dynasty was established following the disintegration of the ruling Bahamani Kingdom into five Deccan Sultanates: Bijapur, Ahmednagar, Berar, Bidar and Golconda. Out of these provinces of Bidar and Golconda occupy major part of ceramic glazed tile ensembles. Madrasa of Mahmud Gawan built in 1417 at Bidar displays extensive use of glazed tile ceramics in binai technique similar to that of Timurid period[9]. Another significant example at Bidar but currently in a state of complete disrepair is at the palace and mausoleum of Ala-al-Din Ahmed II (1436–1458), the spandrels of the entrance were decorated with lion

[4] Ibid. P. 236.

[5] *Porter V.* Islamic tiles. London, 1995. P. 87.

[6] *Degeorge G., Porter Y.* The Art of Islamic Tile. P. 237.

[7] *Ghosh S.,Khaladkar V.* Polychrome Enamelled Bricks of Pre-Mughal Sutanate Bengal (paper presented at conference of European association of South Asian archaeologists, July 4–8 2005. London, University College London, 2005). P. 3. URL:http://www.ucl.ac.uk/southasianarchaeology/Pre-Mughal.pdf (last visit 09.12.2017).

[8] *Degeorge G., Porter Y.* The Art of Islamic Tile. P. 237.

[9] *Porter V.* Islamic tiles. P. 87.

and sun motifs making a striking similarity to Shir- dar madrasa at Samarkand, where these motifs are that of tiger[10].

Moving from Bidar to Golconda, one of the finest examples of cut mosaic work can be seen at the Tomb of Ibrahim Quli Qutub Shahi which forms the part of Qutub Shahi Tombs, all of which are world heritage sites and most of which can be only seen in fragments. Ashur Khana built in 1598 is known for its vibrant turquoise, green, yellow glazed and Chini ka Mahal or porcelain palace with blue and white claddings, at Daulatabad are few magnificent examples of the art form.

Malwa Sultanate

Malwa Sultanate, the present day Madhya Pradesh presents supreme examples of *kashi* work in Mandu. Ceramic glazed tiles in Mandu like in Delhi were square monochromatic tiles mainly turquoise and cobalt blue in color; polychromatic effects were achieved through various combinations:

Stone work and ceramics tile combinations — This type of decoration was achieved through insertion of ceramic in architectural niches, found in Friday Mosque and Malik Mugliths mosque and Jal Mahal.

Combination of turquoise, cobalt, yellow, white and green coloured ceramic tiles, found in Jahaz Mahal (mid-15th century) and Dai-ka Mahal. Rarest form of tile work found in Mandu and Central India is painted and can be seen in Chisthi khan kamahal and at Malkom ki kothi.

Traces of tile work during Mughal era (1526–1857)

Ceramic glazed tile art flourished with greater elegance under Mughals than the Sultans. Soon this Indo- Persian style became the integral part of Mughal architectural vocabulary and was popularly known as Mughal School of Architecture. Initiation of glazed tile work during early Mughal era was considerably centered on Humayun, one of the earliest monuments decorated with Mughal ceramics is that of poet Shaikh Fazlu'llah, popularly known as tomb of Jamali Kamali situated in Mehrauli archaeological park near Qutab Minar. Talaqi *Darwaza* (gate) to Puranaqila and Tomb of martyrs of Humayun's campaign in Gujarat and Hisar (1557–1558) are worth mentioning examples of early Mughal ceramic work. Humayun was soon overthrown by Afghan general Sher Shah Suri who founded the Suri dynasty (1540–1555) and established his control in Bihar, Bengal and Delhi. Splendid examples of ceramic glazed work can be seen in Isa Khan mosque and Isa Khan's tomb, gateway of Qila-i-Kuhna at Delhi and in his own mausoleum at Sasaram, Bihar.

Humayun regained his empire in 1555 and also brought artists and craftsmen during his exile in Persia and particularly a dome builder (gumbad saaz) from Persia, thus reflecting splendid ceramic decorations on a double dome firstly on Subz Burj (Green Tower) and later on chattris at mausoleum of Humayun in Delhi. There are several other monuments covered with glazed ceramics adjoining Humayun's Tomb world heritage site of which, Nila Gumbad with its dome covered with turquoise blue tile, is the earliest.

Arab Serai gateway built in 1560 situated south west to Humayun's Tomb world heritage site demonstrates varied colors of glazed ceramics on *jharokhas*. It is an entrance gateway to the enclosure which used to house Persian craftsmen who came to built Humayun's Tomb and shelter Arab monks coming from Mecca. It was built under Akbar's reign who succeeded Humayun in 1556 and marked the Golden era of Mughal Empire and greatly influenced art and architecture. Soon Lahore, Agra and Delhi became significant centre of art.

