

CASE STUDY

Weekly Scheduled Maintenance Reduced to Condition Based Saving Thousands per Month

Fluitec's DECON helps reduce varnish potential by 86%

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Weekly Scheduled Maintenance Reduced to Condition Based Saving Thousands per Month

VARNISH POTENTIAL REDUCTION

86%



CLIENT: Industrial Gas Manufacturer

COUNTRY: USA

APPLICATION: Screw Compressor

FILTER CHANGES REDUCTION:
Weekly changes to on-condition

MPC REDUCTION: 86%

SOLUTION: Fluitec DECON

PROBLEM

On an alarming weekly basis, a leading U.S. supplier of industrial gases was experiencing costly unscheduled maintenance and systematic plant stoppages due to varnish contamination inside their compressors' filtration systems.

SOLUTION

To reduce this varnish build-up while maximizing lubricant life-usage and eliminating wasteful and unnecessary maintenance, the company introduced Fluitec's **DECON™** to the in-service hydraulic oil. DECON is a Fluid Enhancement Solution utilizing a patent-pending lubricant varnish and deposit mitigation technology called **Solvancer™**.

RESULTS

Since DECON was introduced, the process of weekly filtration changes was stopped. Based on these results, the lubricating oil has years of service life ahead of it. The company is witnessing immediate cost savings and has ensured long-term reliability of supply for its merchant gas customers.

- High cost of filter changes is eliminated, saving tens of thousands per year
- No new compressor element purchases
- Maintain its 60K – 80K hours machine-life expectancy



DEEPER DIVE

The Air Separation Unit operates as a key component to a leading U.S. supplier of industrial gases. The unit's core component, the oil-injected rotatory-screw hydrogen compressor, was becoming notorious for developing varnish contamination. The deposits plugged up their filters requiring weekly changes. These maintenance procedures not only became expensive, but caused cascading work stoppages within their supply chain to merchant gas customers nationwide.

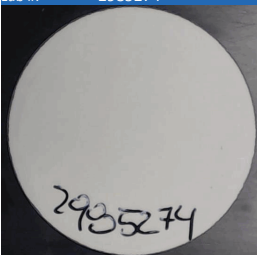
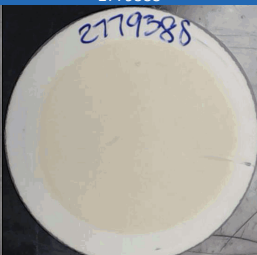
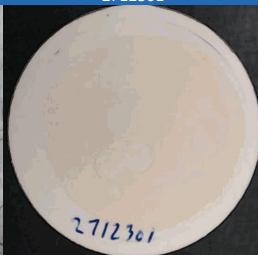
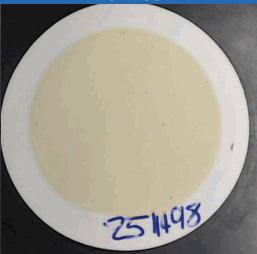
The problem was located within the machine's lubricating oil. Air compressor oil plays several crucial roles within the rotary screw air compressor system.

- Lubricates moving parts
- Creates a seal between rotors to trap air
- Prevents premature wear on parts
- Helps cool air during compression

When the oil becomes contaminated, it's a problem; for the machine, the plant and the entire supply chain.

Solution Procedure: DECON was added last March in 2019. Over an 18-month period ending September 2020, the results have been visibly dramatic. Within the problem-plagued compressor, oil analysis indicated high MPC (Membrane Patch Colorimeter) valued at 23 (a value of 20 or over is considered 'abnormal' or 'alarm limit'). In September, the MPC value was 3. An MPC value this low is close to new oil values.

In summary, since DECON was introduced, the emergency filtration changes were eliminated. Furthermore, based on these results, the lubricating oil has years of service life ahead of it. The company is witnessing immediate cost savings from unnecessary maintenance and this ensures long-term reliability of supply for its merchant gas customers.

Date: 09/11/2020			2/5/2020			11/19/2019			3/27/2019		
Lab #: 2985274			2779388			2712301			2511498		
											
post heating incubation time: 72h +/- 4h											
MPC VALUE: 3			MPC VALUE: 17			MPC VALUE: 12			MPC VALUE: 23		
L	a	b	L	a	b	L	a	b	L	a	b
1	0	3	4	-3	17	3	-1	12	7	0	22