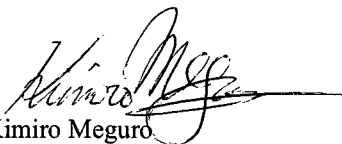


FOREWORD

It has long been recognized that the collapse of vulnerable houses and buildings is the main cause of casualties during earthquakes. Even with a good response system and/or recovery/reconstruction plan, neither structural damage, human loss nor economic losses can be reduced unless structural collapse is prevented. Therefore, it is vital to guaranty the seismic capacity of new constructions as well as to upgrade the resistance of existing ones. In the former case, “good construction codes”, i.e. codes that are complied, are necessary. Complicated codes which are difficult to interpret and put into practice are inappropriate. In addition, an efficient system to ensure the code application should also be established. For existing constructions, technical solutions which emphasize local availability, applicability, and acceptability are required. These should be accompanied by a social system which encourages retrofitting among the general population. Such system should aim at increasing people’s disaster awareness and at giving incentives to house owners for retrofitting and renewing.

The Earthquake Resistant Structure Research Center has been focusing on addressing the above mentioned issues from different perspectives. In particular, my research group has focused, among other topics, on the retrofitting of adobe and masonry houses, which are the most used worldwide and also the most vulnerable during earthquakes. For this purpose we are proposing the use of meshes made of PP-bands, which are commonly used for packing and are resistant, inexpensive, durable and worldwide available. The installation process is very simple and can be performed by the house owner himself. Furthermore, this retrofitting procedure does not change the external appearance of the structure and can be easily accepted by the house owner. Besides this technology, I have proposed retrofit promotion social system by which house owners are encouraged to retrofit their houses and also, total cost needed to pay by both house owners and government is reduced drastically. I sincerely hope that this technology and incentive system can help mitigating future earthquake inflicted casualties and damage. If you would like to get more information about it, please contact us at ppmethod@iis.u-tokyo.ac.jp.



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