Hoysala Architecture in Tumkur District

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Abstract

Since the death of King Harsa Vardhana, many dynasties were enumerated in the various Indian medieval histories. After the 11th century, numerous architectural styles, mainly named after the dynasties, were found throughout the Indian continent. Though these dynastic styles have individual characters, various architectural and sculptural expressions show many similarities, reflecting very similar conceptions. The masonry temples dated from the 4th or 5th century and their progeny, found over the continent by the 7th century, often are quite different from any other forms of religious architecture throughout the world. In the architectural history of India, the evolution of the styles involved a conscious reflection and transformation from the precious dynastic styles, with significant reference to political and religious needs. One such dynastic styles is that of the Hoysalas in lower Karnataka. In this paper, I shall discuss the Hoysala temples, concerning especially upon the usage and meaning of the space. It is important to define the meaning of the spatial units of the temple architecture. Though the temples amplify all over India, the spatial units, i.e., garbhagrha (sanctum), sukanasi (vestibule), navaranga (closed hall of worship), and mukhacatuski (pillared entrance hall) and so on, are not uniform. Take the Hoysalas for instance, I try to clear the meaning of the special units, what is universal character and what is particular character of the Hoysalas in relation to temples in Tumkur Ditrict. I shall start from stating the historical background and general features of the Hoysala temples, then discuss about the meaning and usage of the space unit of the temples. The origin of the Hoysalas is not clear. It is only capable to believe that they were from a hilly area. The legend associates an ancestor 'Poysala' or 'Hoysala' with killing a tiger at the command of his preceptor in the precincts of the temple at Angadi, the hilly town of Lower Karnataka. According to Hoysala art and architecture criticizers like Raghunath Bhat, Percy Brown, Srikantashastri, Narasimha Murthy, A.V., Ragaraju, N.S. and others the excessive ornamentation can be considered as a defect of the Hoysala School of art. The limbs and back show heaviness. Though the Hoysala artists had great control over the chisel, they disregarded the total effect and lost themselves in the labyrinthine details. It was his first experiment with the new soft stone and it opened up vast vistas before him. To him carving each image was a curiosity of experimental stage. Thus though technically opinions differ on his achievement, the Hoysala artist has definitely succeeded in conveying what he wanted to say or delineate. That is the real merit of the Hoysala artist

Key words: garbhagrha, navaranga architecture, sukanasi Hoysala, Tumkur.

Introduction

The Hoysala history takes up a concrete shape from Nrpakama (or Nrpa Kama). His capital was Sosavur, present Angadi, located in the heavily wooded hills. The chief was mentioned in an epigraph of A.D. 1006 in the western part of lower Karnataka. He was the first noble of the dynasty who had stated expanding the territory of his principality and in the process had had an encounter with the Cola dynasty of Tamil. His rule may have ended some year before 1047 when his son Vinayaditya is for the first time emerged in the epigraph stated to have engaged the Hoysala throne. Hoysala Mahadevi, a

consort of Calukya Somesvara I, may have been Nrpakama's daughter. The Hoysalas were thought as a feudatory of Later Calukyas. Vinayaditya, who had shifted his capital to the plains in Belur, had a long rule. He succeeded in expanding his power over western part of Gangavadi, present lower Karnataka, and expedited his son, Ereyanga to the coast of Bengal Bay. The Hoysalas watched for a chance two empires, Later Calukyas of Kalyani and Great Colas of Tanjavur were conflicted at lower Karnataka.

In certain other cases where the bhitti is not fully utilized for figure sculptures. The horizontal friezes become simple cornices round sculptures, the horizontal friezes become simple cornices round the building with or without decorations. Such an arrangement is seen in temples where figure sculptures adorn the walls and where there are normally pilasters and miniature sikharas. In the horizontal friezes of the classical Hoysala temple not as like a rule the first frieze from the bottom is always with elephant, which denotes the stranght and stebility, the second frieze with Horses, which denotes the speed, third one with Keerthimukha and floweral designs and scrolls, fourth frieze with stories of Ramayana, Mahabharata and Bhagavatha next penal with Yali an imaginatery animal with the body of a Pig, leg of a Lion, eye of an Elephant, mouth of a Crocodail and tail of a Peackok and above this the final horizontal frieze there will be good number of swans swimming in the water. This is the common pattern of arrangement of horizontal friezes in the matured style of Hoysala temples.