[10] *Degeorge G., Porter Y.* The Art of Islamic Tile. P. 237.

Influential traces of tile work can also be found in Tomb of Atgah Khan (1566–1567), Gateway of Bu Halima and Barbers Tomb in Delhi, Ajmer fort (1564–1573) in Rajasthan, on doorways at Fatehpur Sikri, Agra and Tomb of Sheikh Musa Ahangar's at Lahore, present day Pakistan. Glaze ceramic work can also be found in considerable amount during Jahangir's reign (1605–1627) at Akbar's Tomb and Kaanch mahal, at Sikandra near Agra. Most of the tile works on the chattris of Akbar's Tomb is now lost. Shah Jahans reign (1628–1657) continued the legacy of cut tile art through polychromatic panels of Amar Singh gate at Red fort and a masterpiece in form of Chini ka Rauza, Agra.

Aurangzeb's reign (1658–1707) thereafter lastly displayed the art form on the arch opening of Bibi ka Maqbara (1678), Tomb of his wife in Aurangabad and in Dargah of Qutab sahib in Delhi, of which that of in Delhi is in a dilapidated state.

The invasions of Nadir shah finally seized the Mughal domination and art was later transferred to that of Rajputana clans, but was not able to regain its position as a significant art form before nearly going into complete eclipse under British rule.

Sincere efforts like that of establishment of 19th century Jaipur School of art by Maharajah Sawai Ram Singh II (1835–1880) can be still felt in vain considering the current scenario.

Fig. 2 Cut tile mosaic work at Chini ka Rauza, Agra, 2013 (Photograph by: Iqtedar Alam, 2013)

Formulating Statement of significance

Ceramic glazed tile work is a significant cultural resource holding immense historical, cultural and architectural values, both as a building material and as an embellishment. The assessment of glazed tile work in the present context, the statement of significance formulated depends on numerous factors like pathological observations, degree of acceptable conservation/restoration, technology, historical background and site surveys. The statement of significance for glazed ceramic tile work can now be formulated as follows:

Historical and Cultural Significance

Islamic glazed tile work is of high historical significance due to its association with the two significant periods i.e. the Pre Mughal era (1206–1526) and the Mughal era (1526–1857) which shaped the stylistic development of Indo-Islamic art and architecture in various parts of Indian subcontinent.

Cultural significance of Islamic glaze ceramic tile works is associated to the tradition which was transferred from one generation to the other, reviving which would lead to continuity of art form long lost.

Islamic tile work of Pre Mughal and Mughal era is the representative of strong association uniting Indian Islamic and Persian Islamic architecture. The exchange of art and craft, their adaptation and regional transformation traces the reinforcement of the physical

and the intangible linkage between India and Persia, thus making the art form culturally significant.

Research Significance

Islamic glazed tile ceramics work possesses educational significance and can be considered valuable in opening up new research avenues in reference to materials, techniques and related scientific studies.

Significance of Islamic glazed ceramic tile work lies in the knowhow of its techniques, presently not found in Indian craft practices. Familiarity with these processes involved in preparation of architectural ceramics is considered as a helpful tool during conservation or restoration works.

Architectural and Aesthetic Significance

The glazed tile work came to be recognized as one of the most significant architectural embellishment of the buildings of Pre Mughal and Mughal era, adorning mosques, palaces, fountains and other buildings and landscape features, loss of which disfigures the historic architectural character/integrity.

In many significant Pre Mughal and Mughal historic complexes, the manner in which glazed tile material has performed through the passage of time sheathing brick as well as stone structural material is a testimony of its protective and aesthetic functions.

Many significant Pre Mughal and Mughal monuments possess various stylistic patterns like tree of life, star mazes, Quranic calligraphy decorated in various colours, making the art form aesthetically significant.

Some of the exemplary monuments often treated as icons or identification landmarks for a particular city have conceived their name either from the art form or the color of the ceramic glaze existing on the monument. For example: Chini ka Rauza a funerary monument at Agra is derived from two Persian words Chini (glazed tiles) and Rauza (tomb), similar examples can be found in Delhi like Subz Burj (Green Tower), Neela Gumbad (Blue dome) etc. Essence of preserving glazed tile works should be realized in a wider context as an urban element and a visual representative of its monument when viewed from greater distance.

Economic Significance

Importance of preserving glazed tile work has the added benefit of promoting crafts as a part of sustainable development and as a means of generating employment. Opportunity to preserve glazed tile works should also be considered as the catalyst in the process to collaborate with various governmental and non-governmental organizations within and outside the national boundaries.

