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Authenticity in Architectural heritage, The ask for Conservation of Indian Built form

Skills , Materials & The Philosophy of Repair , "A case of Humayun's Tomb"

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***Abstract*— Cutting edge framework of "protecting" Architectural heritage was introduced about 150 years back when the Archeological Survey of India (ASI) was established by the British colonial government; it deliberately supplanted indigenous practices and information frameworks, in this way making the split between official and local practices which has tormented preservation process in India ever since. This procedure has been persistently characterizing the modern goals of architectural heritage protection in India. Also, there is a reawakening towards indigenous cultural framework, supported by the fact that it has kept on existing between the interstices of the present-day building systems as an elective way of meeting the spatial needs of society. The recognition of this momentous cultural continuity as a "living heritage" which will be as profitable as the physical structures of the past could be a basic issue. This exposition explores the clash of diverse values in the Indian preservation. Conventional or vernacular building is concerned with using indigenous materials and with nearby information of climate and topography. The key to suitable notable building repair is mindfulness of the fundamental difference between advanced development and conventional building. Modern development is based around impermeability and relative 'thinness' Traditional building by differentiate is based around exceptionally diverse principles: thermal mass; breathability; flexibility; and, depending on the construction, the utilize of a defensive, sacrificial skin. It is basic that conventional buildings are repaired thoughtfully, and it is the stark truth that the larger part of noteworthy building repair nowadays is required less because of the characteristic corruption of the building fabric from its unique state. Historic building repair grasps a range of intercessions from routine support and the 'do nothing' choice, through a comprehensive repair program, to reclamation, the supplanting of misplaced highlights or entire rebuilding the favoured choice is continuously negligible mediation, and the general principle is to utilize conventional materials and strategies wherever possible. In the case of demolished landmarks, negligible mediation may amplify to retaining ivy on the premise that it may really ensure the structure that it covers. The authentic circumstances of the advancement of conservation in India may be the reason why professionals got to carry such an extra burden. these circumstances will be discussed in arrange to toss light on proposition. In 1993, Humayun's Tomb was assigned a World Legacy Location by UNESCO. As such, it was of centrality to "mankind as a whole" and not only for the individuals of Delhi or India. The display extends points at the revitalization of the building soul and unique eagerly of the builder. As such, it has incited a few energizing dialogs indicating up the require for a basic dialogue with structural conservation in India as an initially colonial discipline. A kind of overseen 'picturesque decay'. The concept of genuineness in engineering legacy must take under consideration the fact that support may be a social movement, whereas preservation may be a scientific discipline. Just after the construction, Humayun's Tomb got to be a put of journey for the Mughal heads. Akbar, Jahangir, and Shahjahan all made normal visits recorded by their chroniclers. Amid these visits, liberal blessings were made to the keepers of the tomb, among them (maybe) the families of skilled workers permanently "employed" to guarantee the upkeep of the tomb. With the foundation of the Archeological Survey of India (ASI) within the late nineteenth century and its institutionalization within the early decades of the twentieth century, the security and conservation of landmarks considered to be of "significance" became a major concern of modern archeologists and engineers. Therefore; in this paper the case study opted for the Humayun's tomb, Delhi, depicts the character of its authenticity embedded through the hybrid conservation techniques applied for its restoration and its significance for adoption in present scenario.**

Keywords*— *Authenticity; Conservation; techniques; Conventional; Built Heritage ; Vernacular ; revitalization.

I. INTRODUCTION

India within the 19th century is characterized by the investigation by European surveyors and researchers who "discovered" its individuals, societies, and landmarks. The terms of disclosure at last decided the nature of encourage engagement with the discovered structural legacy. It consigned prior, indigenous practices to the past by presenting "modern" frameworks of development and conservation of buildings. In this way conventional societies of conservation were replaced by a modern, and at the same time Eurocentric, culture. This process has been persistently characterizing the modern targets of architectural heritage protection in the country. Experts are getting to be mindful of the centrality of environmentally delicate, innate practices of building and contend for a people-oriented approach to choose making. In fact, the "revival" of indigenous practices of engineering legacy preservation is redefining the concept of genuineness in present-day India. within the case of monuments which are still depicted the purpose for which they were constructed, whether they be sanctuaries or mosques or tombs or royal residences where ceremonial capacities are still performed, there are frequently substantial reasons for turning to more broad measures of repair than

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would be alluring, if the buildings in address were maintained simply as antiquarian relics.