Highly decorated doorways or entrances are another important feature of the Hoysala temples. This architectural feature is introduced by the Later Chalukyan artists who used soap-stone for the doorways so that they could be shaped into highly decorative and ornamental ones. The Hoysala artists developed this tendency to its natural culmination and made the doorways of the garbhagriha, sukhanasi, navaranga and mukhamandapa into excellently carved doorways. In fact some of the doorways can be considered as representing best specimens of intricate sculptural art of Hoysal period. There are at least five deep grooves separating the mouldings from the sides. The frame work and the architrave emanating from the makaras from either side blending with the garlands of pearls dropping from a keertimukha which has the sculptures pointing to the dedication of the deity. In some cases the dvarapalas on either side add to the beauty of the door frames. The doorway of the southern garbhagriha of the lakshminarayana temple at Hosaholalu has fine dvarapalakas below and pilasters in high relief. The lintel has Venugopala supported by the sala and dancing group. The doorway of the northern garbhagriha is similar but has Lakshminarasimha on its lintel.

Objective:

This paper seeks explore important sites of Hoysala architecture in Tumkur District

Spatial Units of the Hoysala Temples

In the Hoysala temples, the interior of the temple can be divided into certain units, i.e., chambers. The Hoysala temple is basically composed of the garbhagrha (sanctum), the sukanasi (vestibule), the navaranga (closed hall of worship), and the mukhacatuski (pillared entrance hall). It is worth to identify those individual spaces for further study, which basically depends on this definition of the spaces. Those units are basically square planed spaces with different functions. Though separated by the wooden door usually, the interior of the temple occasionally had no doors in-between two units. Those two units can be divided by the differences of the size of the space. One of the general features of the Hoysala temples is the smallness of the structure. This is basically dependent on the quality of the materials which is used for the temples. The stone mine around

lower Karnataka has been chloritic schist, so-called soap stone. This blackish stone is quite soft which is used mainly for the decorative stone laminate, and can not be counted on shearing force. It means that it is quite difficult to make long beams to build huge structures. This weakness of stone seems to be the main reason why the Hoysala temples are quite small and lavishly ornate with detailed sculptures.

Garbhagrha

The basic unit of the Hoysala temple is the garbhagrha. This can consist of the temple alone, can be thought a smallest spatial unit in the temple to define the size of the space. This is a square planned chamber that does not have any opening except the doorway. Covered by thick walls, it is crowned by a superstructure called the sikhara. The garbhagrha and the sikhara compose the vimana or the mulaprasada. This is usually identified as Meru Mountain or Kailasa Mountain. The former is the representation of the Indian cosmology and the latter is the residence of Siva. In the garbhagrha as if which is dug in this mountain, the religious object is enshrined. As indicated by the name, garbha (womb), grha (house), this is identified as the inner space of the womb. While the outside walls of the vimana reveal a decorative expression in both architectural and sculptural terms, the inside walls do not. We may find the thin pilasters at the sides and the combination of the square and triangle parts of the ceiling. It seems that the outside walls were planned to attract the attention of devotees by expressing the importance of the structure. This is the design for the public. The inside is a sacred space separated from human activities. The ornamentation is sparse except pilasters in some temples, allowing the devotees' attention to be focused on the image. The garbhagrha of each temple is a sanctified space in the temple as well recognized as a center of the world. The temple is recognized as the center of the world, the garbhagrha is where the image is placed and religious center of each temple.

Sukanasi

The sukanasi, the space between the garbhagrha and the navaranga, is a small thick walled chamber without windows, its open doorways leading to the garbhagrha and the navaranga. The doorway to the garbhagrha is usually closed with the wooden doors, while that to the navaranga is not. Some of them are closed with the double-swinging wooden door at the center and perforated windows at the side, others are open or no wall at all. The sukanasi, identified with the antarala, is the same size as the garbhagrha. The term sukanasi is derived from the sukanasa, the projecting portion in front of the sikhara. The superstructure is composed of the sikhara and the sukanasa; usually the Hoysala temples do not have any other superstructure. On the sukanasa, a unique crest, commonly used for the Hoysala temples, shows the legendary founder of the Hoysalas, Sala, killing a tiger who threatened an ascetic. The design of the ceiling is as simple as that of the garbhagrha. Qualified priests were allowed to go inside; the devotees were controlled to look inside through the doorway. Inside the sukanasi it is kept the small image which is conveyed on the ratha (chariot) at the time of the festival. This sukanasa is called antarala in general, which means 'intermediate space' between the sacred and secular spaces. The sukanasi may be identified a sacred space next to the garbhagrha. The vaulted superstructure, Sukanasa is one of the distinct features of the Hoysala temples. The vaulted roof is lower than the Sikhara which is the highest peak of the temple. The Sukanasa is attached to the Sikhara, compose the Vimana. It is conceivable that Sikhara and Sukanasa are composing one structure which can be identified as a symbol of the temple. As the view of the temple is emphasized by the superstructure as well as vaulted roof in

