Isogrid 패널의 초기 형상 불완전성에 관한 연구

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A Study on the Initial Geometrical Imperfection of Isogrid Panel

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Key Words: Initial Geometrical Imperfection(초기 형상 불완전), Isogrid panel(Isogrid 패널)

Abstract : There are many methods to reinforce the cylindrical structure for light weight design. Isogrid is one of the reinforced structures to improve buckling load. To make Isogrid panel, trignle shape grid is removed by mechanical milling and it is curved-shaped by roll bending which is one of the plastic forming. When the Isogrid panel is shaped by roll bending, initial geometrical imperfection is occurred and becomes the reason which diminish the buckling load. In this paper, ANSYS is used for non-linear FE analysis and analysis results are compare with manufactured Isogrid panel about dimension of initial geometrical imperfection.

치과용 임플란트의 최적 설계 변수에 대한 경사하중의 영향

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Effects of inclination angle of load on optimal design parameters of dental implant

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Key Words: Implant(임플란트), Optimization(최적화), Sensitivity(민감도), Finite Element Analysis(유한요소해석), Design Optimization Tool(최적화 설계 프로그램)

Abstract : The occlusal loads are appled in the various directions to tooth. The effects of inclination angle of load on optimal design parameters are studied. The optimal design parameters are determined for loads with inclination angles of 0°, 30°, 60° and 90° in the one-body type implant system using the finite element analysis and design optimization tool (DOT). The correlations between the optimal design parameters and inclination angle of load are established. The obtained information is used for better implant design.