

기계적 강도 향상을 위한 듀얼 레이저 주사 경로 생성

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Generation of Dual Laser Scan Path for Enhancement of Mechanical Strength

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Key Words: Solid Freeform Fabrication System(임의 형상 제작 시스템), Dual Laser(듀얼 레이저), Scan Path(주사 경로)

Abstract : In Solid Freeform Fabrication System, in order to fabricate a large part, dual laser and each scan path is needed. A scan path for dual laser is generated from single path, therefore there is divided region and discontinuous positions. Scan paths for each laser have to be synchronized and consider mechanical strength against fracture at divided region. This paper addresses generation of single laser scan path which deals with special cases for unnecessary scan points and generation of dual laser scan path according to various divided regions to enhance mechanical strength.

유압시스템 구성품의 수명시험에 대한 고찰

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Study for the Life Tests of Hydraulic System Components

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Key Words: Life Test(수명시험), Reliability(신뢰성), Hydraulic System Component(유압시스템 구성품)

Abstract : It is very important for the manufacturers to predict the life of hydraulic system components according to the results of life tests. However, the time and cost of life tests are so much that it is almost impossible for the small or medium-size manufacturers to conduct the life tests themselves. Fortunately, the reliability center of Korea Institute of Machinery and Materials has been conducting the life tests of hydraulic system components such as hydraulic motors and pumps, hydraulic cylinders, hydraulic valves, hydraulic accumulators, hydraulic hoses, and hydraulic filters. Here, the assessment codes and test methods of life tests for the hydraulic system components are described briefly.