

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION No. 586
TO BE ANSWERED ON THURSDAY, DECEMBER 03, 2015**

DEVELOPMENT OF DESIGN FOR QUAKE-RESISTANT BUILDINGS

586 SHRI BAISHNAB PARIDA:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the IIT Roorkee Scientists or others have developed a design for quake-resistance system for buildings with used tyres etc., in the country, if so, the details thereof; and**
- (b) to what extent this would help to control deaths during earthquakes and other such calamities?**

ANSWER

**MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)**

(a-b) Yes Sir. A new construction technique for earthquake resistant housing is being developed in the Department of Earthquake Engineering, IIT Roorkee. This is based on interlocking of pre-cast slotted concrete blocks with the help of energy dissipation links.

This complete interlinked block masonry system is well interconnected and robust in itself. The seismic performance of this interlocked block masonry system with energy dissipator links has been verified under simulated strong earthquake conditions on the shake table and shock table testing facility. The simulated motion corresponds to the strongest earthquake motion expected in the seismic zone V (the most severe zone) of IS-1893. The concept of block masonry with visco-elastic link is completely successful since the energy is completely released through friction between the blocks and yielding of links at the bottom portion of the model. The developed low-cost system has been found to be very effective in withstanding strong earthquake motions without any distress.
