

Leading Structural Engineering Firms Help the Council on LCA Research

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12 of the most accomplished and world-known structural Engineering firms helped the CTBUH Research Team to perform a fundamental part of the LCA research “A Whole Life Cycle Assessment of the Sustainable Aspects of Structural Systems in Tall Buildings” sponsored by ArcelorMittal.

The Research is aimed at assessing the environmental impacts and energy consumption of tall buildings structures, from the production of the building materials to their end-of-life.

Arup, Buro Happold, Halvorson & Partners, McNamara/Salvia, MKA, Nishkian Menninger, Severud Associates, SOM, Thornton Tomasetti, Walter P Moore, Weidlinger Associates and WSP Cantor Seinuk provided the CTBUH with material quantities of 16 different structural scenarios, 8 for a 248m tall tower, and regarding a 490m tall tower that, if constructed, would be the 5th tallest in the world. Structural scenarios include: all concrete construction, composite columns, 100% steel diagrid structures and mixed structures with a concrete core and steel columns.

The next phase of the research includes the study of the end-of-life scenario of tall buildings (limited to the 248m tall scenarios) with the involvement of leading international demolition companies.