



OLYMPIC ARENA

Rome, Italy, for the 17th Olympiad, 1960

In this domed Palazzetto dello Sport, concrete has been shaped by Nervi to speak eloquently of structure, of craftsmanship, and of its own nature as a material. The 194-ft dome—actually designed as a ribbed membrane—seems to rest very lightly on its 36 Y-shaped supporting trestles; and this airy quality is furthered—both inside and out—by the continuous band of glazing at its support points. The interior effect is strongly enhanced by the lacy elegance of the rib pattern, which is both structural and decorative.

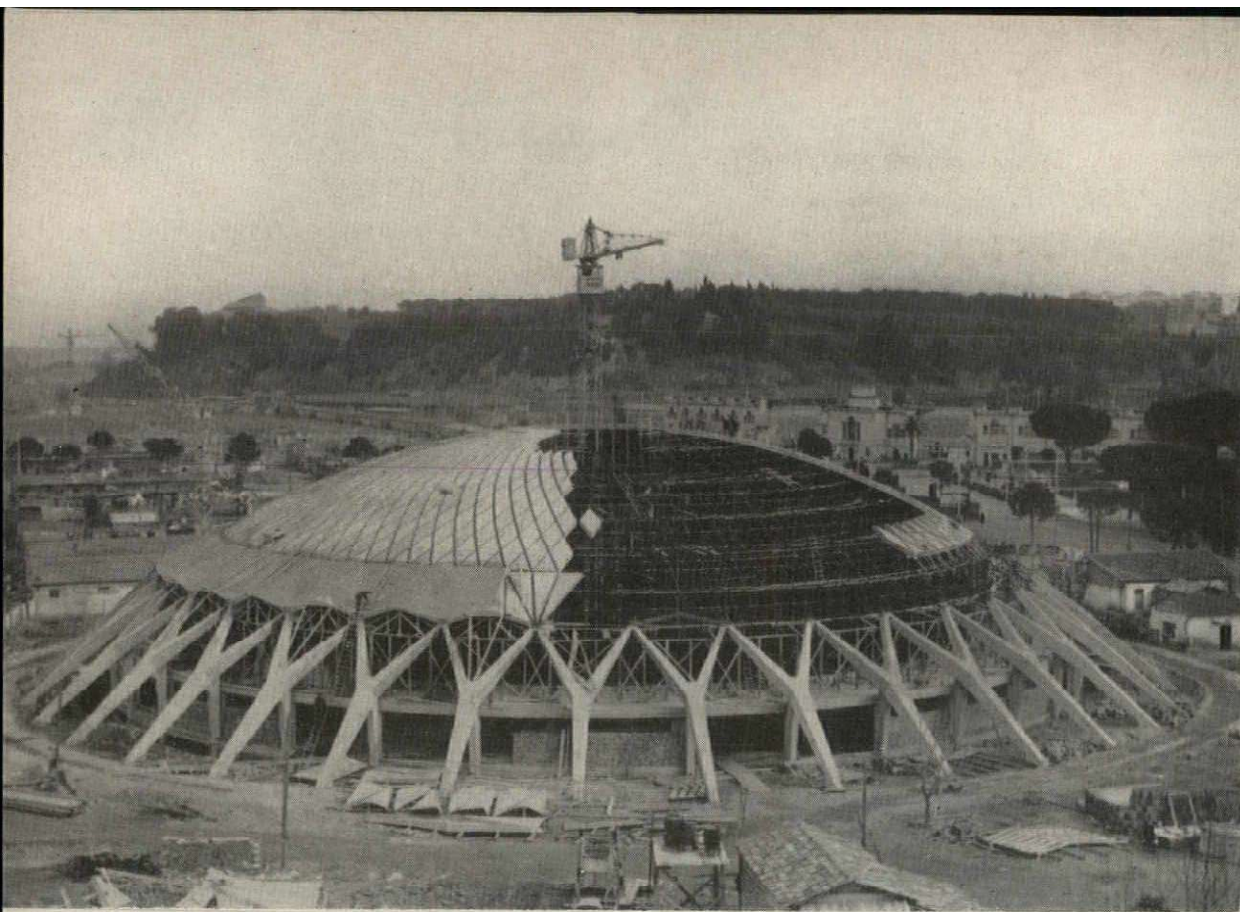
The circular inner hall, 192 ft in diameter, will seat 5000 for boxing and wrestling, or 4000 for tennis and basketball. The dome's apex rises 70 ft above the playing surface, which lies 10 ft below the plane of the surrounding grade level. The perimetral ring is devoted to ancillary facilities and living quarters for the caretaker.

The dome was built of 1620 precast, reinforced concrete coffers, which were formed in very accurately

made and precisely finished cement molds. During construction, the coffers were supported on a series of annular rings while their connecting ribs and the 1 $\frac{1}{4}$ -in. membrane were poured in place. With insulation and roofing added, the thickness of the dome comes to 4 $\frac{3}{4}$ in. The protected central eye contains the PA speakers as well as units for ventilation and floodlighting.