After the decline of the Mughal Empire, Humayun's Tomb suffered for around two centuries of disregard in which the gardens were utilized for farming. For at slightest a century, inappropriate repairs were embraced under the supervision of the ASI, not least over a million kilos of concrete to cure defects on the roof. With meager resources and small respect for the architectural legacy, building keenness had been relinquished in most monuments by the conclusion of the twentieth century. This resulted not as it were within the nearby open losing interest in their heritage but too within the misfortune of a few destroyed landmarks no longer considered to be of any esteem.

Following the facts of conservation, the conventional buildings and heritage structures by differentiate are based around exceptionally distinctive principles: thermal mass; breathability; flexibility & depending on the construction, the use of a defensive, sacrificial skin. Thick walls give warm mass, sustaining warmth in winter and coolness in summer. The walls are breathable and admit dampness, which at then eventually evaporates freely.

Within the case of demolished monuments, negligible intervention may lead to retaining ivy on the premise that it may really secure the structure that it covers – a kind of overseen 'picturesque decay'. However, the standard renowned golden rules of conservation – minimum intervention, preserve as found, 'like for like' repairs, and reversibility are not always considered as compatible. Thus, in this paper it is discussed that how the conservation gap is been bridged between the past & the present while maintaining the need and ask of development of this field of Architecture.

II. OBJECTIVES

A. Contesting conservation theories in present Indian scenario

The revival of charm in vernacular practices is additionally supported by the fact that it was never wiped out in India. It has kept on exist between the interstices of the advanced building framework as an alternative way of meeting the requirements of the society. The perception of this exceptional social progression as a "living heritage" that will be as important as the physical structures of the past & is a critical issue with which the conservation architects of the country are adhered and trying hard to work upon. The specialists who worked on INTACH's ventures were not prepared professionals and, in this manner, had not been educated to valorize "modern" standards of preservation. They soon figured it out that managing with a living heritage required techniques that differed from the ones executed by ASI to preserve monuments. This understanding emphasizes the difference between preservation and conservation and recognized the works of INTACH and ASI. The traditionalists working for the ASI were anticipated to protect the tangible traces of architecture in understanding with the ethical and technical standards they had created through their claim particular social evolutions. This perspective was interpreted as an "international norm." It was too contributed with the air of being more "scientific." By contrast, indigenous practices of dealing with structural heritage were termed as "unscientific" and thus destructive to the conservation of the genuineness. Heritage conservation is presently high on the plans of numerous Indian state governments, private trusts that own heritage properties, and people who are venturing into the field of heritage tourism sector. In the method of managing with the essential realities of architectural legacy in India, however, indeed the youthful conservationists struck a modern way. In case one looks carefully at their projects, it becomes clear that numerous strayed from the Eurocentric principles in which they had been trained. They were "stained" by the compelling force of indigenous cultural standards and impacting desires.

B. Understanding hybridised conservation practices.

The kind of practices emerging from the clash of different value systems in Indian conservation scenario is seen as hybridized practices of heritage conservation. The concept of hybridization should be considered to get the insight of newly developing processes and their relation in terms of Indian Context. With such openness, the doors open for a new dialogue in this field of built heritage conservation in India to see the conservation technologies from emerging new digital perspectives too. The professionals of this field have become very welcoming towards indigenous or vernacular concepts while respecting its authenticity and values in parallel. Whatever is achieved by this notion thus cannot be termed as pure but can be certainly called as hybridized.

C. Architectural Heritage – "The Expression"

The statement of "Architectural heritage" might be considered to include the following properties:

- Monuments: The term monument in general is given to all the buildings and structures of prominent historical, archaeological, artistic, logical, social or technical values & interest, which also include its installation and fixing skills.

- Cluster of buildings: The homogeneous bunch of urban or rural structures seen for their historical, archaeological, aesthetical, logical , social or technical framework , which are adequately coherent to form the geographically predictable units.

- The sites: they are specified the mixed works of man and nature, the zones, which can be somewhat constructed upon and adequately uncommon and homogeneous to be geographically determinable and are of historic, archaeological, innovative, logical, social, or technical value.

