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Efficient demolishing technology and waste management

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Efficient demolishing technology (EDT) is the process where the building is studied beforehand through structural drawings and programming. The structural drawings are used to determine the steel and metal links that are selected precisely centroid of the building to bear the stresses on the columns on the floor below and in parallel the stress of other structural members, in order to collapse the building safely. Alongside, the concrete beams are recommended to be injected with chemicals so cracking and dispersion happens faster. Then the robot excavator deconstructs the building according to the programming set, managing the construction waste before and after demolishing process. Therefore EDT enhances the environment by reusing the construction waste like ((Masonry and CMU, all untreated wood including lumber and finish materials, wood sheet materials , wood trim, metals, roofing, insulation, carpet and pad, gypsum board, unused (leftover) paint, piping and Electrical conduit)) and speeds the deconstruction process with minimum noise and damages to the surroundings. Whereas, the traditional demolishing process, like hydraulic excavators and wrecking ball, take longer and insufficient controlling is done on waste management. Thus, recycling and environmental applications are not targeted. Therefore, having EDT in the construction industry is 60% efficiency in recycling and reusing the construction waste as well as maintaining sustainable solutions within engineering and business.

Speaker Biography

Rawaa Almuzainy has completed her Master's Degree with Merit Award in Civil Engineering from Cardiff University, UK. She is accredited by the institutions of Civil and Structural engineering in the London. She has been teaching for 3 years at Australian College of Kuwait and was a structural designer for Gulf Consultancy in Kuwait. She is certified as an active member at Kuwait society of engineering and ACI – Kuwait Chapter. She specializes in buildings, structures and building environment.

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