

Gardner Denver Nash Failure Analysis



Calcium coated rotor and cone

Failure Due to Calcium Buildup

Calcium (aka Lime) build up can cause higher horsepower consumption, reduction in pump capacity, lost production time due to locking up of the pump, and pump damage due to improper acid washings

Possible Causes

Seal Water

- “Hard” seal water source (containing high concentrations of calcium carbonate)
- Recirculated seal with increasing levels of calcium carryover
- Hot seal water

Carryover

- Liquid carryover from process containing calcium
- Vapor carryover from process

Acid Washing

- Poor acid washing practices
- Waiting too long to properly acid wash pumps
- Pump lockup

Possible solutions

Seal Water

- Change seal water source
- Recirculate seal water
- Treat seal water
- Avoid hot seal water via cooling tower

Carryover

- Install separators and/or eliminate calcium source
- Install spray nozzles with cool seal source

Acid Washing

- Follow Nash acid washing procedures (could cause corrosive attack if not done properly)
- Monitor buildup via Nash borescope

If you have any further questions or would like more information, please contact the number at right.

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