Many of today’s reliability engineers consider varnish to simply be a way of life – a problem that builds up over time, that can only be cost-effectively addressed after oil conditions change or equipment problems occur.

However, as we look more closely, a new problem begins to emerge: assumptions about varnish-related issues might be costing engineers more than they realize in the long run.

Varnish isn’t always considered a top priority

Reliability engineers already face multiple challenges every day that are competing for their immediate attention and efforts.

• Manpower reduction
• Budget cuts
• Regulatory changes
• Equipment availability

Varnish is an issue that leads to other problems

The downside of avoiding the varnish issue in favor of other priorities is that it leads to:

• Valve stiction
• Reduced oil cooler performance
• Failure to start
• Trip event

A reactive solution isn’t as cost-effective as you think

A failure to start or trip event that results from unaddressed varnish buildup can impact a plant’s bottom line in two major ways: lost revenue and possible penalties.

Base load plant turbine

Operates 24 hours/day

$288k in lost sell price to the grid

Merchant plant turbine

Operates 8 hours/day

$500k in lost sell price to the grid

Combined with potential penalties, that’s up to $1M total

The estimated ongoing maintenance costs to combat varnish build up:

• Filtration hardware capital cost
• Operating costs
• Top-treat chemicals
• Incremental oil analysis

You need to get ahead of the problem

Varnish-related issues can arise quickly, and when they do, the extra costs associated with fixing them have a similar trajectory. More than ever, reliability engineers need to recognize varnish as a problem that can only be solved cost-effectively before it becomes one. And that means finding a proactive solution to the problem—one that starts with careful system preparation for a properly chosen turbine oil that can help prevent varnish from forming in the first place.

GET PROACTIVE ABOUT VARNISH

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