Redesco Progetti srl

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P11 GLAZED ROOF FOR THE CROWNE PLAZA HALL IN CASERTA (2nd solution)

The glazed roof features a sub square plan with side dimensions of 58.52 m and 58.42 m and is supported by existing contour buildings.
The bearing structure is composed of two orthogonal groups of tubular steel arches laid at typical centers of 4.238 m and bearing a secondary structure on 1.413 m by 1.413 m square grids to support the safety stratified glass panes. The pattern of the arches was defined for obtaining modular plane surfaces.
The contour bearings are constituted by an horizontal frame with three sides of trussed steel and the fourth one in prestressed concrete with the aim of equilibrating the horizontal thrusts and of anchoring the structure against the earthquake actions to only one of the existing buildings avoiding the dynamic coupling of the other buildings with the roof.
The structure was built by means of incremental launching over the trusses laid on top of side buildings;before the final connection of the launched and the end standing parts, the recovering of the member actions determined during the design was effected by tuning the prestressing applied during the launching and by applying counterweights to the section already built over the end building.

Client:	Progetto Industrie - Caserta
Architect	SABA Studio Architettura Beretta Associati - Milano
Builder:	MAEG – Treviso
Construction year:	2004/2005
Structure value:	1.152.000 €
Services supplied:	conception of the structural system, preliminary and final design, assistance to Work Supervision