

عنوان مقاله:

Coke formation in industrial furnaces

محل انتشار:

دومین همایش علمی مهندسی فرآیند پالایش و پتروشیمی (سال: 1393)

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خلاصه مقاله:

There are several thousand hydrocarbon furnaces located in world refineries and petrochemical plants. In general, these furnaces vary in size and style but each contains fired heating or reaction coils most often of a serpentine configuration commonly called furnace tubes, which transport the hydrocarbon charge stock being heated and processed. During normal operation a solid carbon material, commonly referred to as coke, is formed adjacent to the inner wall of the tubing. The formation, which is a result of continuous heating of the zero velocity fluid layers immediately adjacent to the fluid boundary, grows in thickness in a continuous manner with time. Eventually, removal of the coke deposits becomes necessary due to excessive pressure drop across the tubes, reduced throughput through the tubes, or reduction in thermal efficiency below some allowable minimum.

کلمات کلیدی:

decoking, flame, refining, oil film temperature, hydrocarbon, furnaces

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