Technical Tuesday

Quench® FAQs

What is Quench?

Quench® is used for treating process equipment with a history of pyrophoric issues without having to fill or rinse with water. This dramatically decreases the amount of effluent and the amount of time that it takes.

What does Quench do?

Quench converts iron sulfide into iron oxide. The reaction is not exothermic.

How do you know when Quench is done?

Quench contains a marker that disappears when reacting with iron sulfide. We will continue to treat with Quench until the marker is detected by our field test. The positive detection of the marker indicates the reaction with iron sulfide is complete. One drum of Quench can oxidize approximately 65 lbs. of FeS.

When do we apply Quench?

Quench is applied during or after the QuikTurn steam dwell (temperature dependent). There's no need to rinse between steps. Quench and QuikTurn do not react with each other.

How do we dispose of Quench effluent?

Quench can be drained and vented to the same place as QuikTurn. There's no need to separate the two waste streams.

Does Quench replace Permanna®?

No, heavy oil towers (FCCU, coker, crude, etc.) with trays and packing still need to be rinsed and treated with Permanna. Heavy oil only free drains so much during the QuikTurn vapor phase. Water rinsing is needed to remove the heavy oil barrier from pyrophorics.

Permanna is used to treat pyrophoric iron sulfide in the liquid phase with water and is the preferred product of choice on heavy oil fractionators where water rinsing is required.

Is the Quench formulation and process unique to the industry?

Yes, Quench is such a unique formulation and process that it was awarded multiple patents by the US Patent office. Quench is patented for both steam and nitrogen applications.

What is the maximum temperature Quench can be used?

Quench can be used up to 300°F before the field test marker gets destroyed. Quench can be used in temperatures above 300°F up to 550°F, but alternative analytical methods other than the test strip will be needed to determine when the process is complete.

Does Quench replace soda ash washing for the neutralization of polythionic acid (PTA) on 300 series stainless steel?

No, Quench does not replace soda ash washing on 300 series stainless steel. If required, soda ash washing should be performed once the Quench process is complete.

Is Quench compatible with our wastewater treatment facility?

Yes, the active ingredient in Quench, sodium nitrite, will be converted to sodium nitrate with little impact on the wastewater treatment plant.

Can Quench be used for neutralization on an alkylation unit?

No, Quench should not be used on any equipment in acid service. The definition of an acid unit is anything with a pH of <4. This includes alkylation units, Selexol units, and acid gas equipment. Quench is not compatible with an acid service.