

Development of pull out design strength formulae for light gauge steel roofing systems

Leonardus Gunawan, author

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20248354&lokasi=lokal>

Abstrak

A brief Introduction of steel cladding failures under wind uplift load. Explaining the importance of roof and wall cladding system to support the structural integrity of the whole structure during the cyclone or storm events. The objective of this thesis is to develop a dimensionless formula for predicting pull-out failure under wind uplift loading. Chapter two presents the behaviour of steel roofing systems under wind uplift loading/suction. It also describes the types of cladding, connection, and failure mechanism of the roofing systems. Chapter three and four Presents a review of previous literature published on pull-out and pull-through strength of steel roofing systems subjected to wind uplift/suction. Chapter five presents the detailed analysis to determine the pull out strength of steel roof claddings using Buckingham theorem, excel spreadsheet and solver program.