

PRELIMINARY INVESTIGATION ON BUILDING ROOF REMOVAL DURING RAINSTORMS

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ABSTRACT

Building roof blow-off during rainstorm can be damaging and frustrating. To forestall such incidence, salient issues relating to materials of construction, reliability of design and site exposure effects are discussed in this paper. As a major roof component, construction wood must be kept dry in use. Metal fasteners should be protected from corrosion and the roofing sheets should be applied according to specification, which should adopt optimum roof overhang for particular localities. Trees and other barriers that provide wind resistance should be permitted and encouraged around buildings while constant roof checks and maintenance are recommended to detect incipient structural failures so that appropriate and timely remedy can be applied. Moreover, further research is encouraged to establish time-dependent reliability and ranking of the various roofs covering through weighted analysis of their failure characteristics under wind load.

Keywords: roof design, construction materials, roof blow-off, maintenance.