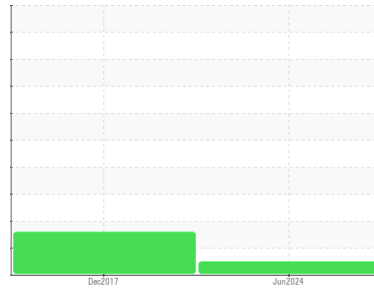




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
Direct Strip Mill/Finishing
 Machine Id
HPWG EAST BULK TANK
 Component
Bulk Fluid Tank
 Fluid
HOUGHTON HOUGHTO-SAFE 620 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

The AN level is acceptable for this fluid. The pH level of this fluid is within the acceptable limits. The reserve alkalinity of this fluid is acceptable. The water concentration level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0931242	WC0286765	---
Sample Date	Client Info		11 Jun 2024	14 Dec 2017	---
Machine Age	hrs	Client Info	0	0	---
Oil Age	hrs	Client Info	0	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			NORMAL	ABNORMAL	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	0	0	---
Chromium	ppm	ASTM D5185(m)	0	0	---
Nickel	ppm	ASTM D5185(m)	0	0	---
Titanium	ppm	ASTM D5185(m)	0	0	---
Silver	ppm	ASTM D5185(m)	<1	0	---
Aluminum	ppm	ASTM D5185(m)	<1	<1	---
Lead	ppm	ASTM D5185(m)	0	0	---
Copper	ppm	ASTM D5185(m)	0	0	---
Tin	ppm	ASTM D5185(m)	0	0	---
Antimony	ppm	ASTM D5185(m)	0	<1	---
Vanadium	ppm	ASTM D5185(m)	0	0	---
Beryllium	ppm	ASTM D5185(m)	0	0	---
Cadmium	ppm	ASTM D5185(m)	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	2	<1	---
Barium	ppm	ASTM D5185(m)	1	0	---
Molybdenum	ppm	ASTM D5185(m)	0	0	---
Manganese	ppm	ASTM D5185(m)	0	0	---
Magnesium	ppm	ASTM D5185(m)	<1	3	---
Calcium	ppm	ASTM D5185(m)	<1	0	---
Phosphorus	ppm	ASTM D5185(m)	0	0	---
Zinc	ppm	ASTM D5185(m)	0	0	---
Sulfur	ppm	ASTM D5185(m)	48	1	---
Lithium	ppm	ASTM D5185(m)	<1	0	---

CONTAMINANTS

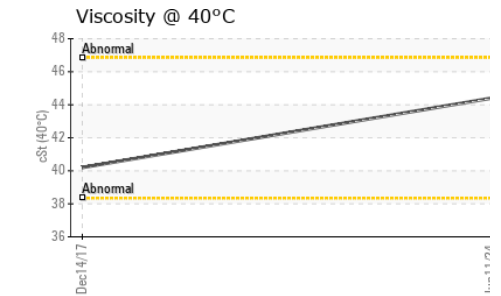
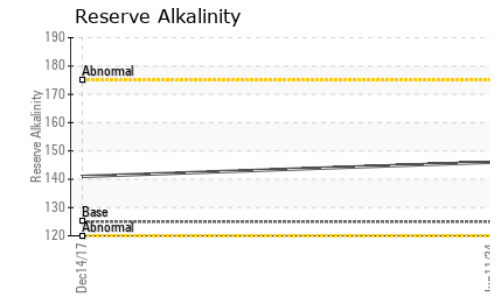
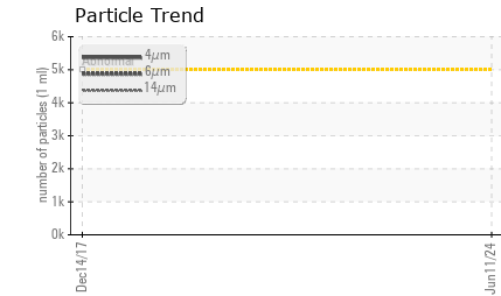
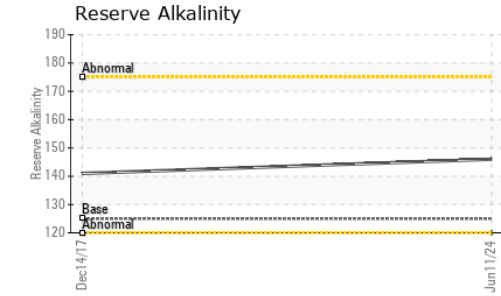
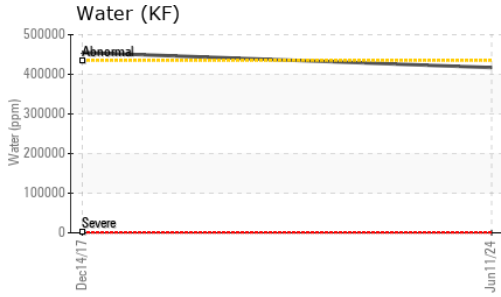
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1	0	---
Sodium	ppm	ASTM D5185(m)	21	14	---
Potassium	ppm	ASTM D5185(m)	>20	11	---
Water	%	ASTM D6304*	>43.5	▲ 45.5	---
ppm Water	ppm	ASTM D6304*	>435000	▲ 455000	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	1830	---	---
Particles >6µm	ASTM D7647	>1300	226	---	---
Particles >14µm	ASTM D7647	>160	13	---	---
Particles >21µm	ASTM D7647	>40	2	---	---
Particles >38µm	ASTM D7647	>10	0	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	18/15/11	---	---



