空间管状接头应力分析的半解析法

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摘要　采用半解析法为空间管状接头应力分析提供了一种有效的手段，此法未对接头的形式和受载条件作任何假设，大大拓宽了过去半解析法只局限于平面管接头应力分析的应用范围，与有限元法相比，具有计算量小、前处理简单、内存要求低、简便易行等优点。通过两个数值计算例题与试验值比较后显示了本法的可行性与优越性。

关键词　　空间管状接头　应力集中系数　子结构　柔度阵　圆柱薄壳

分类号

A SEMI-ANALYTICAL METHOD FOR STRESS ANALYSIS OF MULTIPLANAR TUBULAR JOINTS

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Abstract

There are many multiplanar tubular joints in offshore structures. The stressanalvsis of these joints is far from being solved with satisfaction due to the complexity ingeonietry and ioad cases.A semi-analytical (analytic-numerical) method for stress analysis ofmultiplanar tubular joints subjected to any loads is presented in this paper. Some advantagesof the computer program compiled based on semi-analytical method are discussed. Twonumerical examples and comparison of the computed results with that by expe...

Key words multiplanar tubular joint stress concentration factor substructure circularcylindrical shell flexibility matrix

通讯作者