



OIL HEATER

Customer: PTRHTF30166	System Information	Sample Information
KINGSPAN INSULATED PANEL LTD 12557 COLERAINE DR BOLTON, ON L7E 3B5 Canada Attn: Dan Smith Tel: (519)215-6540 E-Mail: daniel.smith@kingspan.com	System Volume: 1500 ltr Bulk Operating Temp: 392F / 200C Heating Source: Blanket: Fluid: SHELL THERMIA B Make: FERROLI	Lab No: 02427898 Analyst: Gaston Arseneault Sample Date: 06/07/21 Received Date: 06/17/21 Completed: 07/27/21 Gaston Arseneault gaston.arseneault@hollyfrontier.com

Recommendation: The oil test results show the low hydrocarbon evaporation which resulted in oil viscosity increase, and GCD %10 and %90 increase. No sign of oil sever oxidation. slight increase on Total Acid Number but still in the range. It is the beginning of the oil degradation. If you continue using the oil, by increase in dirt solids you need two times cleaning fluid at the changeout time. Now , there is less than %1 solids which means for the changeout process , you only need one pass cleaning fluid. It is recommended to change the oil in your next shutdown.

Comments: Pentane Insolubles levels are abnormally high. (GCD) 90% Distillation Point is severely high. Visc @ 40°C is severely high.

Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/07/21	06/17/21	1.0y	BOTTOM TANK	457 / 236	20.0	55.1	0.29	0.418	722 / 383	814 / 435	944 / 507	0.00
Baseline Data				428 / 220		35.2	0.05		714 / 379		903 / 484	2.60



