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High Density and Living Comfort // CHINA – AUSTRIA 2013

An international symposium on contemporary requirements for dense housing areas.

HIGH DENSITY AND LIVING COMFORT // CHINA – AUSTRIA 2013

AN INTERNATIONAL SYMPOSIUM ON CONTEMPORARY REQUIREMENTS FOR DENSE HOUSING AREAS.

The extent of building activities in China is fascinating. The demand for living space in the big cities has led to an unprecedented high-rise building boom. This building boom and the further densification of cities involves new and complex challenges not only for urban planning departments, mobility and for the infrastructural supply chain management, but also for architecture.

According to statistics, Chinese metropolis regions (more than 85 conurbations with more than five million inhabitants each) can expect an annual increase of one million people per year. In this context, a steep rise of the cities' total energy demand is also to be expected. Even today, the major part of the energy demand of urban settlement areas is due to the operation of buildings, especially to the segment of cooling buildings.

The damp sub-tropical climate of the South-Eastern Chinese coastal region (Pearl River Delta, Taiwan, Hainan) has led to the use of air-conditioning systems ensuring a comfortable 50%-moisture indoor climate in combination with a temperature of 22 °C. The outdoor air moisture and temperature intensity are almost double. Compared with heating systems, air-conditioning systems require almost triple the energy input, and through their waste heat, they heat up the urban space even more, already overheated because of its excessively sealed surface areas (40% of the energy is released in the ambient air in the form of waste heat). If predictions regarding immigration in Chinese conurbations are right, and if the current air-conditioning standards are maintained, energy demand in this field of building operation will double.

Above all, this trend means an ecological challenge, which is connected directly with questions of energy production and the urbanization of major regions.

In this context, quality of urban density is up for discussion, as is the technical and energy effort needed to achieve a high, yet acceptable building and population density. This debate about acceptance of high density and living comfort must lead to an understanding of the qualities of density.

Which replies to this question can be expected in order to ensure high-level living comfort for inhabitants of sub-tropical metropolises and simultaneously save resources? How will these conditions influence the typologies, ground plans and building typologies in housing construction?

The main topic of the symposium “High Density and Living Comfort” at Graz University of Technology will be devoted to these questions. The Institute of Architecture Technology has been dealing with this matter in

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research and teaching in the framework of a cooperation with Chinese universities. The symposium, which is organized by the IAT and the Confucius Institute Graz, will offer international architects, experts and building developers a platform that includes lectures, debates and workshops.

Specialists from all over the world have been invited to examine these issues in depth and to explore synergy potentials through professional exchanges.

Twenty PhDs and PhD students will be invited to participate in the symposium.

Please submit application documents in English including a motivation letter, CV, subject and abstract of your dissertation, to the IAT. On the closing day of the event, the results of the participants will be presented and evaluated.

Applications to be submitted by e-mail before 7th of January 2013.

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