front, it seems reasonable to suppose that the spatial character of the Sukanasi also very close to that of the garbhagrha, the most sacred space in the temple. Since it was impossible for ordinary men to go in, I would rather to say that we can distinguish the inner space of the temple between the sukanasi and navaranga in the sense that there is a clear distinction between both spaces; sacred or not; the ordinary men can go in or not.

Navaranga

One of the major characteristics of mediaeval Indian architecture is its two-dimensional planning, many of the subtleties of architectural details being found in the ground plan. Though the relation between spatial elements and associated sculptures are determined by texts like the Vastu-sastra, it is not clear which text the Hoysala architects followed. In the Hoysala temples, and the Hindu temples in general, quite in contrast to the Christian cathedrals or the Islamic mosques, huge interior spaces were neither planned nor intended. They are trabeated structures in which small spaces defined by pillars and beams are repeatedly used. The small spaces separated by beams can be thought as a minimum defining unit of the space. These are adjoining spaces of the same size as the garbhagrha, and are called ankana in the Hoysala architecture. The navaranga, generally referred to as the mandapa in Hindu temples, is a hall (ranga) divided into nine (nava) sections. The central section of the navaranga is generally bigger than the others and slightly raised, the latter feature being a particularly notable characteristic of the Hoysala temples. This is the place for singing and dancing in honor of gods. On the other side of the garbhagrha in the navaranga, stone benches, probably used as seats for the audience, can be seen. The walls have jalakas, latticed windows, for allowing light to enter the navaranga. Though the Hoysalas basically followed the previous open halls that were common in temples of Later Calukyas of Kalyani, these half pillars of the open halls were walled up in some of the Hoysala temples. The elaborate decoration of the ceilings of the navaranga is another feature of the Hoysala temples. As we discussed above, the decoration of the ceilings is different each other. Usually the central one is most elaborate. The pilasters of the navaranga are usually classified into two; the ornate and less-ornate. The ornate pilasters have many facets and placed on the axis to the garbhagrha. These are usually placed one pair on the side of the garbhagrha or sukanasi, and the other on the side of the main entrance. The less ornate pilasters are placed on the plain wall. Obviously the way to other spatial units was more ornate than plain walls.

Mukhacatuski

The mukhacatuski, the entrance hall to the inside of the temple is recognized as an intermediate space between outer and inner space of the temple. This can be situated at the east of the temple while the garbhagrha is on the west. This is not only the case that the mukhacatuski situated. In some of the temple, while the garbhagrha is situated at the west, the mukhacatuski can be situated on the south as well as on the three sides of the navaranga except on the west. Though I will describe the variations in the chapter 3, I like to mention here that the entrances to the temple are not only one place but can be several directions if the situation allowed. The wall of mukhacatuski is composed with base, railing and dwarf pillars. The profile of dwarf pillars is quite similar to pillars in the navaranga. Sabhamandapa

ther interesting aspect of the Hoysala art is the presence of small label inscriptions on the pedestals of the images giving the names of the sculptors who carved them. These label inscriptions are written inHoysala style Kannada script and language and are neatly carved in an elegant way. Generally, inmost of the cases in Indian art, the names of the architects, sculptors and engineers who actually constructed or built or carved are not known to historians. Though we have a rich sculptural wealth, its authors are not known to us for the simple reason that they have chosen to remain unrecognized. Perhaps to them their art was more important than their own name. Under this background the mention of the names of the sculptors who worked in Hoysala temples becomes fascinating and interesting.

In front of the mukhacatuski is placed the sabhamandapa. This is thought as one of the main feature of Later Calukya and Hoysala temple architecture. Without any doubt its design was born by increasing the size of the porch and in the eleventh and twelfth century the open hall became an independent and sumptuous part of many temples built in Central Karnatak'. The sabhamandapa is attached to the entrance porch, as well can be detached. The open hall is cruciform, has no image inside.