Identifying and analyzing issues related to ceramic glazed tiles in India

A ceramic tile scheme may be highly valued by virtue of its historical, aesthetical or technological significance. But its presentation in the present context and in the future can be determined by how it performed as a building material in the past, the effects of natural aging and how it was maintained or repaired over the due course of time. These factors measure the extent of decay of the art form and bring new meaning to the larger debate whether to conserve or restore the dying art and whether to respect material authenticity or artistic unity. Since most of the actions taken or to be taken towards the conservation of this traditional art form is circumstantial, it is beyond the scope of this paper to list them all. The following is an attempt to bring forth some unique cases to identify the critical issues pertaining towards the conservation of this art form.

Issues related to Conservation Ethics and Authenticity

The notion of conservation of cultural heritage has been evolving since the nineteenth century. The initial approach was to focus on restoration of works of art, ancient monuments and historic buildings which was reflected in the conservation policies of several countries and the creation of state organizations for their protection.

The legislative framework concerning conservation and protection of monuments in India after independence is governed by the Ancient Monuments and Archaeological Sites and Remains Act, 1958, which involves Archaeological survey of India (est. 1861) and State department of archaeology as principal implementing agencies. The act promotes «museumification» of monuments and is not concerned with the context in which the monument is situated. Moreover, the act itself is prohibitive in nature, and bars public, private sector and NGOs to participate in conservation efforts, as a result implementing agencies has been lagged behind in terms of developments taking place in the field of conservation and also in technical expertise and use of obsolete technology probably because of severe financial constraints.

References can be drawn from 1980's restoration work at Subz Burj, an early Mughal structure constructed in 16th Century, in Central Asian style and the earliest example of double dome construction in Delhi.

Cobalt Blue tiles presently covering the dome (fig. 3) is considered as the crass choice of colour as dome was originally covered with turquoise blue tiles, concrete evidence of which can be drawn through the close visual inspection, which demonstrates the presence of turquoise blue tiles in between the lotus cresting surmounting the dome and was surely the repetitive color for the whole dome as in case of Barbers Tomb a Mughal structure in the nearby Humayun's Tomb complex.

The restoration of tile work also included removal of remaining original tiles to create a continuous effect of cobalt blue over the dome, what we can see today.

The Subz Burj restoration not only resulted in the loss of integrity of design scheme as a whole but equally questionable is the quality of tiles inserted. Apparently, a product similar to the original was cheaply and readily available and was considered the preferred option, instead of reviving the traditional techniques and authentically producing the material which certainly would have been more expensive.

Restoration work at Subz Burj was criticized for several years and led to a more restrained approach being adopted for the restoration of tile work, which unfortunately only caused in deteriorating the art form. The conservation and restoration approach for ceramic glazed tile works made a makeshift with now only preferring to repair the historic wall surfaces of many significant

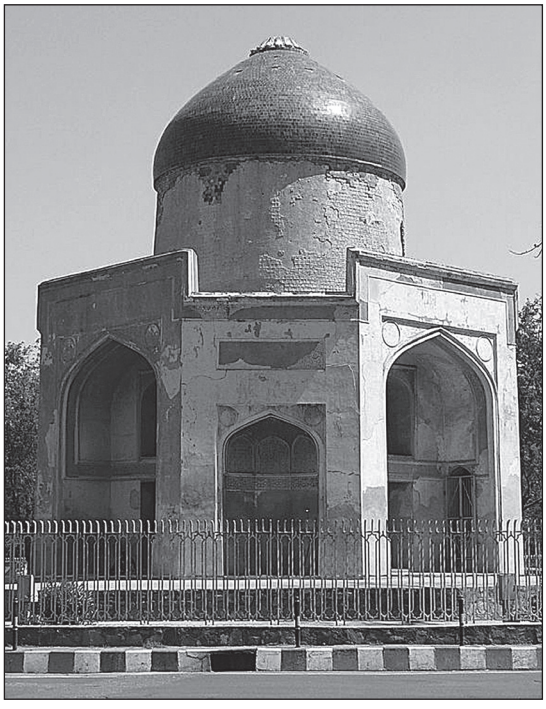

Fig. 3 Subz Burj with cobalt blue tiles, 2011
(Photograph by: Author, June 2011)

monuments with cement or lime plaster where the tile work was lost. Most severe example of which can be seen on the chattris at the third floor of Tomb of Akbar's at Sikandra near Agra, a world heritage site, which once demonstrated one of the finest tile works as illustrated in the works of E.W. Smith. In this case even the existing fragments of tile were covered with unsympathetic material, overall effect of which was relatively poor.

