

KORKIAT TAINPAKDIPAT : OPTIMUM PLASTIC DESIGN OF UNBRACED  
MULTISTORY STEEL FRAMES. THESIS ADVISOR : PROF. THAKSIN THEPCHATRI,  
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A procedure of optimum plastic design of unbraced multistory steel frames based on linear relationship between plastic moment and unit weight of member is presented. The static approach is employed and the linear programming is utilized in the design procedure to obtain the minimum weight of the structure under single or multiple loading condition. The secondary effects are also investigated.

A 2-story, single-bay frame subjected to single load system has been analyzed. Results are found to be in good agreement with those of other investigators. Under multiple loading condition, the method developed in this study will result in only one unique minimum weight of the structure. However, the method will give different correct collapse mechanisms due to different loading conditions.