Characterization of Warping Marble in New Orleans’s Cemeteries

Joseph T. Hannibal
Cleveland Museum of Natural History, Cleveland, Ohio

Thin (~2 to 2.5-cm-thick) tablets (slabs/plaques) of fine-grained marble have been widely used as vertical covers for the entrances to tombs constructed of brick and concrete in New Orleans cemeteries. These marble tablets are commonly warped. In 1996, Erhard Winkler published a note on this deformation, concentrating on the deformation of marble tablets in the city’s Metairie and Greenwood cemeteries, located near the 17th Street Canal. Similar deformation is also found at St. Louis Cemetery No. 1, located just outside the French Quarter and the oldest remaining cemetery in New Orleans, and Lafayette Cemetery No. 1, located in New Orleans’s Garden District. Winkler identified convex (outward) and concave (inward) bowing, some of it asymmetric, but some tablets are also bowed into an additional, S-shaped form. Bowing in New Orleans cemeteries is so distinct that it can be seen in photos in general publications on New Orleans cemeteries.

The tablets used as covers in the New Orleans cemeteries are roughly similar in thickness to that of bowed marble used for exterior cladding of large buildings (3.2-cm thick in the case of the Amoco Building in Chicago) and for bowed tablets inside of the Cuyahoga County Soldiers and Sailors Monument (2.5cm thick) in Cleveland, Ohio.

Marble on the exterior of the former Oil and Gas Building in New Orleans and the exterior cladding of several buildings in Houston, Texas (which is also located in a hot, humid, environment), are also bowed.

Winkler proposed that outward bowing in the cemeteries was due to the effect of sun and high humidity, whereas inward bowing was due to extremely high moisture behind the panels. It is not clear, however, that this is the case, but heat and moisture certainly play a key role in the deformation seen in the cemeteries.