Meeting: 1003, Atlanta, Georgia, SS 27A, AMS-SIAM Special Session on Analysis and Applications in Nonlinear Partial Differential Equations, I

1003-37-202 **Alexandros Antonioy Tasopoulos*** (alexandertasopoulos@yahoo.co.uk), Dimitras 17, AG.Dimitrios, 17343 Athens, Greece. *Grillage Analysis Computer Modelling and Analysis of Structures.* Preliminary report.

The aim of this paper is to analyse a slab supported in four columns using 2 different methods. The Equivalent frame method, which is an approximate method for calculating the maximum Hogging and Sagging moments, and the Grillage method which is a numerical method for calculating the maximum moments for our numerical analysis where QSE package was used. Also, we assumed that there are no beams between the columns. The Equivalent frame method's principle is that the slab is divined in Middle and column strips as shown belowFor the Grillage method, only one quarter of the slab is analysed, and the slab is divined in strips again, as shown below. The characteristics of own slab are the following:

Floor to floor height= 3.5 m

Slab thickness h=275mm

Concrete mass density= 25KN/m3

Floor imposed load=3.5 KN/m2

The load combination= 1.35gk+1.50 (Received August 27, 2004)