

## La Rosaleda Tower in Ponferrada (León)

"La Rosaleda" Tower, is an outstanding high rise building (100 m) set within a larger project which includes a hotel, car parks, offices and residential housing. The total surface area to be constructed is 40,140 m<sup>2</sup>, 40 % of which belong to the 30 floors of 20 x 24m of the standard section of the tower.

Looking at the tower from a structural point of view, one would certainly ask oneself at least two questions. Firstly, how to solve the imbalance created by the upper floors and their cantilevers (protruding approximately 8 meters from the original prism), consequently generating

an uneven distribution of compression at foundation level and, secondly, how to absorb wind effects on such a slender building.

An additional difficulty to solve, at this stage, is that of the unequal distribution of forces between the central core and the perimeter walls. This is an important issue, since the total deformations along the 100m of the tower would provoke unwanted irregular settlements upon the lower floors.

From an architectural point of view, the tower will, undoubtedly, become a landmark of Ponferrada.



### Spain /2008 Project data

Structural type:  
Reinforced concrete central  
communication core and  
perimeter walls  
Location:  
"La Rosaleda" Area, Ponferrada  
The Province of León  
Opening date:  
November 2008  
Proprietor:  
Hogalia  
Architect:  
Juán F. Álvarez Quirós y  
Jesús Santos Pastor  
Construction:  
BEGAR Construcciones y Contratas, S.A.  
Scope of Works:  
Structural Project