

Fouling in heat exchanger tubes.

University of Birmingham - Heat transfer and fouling performance of finned tube heat exchangers: Experimentation via on line monitoring



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8.6 Fouling

Using corrugated tubes in heat exchanger construction, as HRS does, is beneficial in preventing both deposition fouling and chemical fouling. Responding to freezing fouling In some cases, a certain process requires engineers to use substances that may solidify, risking the occurrence of freezing fouling. Examples of chemical reaction fouling are coking and cracking of hydrocarbons, polymerization etc.

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Importance of flow rate during cleaning The proper flow rate ensures the effective mechanical action of fluids during cleaning. Corrosion fouling It occurs when heat transfer surface itself reacts to form corrosion product.

Causes of fouling and corrosion in heat exchangers

When using a solution, there may be various components with differing freezing points. You should never use hydrochloric acid with stainless steel or titanium plates because the acid causes. For this reason, we go to great lengths to make sure those systems are clean.

Heat Exchanger Fouling Factors

However, if you know the fluid is one that would be very challenging to remove in this way, it may be better to allocate it to the tubeside. Besides, biont's metabolism will also consume oxygen and lead to uneven oxygen density on the metal surface.

Heat Exchanger Fouling Factor

TDS Total Dissolved Solids , as a measurement of the ionic strength. It forms a very small coating that adds resistance to heat transfer.

Causes of fouling and corrosion in heat exchangers

Deppmann engineer sales representative can offer a specific recommendation for each opportunity. The corresponding $pAlk$ is obtained from the Langlier diagram see Figure 8. Solidification fouling It occurs due to solidification of liquid on sub cooled heating surface.

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