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INCREASING THE STRENGTH OF THE AIRCRAFT BODY USING GRAPHENE

Abstract

Graphene is a fantastic substance that can be used properly in aircraft body. Due to its simple structure, it has unique and significant features that can make a great revolution in the various basins of science and industry. The discovery of graphene has resulted in the production of lightweight, low-cost, high-stiffness, and variety of applications in aircraft . Graphene has a very strong strength and can increase the strength of body about hundreds of times. So that graphene increases nickel by 180 times. Given these features, it is anticipated that the use of this material with aluminum and nickel, can be used as the ideal material for commercial airplanes. This can increase the tolerance of stresses at high altitudes, and increase the lifespan of the aircraft body. Thus reduce the cost of repairing and maintaining aircraft parts. Graphene's light weight and its stiffness together can also help to reduce body wave resonance (Q-factor) and attenuation factor ($1/Q$) on aircraft body and optimize fuel consumption.