

## عنوان مقاله:

Pinch Technology: A Review

## محل انتشار:

اولین کنگره و نمایشگاه بین المللی علوم و تکنولوژی های نوین (سال: 1397)

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## خلاصه مقاله:

The term Pinch Technology was introduced by Linnhoff and Vredeveld to represent a new set of thermodynamically based methods that guarantee minimum energy levels in the design of heat exchanger networks. Over the last two decades, it has emerged as an unconventional development in process design and energy conservation. The term 'Pinch Analysis' is often used to represent the application of the tools and algorithms of Pinch Technology for studying industrial processes. This technology presents a simple methodology for systematically analysing chemical processes and the surrounding utility systems with the help of the First and Second Laws of Thermodynamics. Initial applications of the technology were found in projects relating to energy saving in industries as diverse as iron and steel, food and drink, textiles, paper and cardboard, cement, base chemicals, oil, and petrochemicals. In the following we explain about the general benefits and applications of pinch technology, giving three rules that form the basis for practical network design and the future outlook. This review aims to provide the basic knowledge of the concepts in pinch technology and how they have been applied across a wide range of process industries.

## کلمات کلیدی:

Pinch technology, Pinch analysis, Applications, Network design

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