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Embedded minimal surfaces in three-manifolds with positive scalar curvature. (English)

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Let M be a closed orientable Riemannian three-manifold with positive scalar curvature. We prove that any embedded closed minimal surface in M has a topological description as a generalized Heegaard surface. Also an existence theorem is proved which gives examples of such minimal surfaces.

MSC:

53A10 Minimal surfaces in differential geometry, surfaces with prescribed mean curvature

53C42 Differential geometry of immersions (minimal, prescribed curvature, tight, etc.)

Keywords:

three-manifold; positive scalar curvature; minimal surface; Heegaard surface

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