Potential Boundary Element Method for Non - moment Analysis of Flat shell

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Abstract In this paper, the problem of non—moment internal force of flat shell is transformed into the bound problem of stress function by potential boundary element method, and the number of unknown is deadly reduced. And this method can also analysis any non—moment flat shell with any boundary epzr any normal direction load.The calculated result presented in this paper indicates that this method introduced in this paper is valid.

keywords: flat shell, non—moment internal force, boundary elemeut method

苯和乙醇气相烃化一步合成乙苯放大试验通过省级鉴定

由我院化工系徐海升、张勤堂、王留成、魏辉荣、胡红娟、刘大壮等教师开发的苯和乙醇直接合成乙苯新型催化剂放大试验研究于一九八九年三月通过省级鉴定。

目前国内外乙苯生产量的90%是利用乙烯和苯在三氯化铝催化剂作用下生产的。该方法工艺冗长、收率低、投资面大，对设备腐蚀严重、污染环境。采用新型催化剂由乙醇和苯一步合成乙苯，可用95%的乙醇代替乙烯与苯一步合成乙苯，它与由乙醇脱水制乙烯再与苯合成乙苯的两步法相比，大大缩短了工艺过程，降低了能耗和设备投资且对设备无腐蚀，对环境无污染。这次放大试验的成功，为工业化生产提供了设计依据，并标志着该项科研成果由实验室走向工业化生产。