The Domes of the Basilica of Saint Mark in Venice, similar to each other, but different in structure and shape, in originality, history and building technique.

Ettore Vio

Abstract  The five cupolas of the Saint Mark’s basilica are unique on the international scene. They are not like the byzantine half-domes that produce subtle reliefs on the roof of ancient churches. A timber superstructure has been added to the brick, mosaic domes, but for a period of about two hundred years after their construction, they looked like byzantine domes. The cupolas are the result of a custom made technique descending from a maritime tradition. On the top of the cupola stands the cupolino, the lantern, a sort of a wooden umbrella supported by the central mast. Each cupola has a different structure. The cupola over the choir is the most singular of all. This essay investigates the differences, the history, the restorations done through time, the structural analysis, the construction phases, the effect of wind on the structure, the decay of the lead and of the wood, the scaffolding and techniques for the conservation of the cupolas.

Keywords  cupolas, domes, timber structure, different shapes, timber and lead failures

1 Ettore Vio, Procuratoria di san Marco, Register of Architects, Venezia, Italy, ettore.vio@alice.it