

Construction Techniques of the Dome of the Mausoleum of Uljaytu in Sultaniyya

Marco Giovanni Brambilla

Abstract The mausoleum of Uljaytu in Sultaniyya represents the apex of dome construction in 14th century. It is one of the three large scale buildings of Ilkhanid, Iran and the only one to have survived the passage of time. It has a unique parallel double shell dome supported by a series of self-supporting arches. The profile of the dome is vertical, often called ovoid, and it has no pendentives or squinches at the transition level. Together with the dome of the Cathedral of Santa Maria del Fiore, it is the largest brick dome built upon piers on an octagonal plan. Its architecture, the minarets framing the dome, and the galleries facing the exterior have served as the prototype for several buildings, including the tomb of Hodayun in Delhi and the Taj Mahal in Agra.

Keywords large scale construction, double shell domes, structural system of domes, Ilkhanid Iran