Temple architecture of Nagalapura in Tumkur district

Nagalapura is a small village situated in Tiptur taluk of Tumkur district of Karnataka. This otherwise ordinary town has two Hoysala period temples, one dedicated to Shiva and the other to Vishnu. The history of the village before the Hoysala period is unknown however it is evident that this village attained enough importance during that period that two temples were erected within a small gap of time. Not many inscriptions are found at this place, therefore constructing its history would be a hard task. Monuments – There are two temples in the village, both under the maintenance of ASI (Archaeological Survey of India). One temple is dedicated to Shiva and one to Vishnu. Both the temple can be placed to mid thirteenth century CE, as no foundation inscription is found so accurate dating cannot be made. Kedareshvara Temple – This ekakuta (single sanctum) temple faces east and is dedicated to Shiva. It is consisted of a garbha-grha (sanctum), an antarala (vestibule) and a navaranga (closed hall). There would have been a porch but it has disappeared. Though the garbha-grha faces east however the main entrance to the temple, through navaranga, is on its southern side. The garbha-grha is modeled on a sixteen-pointed star plan. The shikhara (tower) of the temple has not survived. Gerard Foekema puts this vimana in full start category. His reason being that the aedicule constituting this vimana are all turned on its axis. The vimana measures 4.8m in length.

This temple belongs to the matured Hoysala architectural phase. This phase is distinguished by the series of the bands of the adhisthana of the temple and the eaves over the external wall images. Both these features are evident in this temple. The arrangement of bands found here, over the adhishthana (platform), is consisted of six separate horizontal friezes. These are, from below, a frieze of elephants, a frieze of horse-men, scroll-work, empty band intended for Puranic sculptures, a frieze of makaras with riders on it and a band of swans. The frieze which is usually used for depicting Puranic scenes is empty here, which suggests that it was left incomplete by the sculptors. Among the various images adorning the external walls of the temple, some noticeable images are Gajasamharamurti, Arjun aiming for fish, three-legged Bhringi, Bhairava, Shiva as Tripurari, Durga, Nrrtti, Uma-Maheshvara, Kamadeva, Mahishasuramardini and Shiva as Tandaveshvara. The navaranga is divided into nine equal compartments with its central roof supported on the shining lathe-turned pillars. The designs of each ceiling are different with the central one adorned with ashta-dikpala arrangement. Inside are found various loose sculptures, Surya with Usha and Pratyusha on either side of his feet, Vishnu, Kartikeya, Sarasvati and Sapta-Matrikas. There is one niche in the hall in which Ganesha is housed. A Nandi is also placed in navaranga facing the sanctum. The antarala and the sanctum are of the same size square. The antarala doorway has Uma-Maheshvara on lower lintel while Tandaveshvara on above lintel.

Davrapals are placed on either wise of the doorway as separate sculptures.. A small shivalinga is placed inside the sanctum. The linga is in worship but not many come to pay homage. Channa-keshava Temple —This ekakuta temple was very much ruined and has been reconstructed with its falling material. The temple, as it stood today, consists of a garbha-grha (sanctum), antarala (vestibule) and navaranga (closed hall). There might have been a porch attached to navaranga in earlier times, but it has disappeared completely.

The garbha-grha is a stellate structure with sixteen-pointed star plan. The adhishthana (platform) of the temple has arrangements of the characteristic Hoysala bands, six in numbers. These bands depicts, elephants, riders on horses, scroll work, blank frieze where Puranic scenes are usually carved, makaras and swans. Presence of these bands suggests that this temple belongs to the matured Hoysala phase. The navaranga is a square hall, measuring 20 feet square, and its door has been reconstructed by materials from ruins as stated in an inscription dated 1920. The central roof is supported on four lathe-turned pillars, thus dividing the hall into nine equal compartments. These once wore four bracket images at each one, however these images are lost. Ceilings of the various sections of the hall are executed in different designs, mostly of concentric circles. Also are found concentric octagon, squares etc. The central ceiling has an arrangement of ashta-dikpalas on its lower bands.

The antarala doorway is guarded by two guardians on either side on the jambs. On either side is found perforated screens. The tower above the garbha-grha has no more survived. An image of Venkatesha is placed inside the garbha-grha. The image appears to be of Vijayanagara period, the original image of Keshava is missing. The external walls of the shrine are embellished with various icons of Vaishnava cult. Noticeable among these are, Hayagriva, Vitthala, Venugopala, Yoga-Narasimha, Ugra-Narasimha, kevala-Narasimha, Vishnu over Adi-Shesha, Dhanvantari etc.