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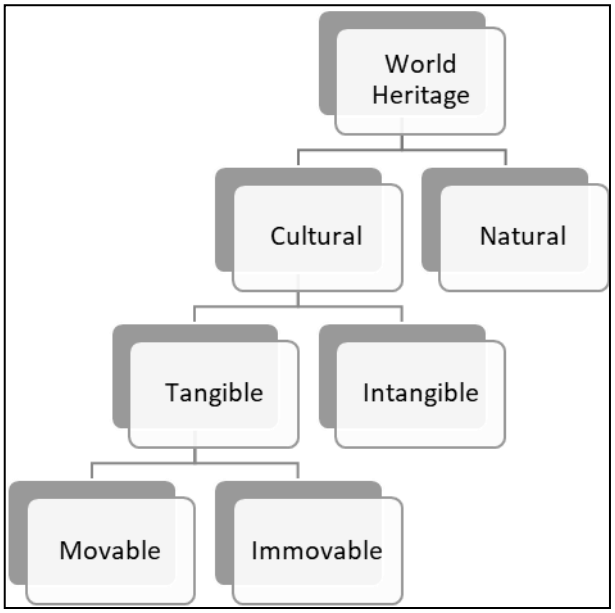

Standard classification of the world heritage as presented by the UNESCO

D. An Insight on cinstruction material & their repair techniques "The Overview"

Stone: In traditional buildings, stone can be broadly divided into two types : rubble and ashlar. These two categories can further be subcategorized though. This has also been used as a façade cladding material in the recent centuries, thus; the repairs must be executed very carefully considering the previously used original procedures and setting.

Photos depicting the ancient stones in its dilapidating state which needs outmost care while executing repair works. Photo Courtesy: Photo Artist - © Ar. Vivek Kalla

Brickwork: The only way of classifying brickwork flaws is to divide them into those related with failures of the bricks themselves or the mortar between them, and those that result from an issue with the structure of the building, driving to cracking or distortion of the fabric of material. In both cases it is important that the reason for the failure is completely understood before a repair technique is chosen to apply. Repairs to the buildings are applicable but unless the failure is of a very minor nature, an engineering advice should be considered. the major cause of failure are the flaws in designing and lack of maintain. Brick can fail due to several reasons being it using the low-quality cheap bricks or on contrary laying most expensive bricks in an inappropriate manner. Thus, success can be achieved only by careful selection of materials as well as by application of correct laying procedures.

Photos showing under maintained brick wall getting weathered due to direct exposure of weather conditions. Photo © Ar. Vivek Kalla

Lime: Lime mortars are among the most seasoned man-made items. Follows of lime jointing and coatings are to be found on most archeological sites and in most of the building examples built before the 20th century.

Photo Courtesy: Photo Artist - © Ar. Vivek Kalla

E. To express the notion behind use of the term " Authenticity in Conservation"

Authenticity in heritage conservation has become one of the most controversial matter which needs further investigation. Reflections on realness show the distorted grey area that exists between the use of the term to refer to aesthetic validity. The term "authenticity" can be seen as an aesthetic notion which has gained much more significance in the modern art theory. Thus; the term authentic which means , real , genuine or original may imply artistic as well as cultural and heritage values while playing a key role in assessment of modernity. Also in terms of heritage conservation, the prevailing operational guidelines for implementation of the world heritage conservation as issued by UNESCO(United Nations Educational Scientific and Cultural Organization) relates authenticity with quality of being creditable and truthful to claim the works of highest repute or ideological purpose. Authenticity plays a vital role as a criterion for the

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Architectural conservation approach which addresses the philosophical dilemma. Although there are no set standards for measuring the notion of the term Authenticity, but certain parameters or essential qualities dictates the considerations. This term is subjective as well as applied to many areas, out of which heritage conservation is one. Authenticity can be as real as the uncoated or exposed stone or brick which is intact to its built form in its untouched and unaltered form. Reflections on realness show the shapeless entanglement that exists between the use of the term to refer to aesthetic validity. In this paper the authenticity relates to explaining a few major transcultural issues with respect to the conceptual history of the notion of authenticity. These may include, for examples of the tension between histories of the monuments, native prevailing traditions, and indigenous craftsmanship or work skills. Thus, this term holds many values as well as view angles to consider and applied from. In the field of architecture and especially heritage conservation the term holds high values system and applicability.

Photos depicting the authenticity of native stone in its original
and untouched form.
Photo Courtesy: Photo Artist – © Ar. Vivek Kalla

III . REVIEW OF LITERATURE

The literature review is displayed in two parts. Within the first part, the relationship between the architectural heritage authenticity and conservation is discussed and in the second part, Skills & materials application used as preservation measures of a monument are identified according to the past studies & considerations.

