

GEODESIC PATTERNS OF SURFACES

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We consider the use of geodesic lines in cutting pattern generation of surfaces. Being the shortest paths between the points on the surfaces geodesic lines generate the great interest in cutting patterns. Namely, it is useful to generate the geodesic lines net and to cut the surface in parts limited by geodesic lines. Membrane structures are lightweight and highly optimized structures. Due to the constant stress state, strength of materials is used optimally. New materials development make wider use of membrane structures. They are used as roofs of large spans, and as the elements for the cladding of buildings.