

Inclined Concrete Residential Roofs for Hurricane/Typhoon Protection

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As we look at the residential construction, we see that most of the roofs are made out of wood. Traditionally, this has been the material used, but as the world faces much deforestation, global warming, and higher wood prices, concrete roofs are gaining more importance.

At a very early age we were told the story of fictitious characters called the “Three Little Pigs”. However, many of us were unclear as to how the technology could be used to our benefit. In fact, most of the concrete homes built in the past did not meet the requirements of our newer codes; namely, the thermal requirements.

Concrete roofs are not new. The Greeks and the Romans used them, however, northern Europeans skilled in wood and ship building did most of the residential construction over the last 200 years.

The main objective of this presentation is to discuss the history, construction practices, and current analysis and design of inclined concrete roofs; its benefits carries a minimum of one hundred year warranty to be enjoyed by many generations.

This new technology is not addressed in our present building codes so work has to be done for its implementation in the code.