Similar repair works were also found on canopies of Humayun's Tomb, a world heritage site and surfaces of surrounding monuments during in situ condition analysis conducted in the year 2009–2012. Conservation works of this degree are completely irreversible and only resulted in the loss or deterioration of original tile work and its artistic qualities. Tiles which had fallen from historic surfaces were neither documented nor preserved in the protected environment whatsoever. Instead, an unusual strategy was employed during 20th century conservation work at Tomb of Sher Shah at Sasaram, Bihar leading to the removal and replacement of decayed tiles from kiosks, and applying enamel paint instead in the similar pattern on the surface from where the tiles were removed (fig. 4).

Fig. 4 Enamelled canopy of Tomb of Sher Shah Suri at Sasaram, Bihar, 2010
(Photograph by: Bikramjit Chakraborty 2010)

Ironically, discolored white tiles on other canopies on the exterior and fragments of cut tile mosaic work in the interior are still prevalent. Conservation strategy employed in this particular case was sympathetic to some extent by not initiating any decay to the surrounding materials and to the structure itself but was unsympathetic to its aesthetic purpose since overall design integrity of the architectural scheme and visual interpretation of its viewers in the urban environment was still lost. «Work of art was still not considered as the work of art»[11] as Cesare Brandi suggests in his theory of restoration that it should be.

[11] See more on his theory: *Brandi C.* Theory of Restoration. Florence, 2005.

Chemical cleaning also made its way into the process in the year 2001–2002 during conservation works carried on glazed tiles works at Tomb of Isa Khan Niyazi[12] (built in 1547–1548). Chemical cleaning on one hand resulted in discoloration of tiles whereas mechanical impact caused due to installation of lightning conductor which involved application of aluminum strips and iron nails over glazed tile work resulted in damage to glaze layer and loss of tiles at few places.

Analysing the above situations clearly states that neither the research value nor the aesthetic value in terms of artistic unity of the original design scheme or the authenticity of material in terms of its components and craftsmanship has been realized.

But the more important question is why? Was it due to economic constraints or due to simple lack of understanding of the significance of the art form or due to the fact that architectural integrity of Indo Islamic architecture is dominated by the use of red sandstone and white marble in India that the conservation professionals, scholars and state implementing agencies have simply decided to ignore this form of architectural decoration?

Issues related to craft and craftsmanship

Following section deals with various issues that came forward during preparation of glazed ceramic tiles for canopies at Humayun's Tomb, where author was the part of team involved with the conservation of tile works. These issues can be considered generic while considering ceramic glazed tile conservation work elsewhere. The problems addressed below are inevitable at one stage or the other and can be considered as a part of evolving process, but if addressed initially would create a product with desirable qualities.

Issues related to material availability and its continuity

Availability of raw materials required for traditional ceramic glazed tile recipes is quite fragmented and confined to handful of companies in India, which are as obvious secretive about the location of their sources.

Raw material bought during the experimentation stage for color matching turned out to be different if production didn't follow the experimentation, which is quite significant factor as the slightest change in raw material would affect the desired colour recipe as experienced on site.

Workmanship issues related to manufacturing process

Degradation factors associated with the quality of tile produced are directly associated to the skill and competency of the craftsmen and can be stated as follows:

Appropriate mixing and folding of clay paste comprising of ball clay, quartz sand water is the deciding factor for the quality of tile bodies produced therefore incomplete mixing and folding of clay paste comprising of clay, quartz, sand and water results in forming fractured and weak tile bodies.

Another factor deciding the quality of tile bodies is the relationship between clay and water. Nature of added water must be understood to comprehend the property of plasticity which upon addition of limited amount of water allows clays to be shaped by pressure and to retain that form when pressure is released. Presence of excess amount of water leads tile body to move beyond its plastic state resulting in soft and weak bodies. Similar instances were observed on site initially due to lack of work experience and later due carelessness or lack of supervision.

[12] *Nanda R.* Conservation plan for Isa Khan — Bu Halima enclosure at Humayun's tomb world heritage site (report for external peer). New Delhi, 2010. P. 31.

Drying methods like dehydrating clay in direct sunlight were quiet prevalent onsite and affects the overall strength of tile although not visible at initial stage but later can be seen in form of cracks.

Face of tile bodies if not flipped at regular intervals during natural drying method would result in over drying of one face or the other consequence of which can be seen as bent tile bodies.

Other issues associated with tile bodies varied from unleveled tiles surfaces and production of tile bodies of irregular of size and thickness.

