

Plugging Heat Exchanger Tubes

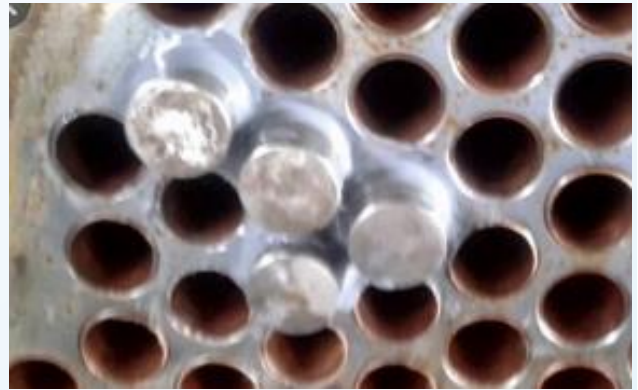


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EPSC

What Happened:

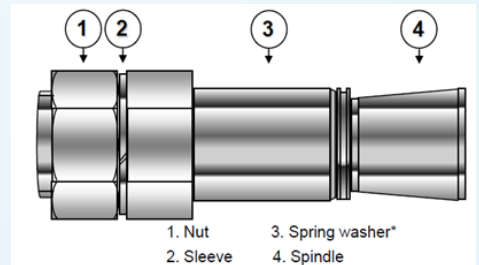
A technician was checking a plug on a heat exchanger tube, while the equipment was heating up. Due to pressure build-up in the tube the plug was released from the tube bundle with great force, killing the technician.



Tapered plug



Hydraulic activated plug



Compression fit plug

Aspects:

- Heat exchanger tubes are regularly plugged when the tube is leaking or has thin wall areas.
- Tubes to be plugged should be first fully opened (cut), to avoid pressure build-up in the tube when heating-up!
- Define the right plug related to pressure and temperature.
- Validate that the bore of the tube is in good condition and that the plug is compatible with the fluids/gases used as well as with the tube sheet material.
- Be careful with welding that can cause tube-sheet cracking.
- Validate leak tightness of the plug and when inspecting a plug at a heat exchanger, stay out of the line of fire.

Plug a heat exchanger tube with care