Soap Film Enneper Minimal Surface Model

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Abstract : Tensioned membrane structure in the form of Enneper minimal surface can be considered as a sustainable development for the green environment and technology, it also can be used to support the effectiveness used of energy and the structure. Soap film in the form of Enneper minimal surface model has been studied. The combination of shape and internal forces for the purpose of stiffness and strength is an important feature of membrane surface. For this purpose, form-finding using soap film model has been carried out for Enneper minimal surface models with variables u=v=0.6 and u=v=1.0. Enneper soap film models with variables u=v=0.6 and u=v=1.0 provides an alternative choice for structural engineers to consider the tensioned membrane structure in the form of Enneper minimal surface applied in the building industry. It is expected to become an alternative building material to be considered by the designer.

Keywords : Enneper, minimal surface, soap film, tensioned membrane structure
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