Question 77: What operating procedures are do you use to mitigate/prevent coking issues in the vacuum tower from loss of wash oil pumps?

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Wash oil loss can result in coking in either the wash oil delivery system or in the wash bed, or both. The best method is to prevent coking is to keep the wash oil in service. Auto-start of standby wash oil pumps, alternate wash oil supply sources (AGO), and putting pumps on critical service power supply are used.

Steam purge of wash oil spray distributors has been used to prevent nozzle coking.

Coking rates depend upon oil composition, temperature, and residence time. If wash oil is not available, the vacuum heater outlet temperature should be dropped to reduce operating temperature. This will reduce unit yields and put more light material into the vacuum tower bottoms. The lower operating temperature reduces coking directly by cooler operation, and indirectly by reducing the amount of entrainment into the wash bed as a result of lower vapor velocities in the vacuum tower.

Tags

Operations

Vacuum Tower

Year

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