Issues related to preparation of glaze recipes at instances varied from incorrect measured proportions to incomplete mixing and improper crushing of glaze components. Uneven application of glaze layer was also witnessed many a times and can be understood as follows: a thin layer of glaze when fired demonstrated the clay body in the background whereas bubble formation occurred where the glaze layer was thick, both leading to accumulation of ceramic waste.

Technical issues related to manufacturing process

Degradation factors associated with production techniques varies from the choice of kiln and the manner by which it is handled and can be described as follows:

Heat generated through elements in the electric kiln is not equally distributed, thus affecting the colors in the same batch.

Defects in kiln design lead to considerable amount of heat loss from chamber door and walls leading to incomplete glaze reaction.

Interrupted power supply in between the glaze firing process leads to incomplete reaction, effects of which are irreversible as glaze components won't react when fired again especially during the preparation of turquoise glazes, thus accumulating the waste.

Kiln temperature performs a very important role in deciding the final quality of tile base and glaze, over fired or under fired tile bodies and glazed tiles are irreversible in their actions. Over fired tile bodies at site were found as bent and darker in appearance whereas under fired tiles were found to be soft and fragile.

In reference to glaze maturing temperature phenomenon, high firing temperature leads to glaze runoff from tile body and rapidly fired glaze may develop bubbles (fig. 5). Under fired glazes are rough to touch and dull in appearance and prevents glaze from bonding properly to the clay body leading to shedding of glaze fragments especially from the edges.

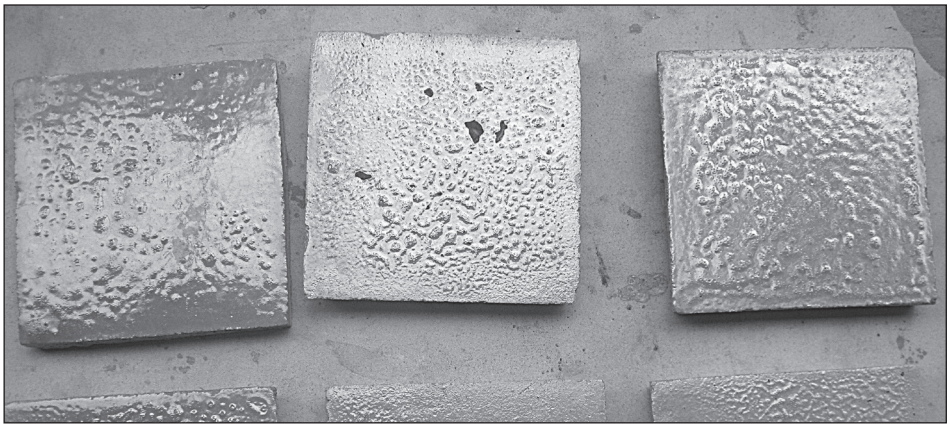

Fig. 5 Rapidly fired glaze during production, 2012 (Photograph by: Author, 2012)

It is equally hazardous to work with electric kiln as insulating ceramic fibres and fire bricks in loose form can be of reasonable size to be inhaled, leads to various respiratory problems.

Lastly it is also extremely important to understand that all theoretical and conceptual problems in restoration run parallel to technical and scientific problems. Technical issues, if not addressed through appropriate measures and at appropriate time would again open the path for deterioration of the art form.

Conclusion

Islamic ceramic glazed tiles as identified possess certain values namely cultural, aesthetical, research, functional, material, technical, and economic. But more important is how these values will be reflected in decision making? Which aspect should be given priority over the other for appropriate interventions? Lastly, for whom these principles should be developed?

Analyzing various aspects of glazed tile work, their significance, present state of preservation and approach towards their conservation reveals that any conservation strategy employed at first instance therefore, should be preventive in nature to minimize any further loss of tile work, followed by a more action based approach certainly guided by theoretical and technical principles.

The responsibility has to be mutually shared between various stakeholders ranging from the custodians to the professional to the immediate community. Each should have a significant contributing role to play ranging in the conservation process. The informed and strong decisions at the policy level from state department organizations combined with technical expertise from conservation professionals and sincere contribution at the community level in the conservation process would secure the future of this rare artwork.

References

Brandi C. *Theory of Restoration*. Florence: Nardini Editore, 2005. 186 p.

Degeorge G., Porter Y. *The Art of Islamic Tile*. Paris: Flammarion, 2002. 288 p.

Porter V. *Islamic tiles*. London: British Museum Press for the Trustees of the British Museum, 1995. 128 p.

Nanda R. *Conservation plan for Isa Khan — Bu Halima enclosure at Humayun's tomb world heritage site (report for external peer)*. New Delhi: Aga khan trust for culture, 2010. 89 p.