Conclusion

Important salient feature of the Hoysala temple in Tumkur district is having pierced stone screens or windows, also called jalandhras. Such windows are seen in the early Chalukyan temple in Tumkur district at Ladkhan in Aihole. The main intention of these windows is to allow sufficient air and light into the interior of the temple in Tumkur district. The Hoysala temple in Tumkur district as has already been remarked contain no circumambulation and have a sukhanasi, a navaranga and a mukha mandapa. As all these parts are closed ones, the only open space is provided by the main door which may be either at the side or opposite to the garbhagriha itself. Thus by its nature of the plan the Hoysala temple in Tumkur district is deprived of air and light. Hence windows were absolutely necessary to allow air and light inside the temple in Tumkur district. As the Hoysala sculptors had an ingenuity to make everything decorative, they made even the jalandhras ornamental and sculptural in nature. These jalandhras contain circular, square, octagonal open space to allow light and air and the rims were carved with minute sculptures of mythological stories. Thus it appears ornamental pieces and makes us to forget that they are windows. The garbhagrha is a center of the temple in Tumkur district as well as the center of the 'space'. The temple in Tumkur district is composed with the garbhagrha as a center. Towards the garbhagrha, there are two partitions, i.e., sacred or not at the entrance of the sukanasi, and walled up inside or semi-open outside at the entrance of navaranga. The ornamentation of the units has the inclination to be plain from outside to inside, the brightness as well. The space of the Hoysala temple in Tumkur district can be divided into certain units which have certain importance as well as functions, such as the garbhagrha, the sukanasi, navaranga and mukhacatuski.

References

- Cousens, Henry (1996) [1926]. The Chalukyan Architecture of Kanarese Districts. New Delhi: Archaeological Survey of India. OCLC 37526233.
- 2. Foekema, Gerard (1996). Complete Guide to Hoysala Temples. New Delhi: Abhinav. ISBN 81-7017-345-0.
- 3. Foekema, Gerard (2003) [2003]. Architecture decorated with architecture: Later medieval temples of Karnataka, 1000–1300 AD. New Delhi: Munshiram Manoharlal Publishers Pvt. Ltd. ISBN 81-215-1089-9.
- 4. Hardy, Adam (1995) [1995]. Indian Temple Architecture: Form and Transformation: the Karṇāṭa Drāviḍa Tradition, 7th to 13th Centuries. New Delhi: Abhinav. ISBN 81-7017-312-4.
- 5. Kamath, Suryanath U. (2001) [1980]. A concise history of Karnataka: from pre-historic times to the present. Bangalore: Jupiter books. LCCN 80905179. OCLC 7796041.
- 6. Sastry, K.A. Nilakanta (2002) [1955]. A history of South India from prehistoric times to the fall of Vijayanagar. New Delhi: Indian Branch, Oxford University Press. ISBN 0-19-560686-8.
- 7. Settar S. "Hoysala heritage". history and craftsmanship of Belur and Halebid temples. Frontline. Retrieved 13 November 2006.
- 8. "Monuments of Bangalore Circle". Archaeological Survey of India, Bengaluru Circle. ASI Bengaluru Circle. Archived from the original on 25 June 2012. Retrieved 15 August 2015.
- 9. Arthikaje. "Architecture in Hoysala Empire". History of karnataka. OurKarnataka. Com. Archived from the original on 4 November 2006. Retrieved 13 November 2006.
- 10. Kamiya Takeo. "Architecture of Indian Subcontinent". Indian Architecture. Architecture Autonomous. Retrieved 13 November 2006.
- 11. Ragavendra, Srinidhi. "In need of support". Spectrum. Archived from the original on 7 October 2011. Retrieved 13 November 2006.
- 12. Githa U.B. "Hoyasala architecture in Somanathapura". History of Indian art. chitralakshana. Archived from the original on 14 June 2006. Retrieved 13 November 2006.
- 13. Review by: Ajay J. Sinha of Hardy, Adam. "Indian Temple Architecture: Form and Transformation—The Karnata Dravida Tradition 7th to 13th Centuries". Art History. 58: 358–362. JSTOR 3250027.
- 14. Premakumar, B.P. "Architectural marvel". Deccan Herald. Spectrum. Archived from the original on 11 June 2012. Retrieved 12 November 2006.
- 15. Chandra, Pramod (2008), South Asian arts, Encyclopædia Britannica.
- 16. Evenson, Norma (1989). The Indian Metropolis. New Haven and London: Yale University press. ISBN 978-0-300-04333-4.
- 17. Foekema, Gerard (1996), A Complete Guide to Hoysala Temples, Abhinav Publications, ISBN 81-7017-345-0.
- 18. Gast, Klaus-Peter (2007), Modern Traditions: Contemporary Architecture in India, Birkhäuser, ISBN 978-3-7643-7754-0.
- 19. Harle, J.C., The Art and Architecture of the Indian Subcontinent, 2nd edn. 1994, Yale University Press Pelican History of Art, ISBN 0300062176
- 20. Hegewald, Julia A. B. (2011). "The International Jaina Style? Māru-Gurjara Temples Under the Solankīs, throughout India and in the Diaspora". Ars Orientalis. 45. doi:10.3998/ars.13441566.0045.005. ISSN 2328-1286.

