

**Professional scientific sessions for art, architecture and urban planning Thursday evenings**

**Held in: Conference hall of Herampey Consulting Engineers**

**Date: 23.01.2014**

**Title: Comfort and security in high buildings. The architectural, structural and plants design duties**

**Speakers and panel members: Mrs.k.Taghizadeh, Mr.A.tavafoghi, Mr.R.Soltandoust and Mr.M.M.Mahmoudi**

At the beginning Mrs. Taghizadeh presented an historic panorama about the high buildings, from the ancient times, when the religious buildings had a superior height to stress the desire of a human link with the divinities. The modern development of the high buildings began with the invention of the lift, telephone and steel. Mrs. Taghizadeh presented the high buildings construction process in various periods, explaining how they were conceived, designed and built. Most of these buildings were realized in the U.S.A. from the end of the 19th century to our days.

Talking about the historic process of the high buildings in Iran especially in Tehran, Mrs. Taghizadeh mentioned the first "high building" in Tehran that is the Shams-ol-Emareh (7 floors), the first and the second Pahlavi realizations, pre and post revolution constructions and the latest and highest building that is the Sepehr tower (33 floors and 110 m. high).

Mrs. Taghizadeh spoke about the different characteristics of the high buildings (structural, safety, comfort, landscape, town planning, social necessities....)

The second speaker was Mr. A. Tavafoghi (civil engineer and structures` designer) who talked about the parameters and characteristics that must be taken in consideration in the design process of a high building like the earthquakes, problems caused by wind, different kind of loads. These problems are faced through different kind of solutions that can generally be divided in active and passive solutions. Through the comprehensive and detailed presentation of Mr. Tavafoghi, the presents had the opportunity to make a good knowledge of the mater.

The last speaker was Mr. M. R. Soltandoust who talked about the real and actual problems that a plant-system designer is obliged to face, like the relation and the interaction of the positioning of the various plants in a high building, that influence directly the structure and the functions of a high building. One of the most interesting characteristics of these buildings are the expanded facades and the possibility of use of solar energy to reduce the use of fossil combustibles.

Mr. Soltandoust mentioned the case of safety and fire protection that should be very seriously considered.