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IV . METHODOLOGY

This study involves the identification of areas connected with built heritage conservation while the procedures and format to access the repair tools and technology are discussed as an overview. The qualitative analysis was executed to evaluate the coherence between architecture heritage and its conservation. To evaluate the study in a detailed manner, a case of heritage monument “Humayun’s Tomb” was studied and represented as an example of recent times conservation project.

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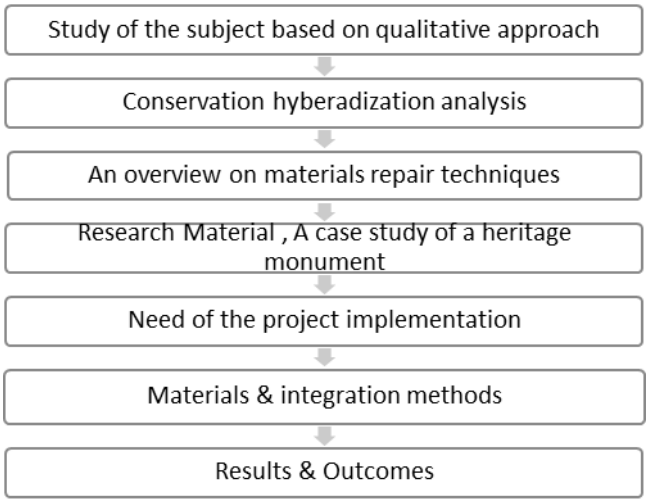


Table:1- Methodology

Method Goals	**Qualitative content analysis**
Purpose	To develop a concept for understanding the purpose of protecting heritage monuments & sites.
Process	1- Identification of relevant date 2- Evaluation of the test included in the context. 3- Generating the theme to review the underlying concept of protecting heritage & its related repair techniques. 4- Application of the theme to address a research question(s)
Outcome	Creditable & context-oriented results

IV . MATERIALS & METHODS (CASE STUDY)

The aim of this paper was to relate the heritage conservation and related authentic practices with the present monument protection scenario, in the case of India built heritage forms. Eg: Humayun's Tomb, Delhi

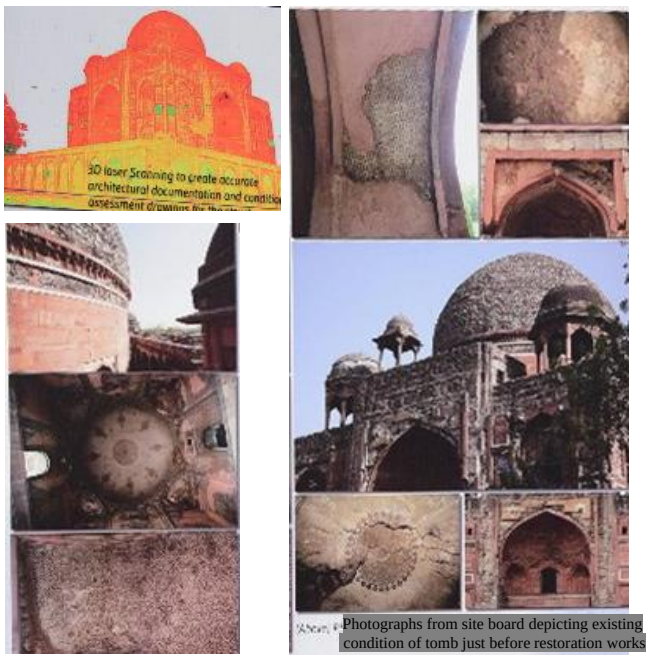
A. Research Material -Case Study

"The case of Humayun's Tomb" Conservation & restoration work on the iconic monument of Mughal Emperor.