- 21. Le Huu Phuoc, Buddhist Architecture, 2009, Grafikol
- 22. Livingston, Morna & Beach, Milo (2002), Steps to Water: The Ancient Stepwells of India, Princeton Architectural Press, ISBN 1-56898-324-7.
- 23. Michell, George, (1977) The Hindu Temple: An Introduction to its Meaning and Forms, 1977, University of Chicago Press, ISBN 978-0-226-53230-1
- 24. Michell, George (1990), The Penguin Guide to the Monuments of India, Volume 1: Buddhist, Jain, Hindu, 1990, Penguin Books, ISBN 0140081445
- 25. Nilsson, Sten (1968). European Architecture in India 1750–1850. London: Faber and Faber. ISBN 978-0-571-08225-4.
- 26. Piercey, W. Douglas & Scarborough, Harold (2008), hospital, Encyclopædia Britannica.
- 27. Possehl, Gregory L. (1996), "Mehrgarh", Oxford Companion to Archaeology edited by Brian Fagan, Oxford University Press.
- 28. Rowland, Benjamin, The Art and Architecture of India: Buddhist, Hindu, Jain, 1967 (3rd edn.), Pelican History of Art, Penguin, ISBN 0140561021
- 29. Savage, George (2008), interior design, Encyclopædia Britannica.
- 30. Tadgell, Christopher (1990). The history of architecture in India: from the dawn of civilization to the end of the Raj. London: Architecture Design and Technology Press. ISBN 978-1-85454-350-9.
- 31. Thapar, Bindia (2004). Introduction to Indian Architecture. Singapore: Periplus Editions. ISBN 978-0-7946-0011-2.
- 32. Rodda & Ubertini (2004), The Basis of Civilization-Water Science?, International Association of Hydrological Science, ISBN 1-901502-57-0.
- 33. Sinopoli, Carla M. (2003), The Political Economy of Craft Production: Crafting Empire in South India, C. 1350–1650, Cambridge University Press, ISBN 0-521-82613-6.
- 34. Sinopoli, Carla M. (2003), "Echoes of Empire: Vijayanagara and Historical Memory, Vijayanagara as Historical Memory", Archaeologies of memory edited by Ruth M. Van Dyke & Susan E. Alcock, Blackwell Publishing, ISBN 0-631-23585-X.
- 35. Singh, Vijay P. & Yadava, R. N. (2003), Water Resources System Operation: Proceedings of the International Conference on Water and Environment, Allied Publishers, ISBN 81-7764-548-X.
- 36. Vastu-Silpa Kosha, Encyclopedia of Hindu Temple architecture and Vastu/S.K.Ramachandara Rao, Delhi, Devine Books, (Lala Murari Lal Chharia Oriental series) ISBN 978-93-81218-51-8 (Set)
- 37. Haig, Thomas Wolseley (1907). Historic Landmarks of the Deccan. Allahabad: The Pioneer Press.
- 38. Havell, E.B. (1913). Indian Architecture, its psychology, structure, and history from the first Muhammadan invasion to the present day. J. Murray, London.
- 39. Coomaraswamy, Ananda K. (1914). Viśvakarmā ; examples of Indian architecture, sculpture, painting, handicraft. London.
- 40. Havell, E. B. (1915). The Ancient and Medieval Architecture of India: a study of Indo-Aryan civilisation. John Murray, London.
- 41. Fletcher, Banister; Cruickshank, Dan, Sir Banister Fletcher's a History of Architecture, Architectural Press, 20th edition, 1996 (first published 1896). ISBN 0-7506-2267-9. Cf. Part Four, Chapter 26.