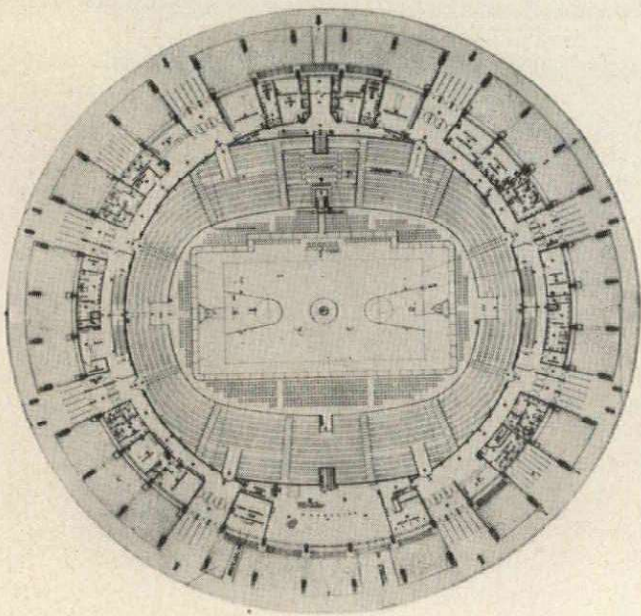
The gracefully tapered Y-trestles—tangent to the curve of the dome—carry the stresses axially downward to a substructure consisting of a prestressed compression ring 276 ft in diameter and 8 ft wide. Such a construction not only provides great rigidity, but also reduces the bearing pressure on the earth—in this case to 820 lb per sq ft.

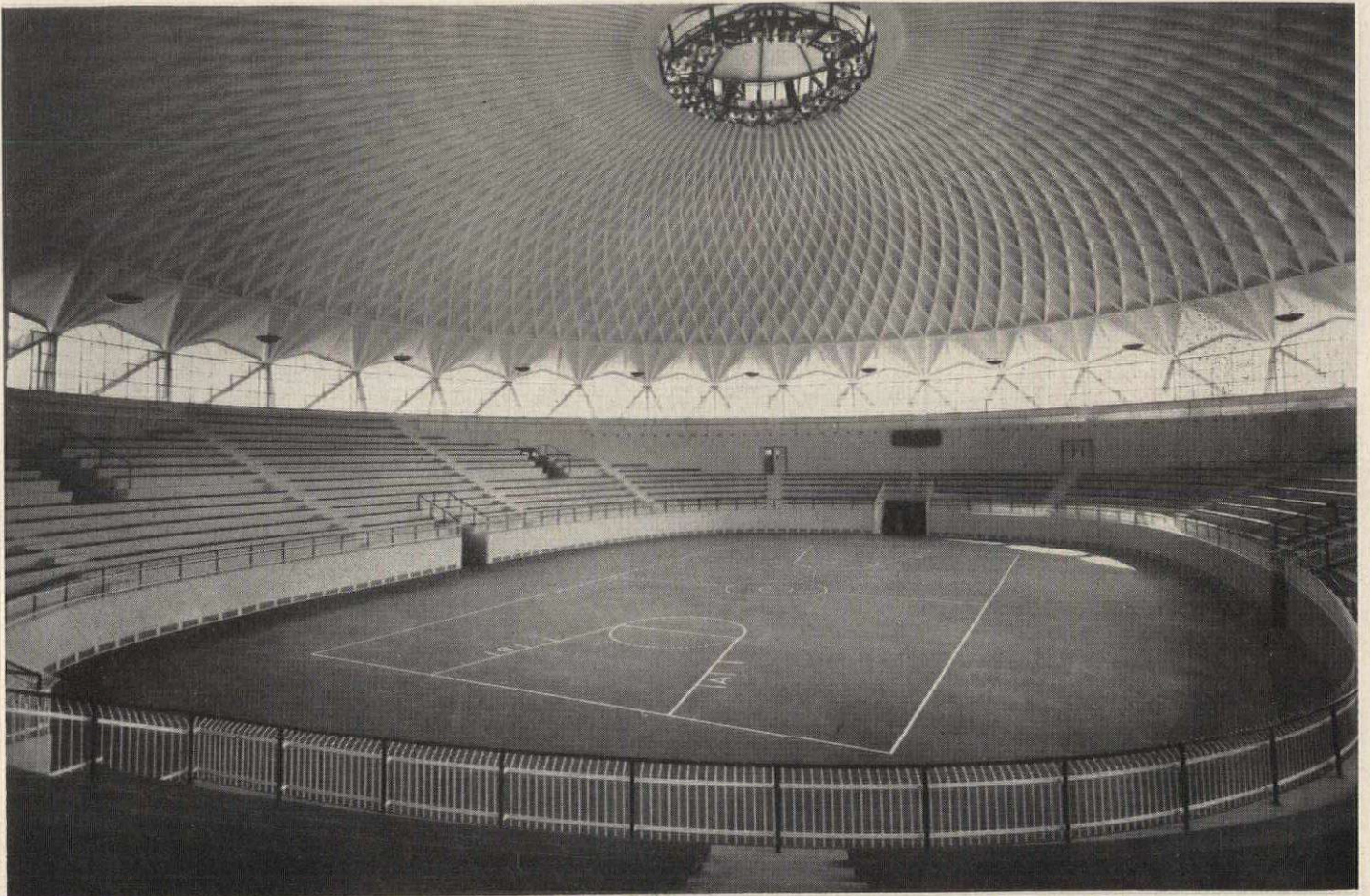
The arena was built economically, its cost totaling \$8.25 per sq ft. Surrounding elements such as passageways, gardens, outside illumination, and approaches were provided by the city of Rome. *Annibale Vitellozzi, Architect; Pier Luigi Nervi, Engineer.*



Photos by Gherardi-Mascetti-Fiorelli

The 1620 precast coffers were supported on annular rings while the membrane and ribs were poured





The elegantly patterned dome appears to float due to the continuous ring of glazing at its support points

