

Demountable Car Park

London Airport Heathrow for BOAC

Miscellaneous section

DESIGNERS

BOAC Properties Branch

STRUCTURAL ENGINEERS

Robert Frazer & Sons Ltd

STEELWORK CONTRACTORS

Robert Frazer & Sons Ltd

Judges' Comments

The philosophy of a space frame applied to the covering of a large unrestricted area. Sections of the roof were conveniently assembled from the standard pyramid units at ground level, simplifying both inspection and erection. The rapidly changing requirements for car parking in this sort of building complex are very adequately met by this building which can be demounted and erected on another site.



The car park has been designed to accommodate 325 cars distributed on the ground and two upper floors. Demountability was emphasized in the client's brief as it was felt that the car park might well have to be re-sited during its life span. The shape of the structure was naturally conditioned by the available site but since the module of construction is only 3ft 6in it can be seen that many more configurations are possible. This great flexibility was made possible by the use of a Unibat space frame structure which forms the upper two decks. Unibat consists of rectangular pyramid units which are completely fabricated off-site and have only to be bolted together on the ground before being slab-lifted into position. In order to ensure a long maintenance-free life all pyramids have been hot-dip galvanized. This flexibility is also maintained in the deck slabs which are made to the same module. They have been reinforced with chopped steel wire which is mixed in the concrete under carefully controlled conditions. This car park is the first large-scale application of the slabs and the product is known as Wirand. The supporting structure is rather more conventional consisting of a painted steel frame, structural hollow section crash barriers and handrails and PVC-coated steel sheet cladding. The ramps are heated to prevent ice forming in the winter. Apart from economy one of the major reasons for selecting this design from the several for which tenders were received was the complete demountability and flexibility of the Unibat system.

