

 PREVENTION AT SEA

DON'T CURE PREVENT

ISSUE 22 APRIL 2024



CATALYTIC FINES

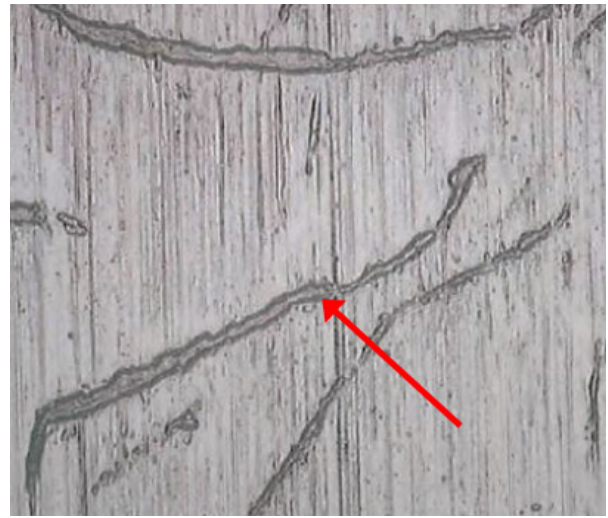


CATALYTIC FINES



CASE

A vessel reported several alarms from M/E regarding high temperature of various cylinders, resulting to vessel's black out. PAS conducted an incident investigation and after further analysis, it was evidenced that damaged fuel injectors, fuel pumps and broken piston rings resulted to black out. Additionally, the Engine team found scratches on the cylinder liner and from the rest of the evidence, the presence of high amount of cat fines inside the fuel system was observed. The Main Engine had been overhauled in less than 800 running hours before the incident.



REGULATORY FRAMEWORK

ISO 8217:2005 STANDARD
REQUIREMENTS FOR FUEL PETROLEUM - MAXIMUM 60PPM IN CAT FINES.



WHAT WENT WRONG?

- ❌ Fuel oil analysis revealed elevated Al+SI particles (cat fines).
- ❌ A preventive testing to the purifying system before initializing the new fuel was not conducted.
- ❌ No indication of service and settling tank daily draining.
- ❌ The purifiers were not working as intended.



OUR SUGGESTION

We suggest the following actions with the aim to prevent such cases from occurring:

- 🕒 Ensure that fuel tanks are clean and ready to receive the new fuel.
- 🕒 Conduct a testing and analysis before utilize the new fuel.
- 🕒 Perform a continuous sampling analysis during bunkering to ensure compliance with **ISO 8217** specifications.
- 🕒 Avoid blending of different fuel batches unless compatibility is confirmed.
- 🕒 Ensure separator optimal performance and conduct maintenance, as per manufacturer's instructions.



BEST PRACTICE

- ✅ Continuous & thorough sampling during fuel delivery.
- ✅ Check the fuel analysis results before utilizing new bunkers.
- ✅ Never bypass fuel filtering equipment.
- ✅ Ensure engine personnel is trained and familiar with fuel handling systems and emergency procedures.
- ✅ Highlight the importance of situational awareness, critical thinking and good seamanship.

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FOR MORE INFORMATION,
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