The Tomb: Humayun's Tomb was built on a distant grander scale than any prior tomb in the Islamic world. It was built under the supervision of Mirak Mirza Ghiyas, a Persian whose father had worked for Babur. It was the first of the extraordinary Mughal tombs on the Indian subcontinent and the precursor of the renowned worldwide Taj Mahal, built 80 years later. Humayun's Tomb was built as a family tomb, is different than any other building that preceded it, not just due to its size but also because it was the first time that material such as marble and sandstone were widely used in any project. The monumental tomb also called Abdur Rahim Khan I Khanan's tomb sits prominently along the Mughal Grand trunk road (presently called Mathura Road)

Conservation vision for the main garden: The recognizing parameters between "dead" and "living" monuments, by ASI laid down rules for the preservation and restoration of the architectural heritage that proposed the significance of repair or reclamation for buildings that still incorporated regular practice. Due scanty resources and lesser regard towards the architectural heritage, the real work of integrity began to supress for most of the monuments by the end of 20th century. Resulting this the restoration works on Humayun's tomb only started at the far end of the century in 1997, before which the iconic Mughal gardens of this tomb were used as an agriculture land. The work on Charbagh started with the effort of Aga Khan Trust for Culture (AKTC) with AIS

Photo shows restored gardens & 6 corner palm trees at tomb
Photo Courtesy: Photo Artist – © Ar. Vivek Kalla



Photographs from site board depicting existing condition of tomb just before restoration works

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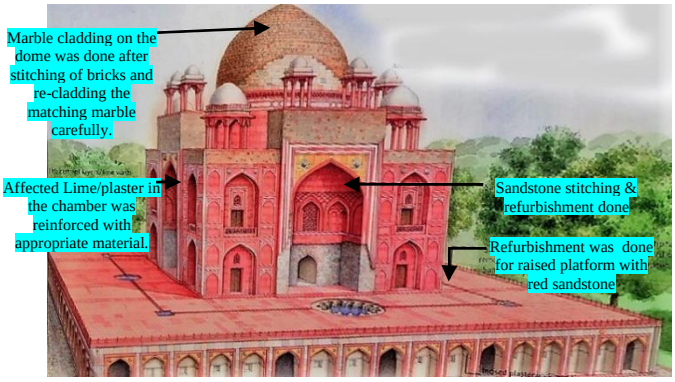
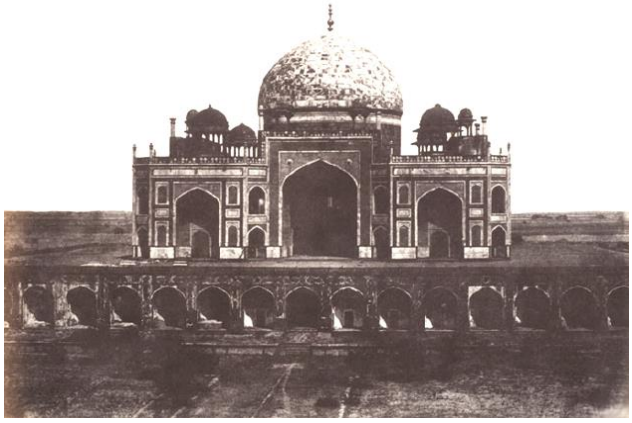




The earliest photograph of Humayun's Tomb dates from 1849 and shows water channels and tanks.
© Canadian Centre for Architecture, Montre'al

In the research process of the tomb it there were found paintings, photos, miniatures, drawings to scale and conservation notes since 1849 onwards , the data retrieved helped in the restoration and development implementation works successfully.

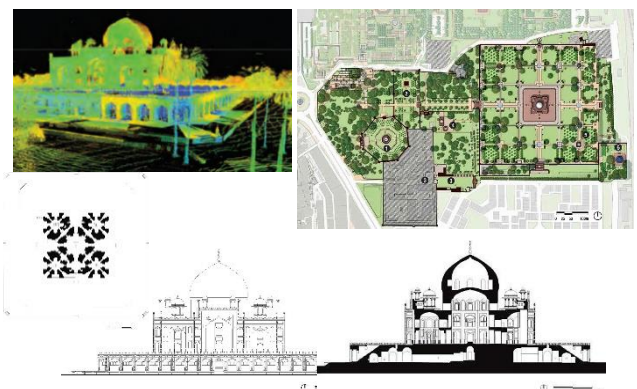
Most of the proof photographs obtained in the 19th century around 1860's showed the view of Tomb with part of garden. Later it was discovered that there were water channels and tanks present in 1849. The ancient paintings and landscape pattern expressed that there was tree plantation along the pathway edges keeping the central part of each garden plot for a weed like green covers possibly left open for laying out Mughal carpets during the then royal gathering events. The concept of 6 palm trees on each corner of the tomb was noteworthy.

