

ABSTRACT

USE LINK OPTION ON SAP2000 FOR ANALYSIS STRUCTURE WITH SEMIRIGID CONNECTION

(77+xvi page: 46 picture ; 23 table)

Steel is the most superior material in term of strength, stiffness, and ductility. Due to its factory-fabricated, steel is also more homogeneous in quality. Steel constructions generally consist of factory-fabricated profiles of different dimensions depending on needs, which are then assembled and connected to each other. The type of connections of steel structure varies, each having different characteristics, in which in practice are simplified to fix and pin connections models. In other types of steel connections, however, those which are unsuitable to be modeled as fixed and/or pin connections needed special and specific analysis which count the semirigid effect. These need, indeed, has drawn concerns for the experts. Semirigid connections need a more sophisticated analysis procedure, the non-linear analysis. To fulfill this need, in time home-made computer programs are often made and used. These home-made programs, however, are limited to the creators. In commonly used construction computer program, SAP2000 to be specific in this research, LINK is the tool which is able to accommodate non-linear data. This statement has been justified in this research, providing a validity to be used for construction analysis of semirigid connections. The semirigid connection itself is the most appropriate model to support the new model DAM for steel structure, which includes connection parameter as a whole without the pin and fix model simplification.

Keyword : semirigid, nonlinear, LINK, DAM.