OIL ANALYSIS REPORT



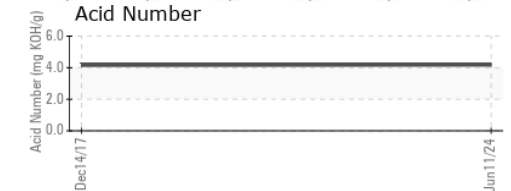
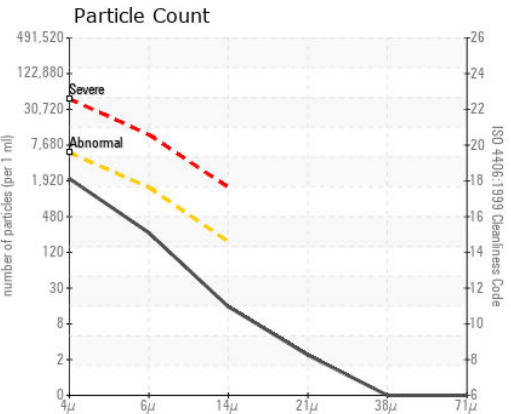
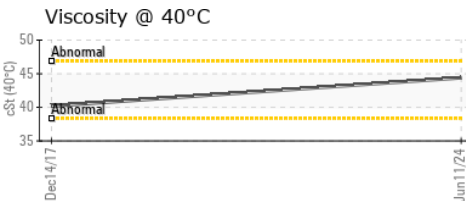
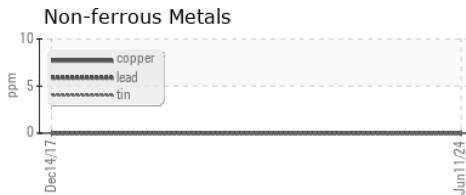
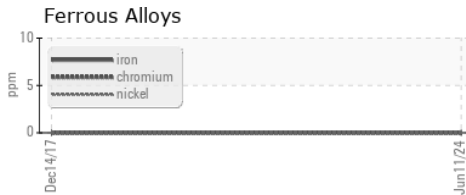
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		4.18	4.16	---
Alkiline Reserve (Oils)	ml KOH/g	ASTM D1121*	125	146	141	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Precipitate	scalar	Visual*	NONE	NONE	NONE	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	---
Emulsified Water	scalar	Visual*	>43.5	NEG	>10%	---
Free Water	scalar	Visual*		NEG	NEG	---

FLUID PROPERTIES		method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287*		9.66	9.50	---
Visc @ 40°C	cSt	ASTM D7279(m)		44.4	40.2	---

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						no image
Bottom						no image

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0931242
Lab Number : 02642153
Unique Number : 5799692
Test Package : IND 2 (Additional Tests: KF, pH, PRTCOUNT, ReserveAlk, TAN Man)

ALGOMA STEEL INC. - STORES DEPT.
 301 WALLACE TERRACE
 SAULT STE MARIE, ON
 CA P6C 1K8
 Contact: John Vincent
 john.vincent@algoma.com
 T: (705)206-0974
 F: (705)945-3585

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.