



HC Precast System : Industrial Building System or Component?

Tiong, P.L.Y. and Teow, B.H.

What are the important elements required to complete a building to perform its function? Buildings, as we know require few basic structural components to form an integral system to contain its occupants to protect them from weather and external hazards. These components, as we know are beam, column, staircase and wall.

To speed up construction as well as decreasing dependant on heavy site works, the government are encouraging a relatively new-method of construction, termed as Industrialized Building System (IBS). However, what does IBS truly mean? Many precast manufacturers turn to use limited types of precast element in order to satisfy the minimum percentage of prefabricated materials in order to qualify for government projects. For example, by resorting to only precast beam and column (i.e. precast skeletal system), large amount of brick-wall assembling work is still required when the frame is in place. The same goes for concreting of staircase. Some may say, why don't we use precast wall together with precast frame? Okay, while this problem does not occur in countries like the U.S. or European, we have to accept the fact that the construction tolerance of local builders is a serious issue. The precast wall is unable to sit in place if the frame system beneath or above the wall does not form the exact angle as required.

Hence, in HC Precast System, we have come up with a complete precast building system where the level of site grouting work is kept to minimum. Only casting of connection between the precast elements is required. The complete system, consisting of precast beam, load-bearing wall, and staircase are able to provide the whole precast system rather