(Before) View from tomb showing ruins &landscaping at the western entrance from British government photos.
Photo Samuel Bourne, ca. 1863

(After) Photo from the central restored water body
Photo Courtesy: Photo Artist – © Ar. Vivek Kalla

(After) Photo showing restored dividing water channels.
Photo Courtesy: Photo Artist – © Ar. Vivek Kalla

Procedure of conservation: The conservation works was targeted for restoring the architectural integrity and the original Mughal splendor by application of indigenous building craft skills of master masons, plasterers, stone carvers, and tile makers – all of worked on the project based on initial 3d laser survey commenced for the proposal followed by the use of relevant traditional materials. In view of the nature and scale of work and with a major concept of departure from a 'preserve as found' approach, a thorough conservation plan proposal, detailing the all requirement & works was peer-reviewed at the outset by the various international experts , resulting into preservation of this iconic master piece.



3d laser survey & drawings were prepared for proposal
Source: https://archnet.org/sites/1567

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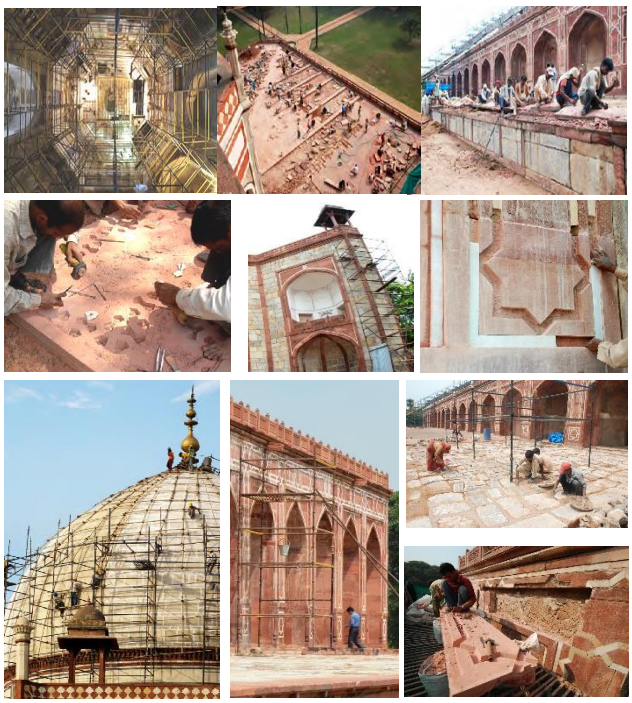

(Before/during restoration) Photos depicting tool & techniques used for restoration of lime plaster ,white stone cladding ,brick stitching and preservation of red sandstone. Source: https://archnet.org/sites/1567

(Before) Restoration of ornamental plaster Work in progress in lower cell of tomb. Photo : © AKTC

(After) Photo : © Ar. Vivek Kalla
The final outcome of restoration works

Lime Plaster : The finished layer of plaster consisted of of lime-marble-dust coating, mirroring the way how Mughals used to mimic marble. Evidence were discovered at the tomb & suggests that the prominent star patterns were highlighted with red coloured polychrome; they continued with the repeat of the highlighting red & white contrast. Noticeable works were executed in lime plaster in the lower cell & flooring which accounts to 200,000Sq.ft area of repair & restore.

Corner pillar in red sandstone
Photo : © Ar. Vivek Kalla

Painting Work by artesian
Photo : © AKTC

Different pain-staking works were executed by master craftsmen following the evidence of original architectural design elements that remained were referred to restore the splendor of the era.

CONCLUSION

The Authenticity in architectural heritage and its conservation has been envisioned a different tangent which needs to be restored and kept intact to motivate more of restoration projects in the country. In the attempt to overcome the incorrect attitude towards this branch of conservation more tools and techniques are being evolved and can be introduced in due course. To keep up the architectural integrity and authenticity in its fabric of monuments of highest repute, the involvement of related skilled teams, technical work force and pure vision of perseverance should prevail and encouraged. Considering the example of Humayun's tomb in Delhi there is observed a trans-cultural flow which emerges as a persistent controversial process of historical negotiations from the perspective of tangible and intangible heritage values.

LIMITATIONS

In view of genre of study area, the notable limitations in this paper as observed is that the qualitative studies are predominant and is more in discussion or observation in comparison to qualitative approach. The case study should be considered as an example of typical Indian scenario and vision for heritage conservation and restoration projects. The concept of Authenticity & hyperaeration is only overviewed and further in-depth study or research can be conducted on the same.

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