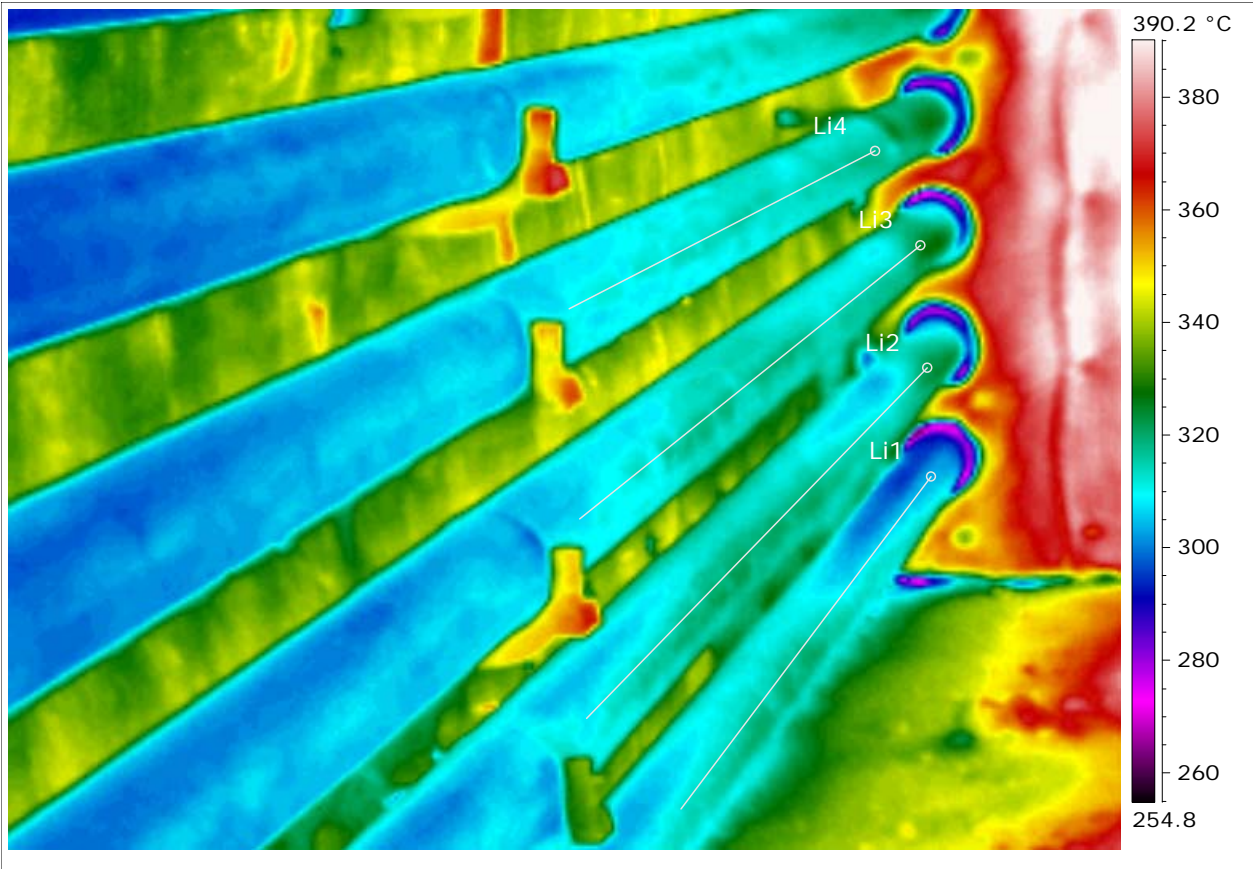
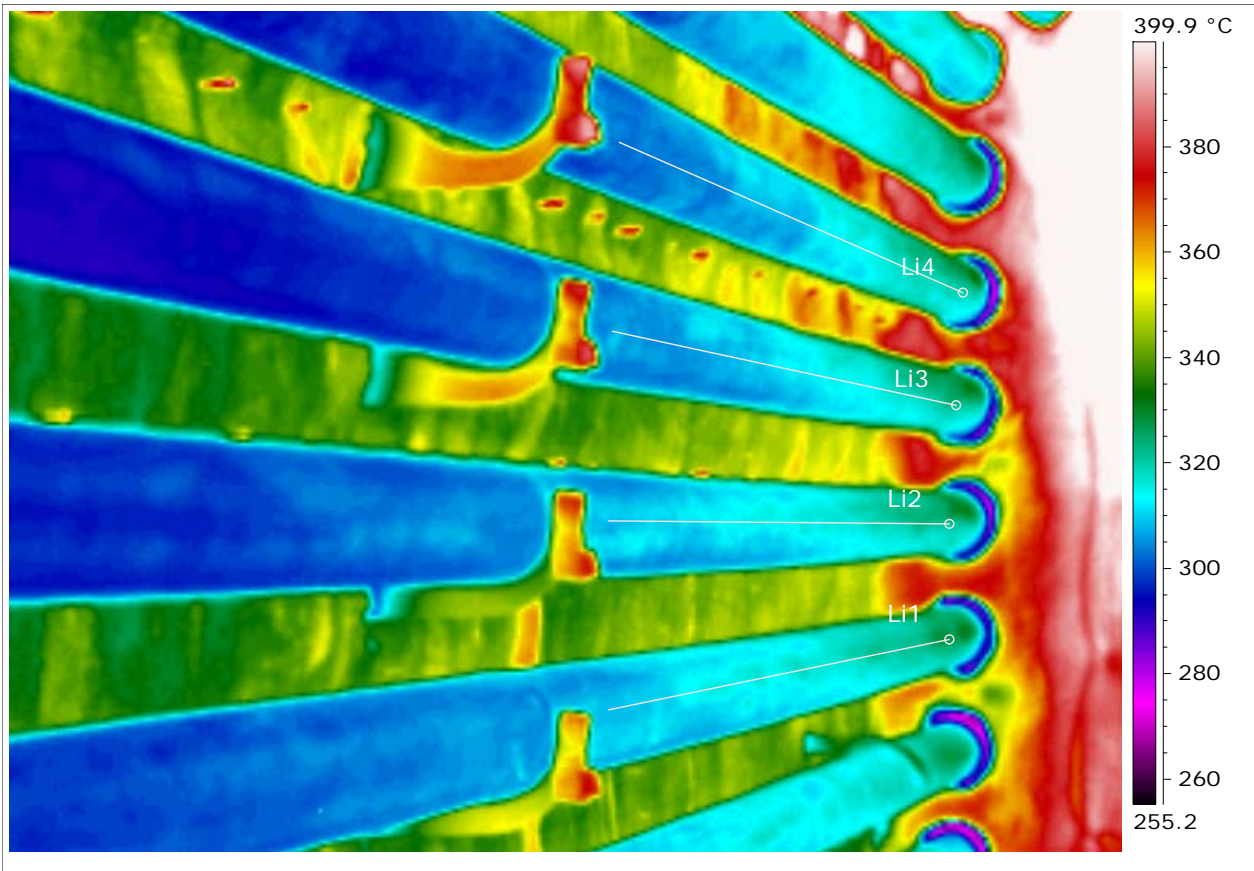


**Regen Gas Heater**



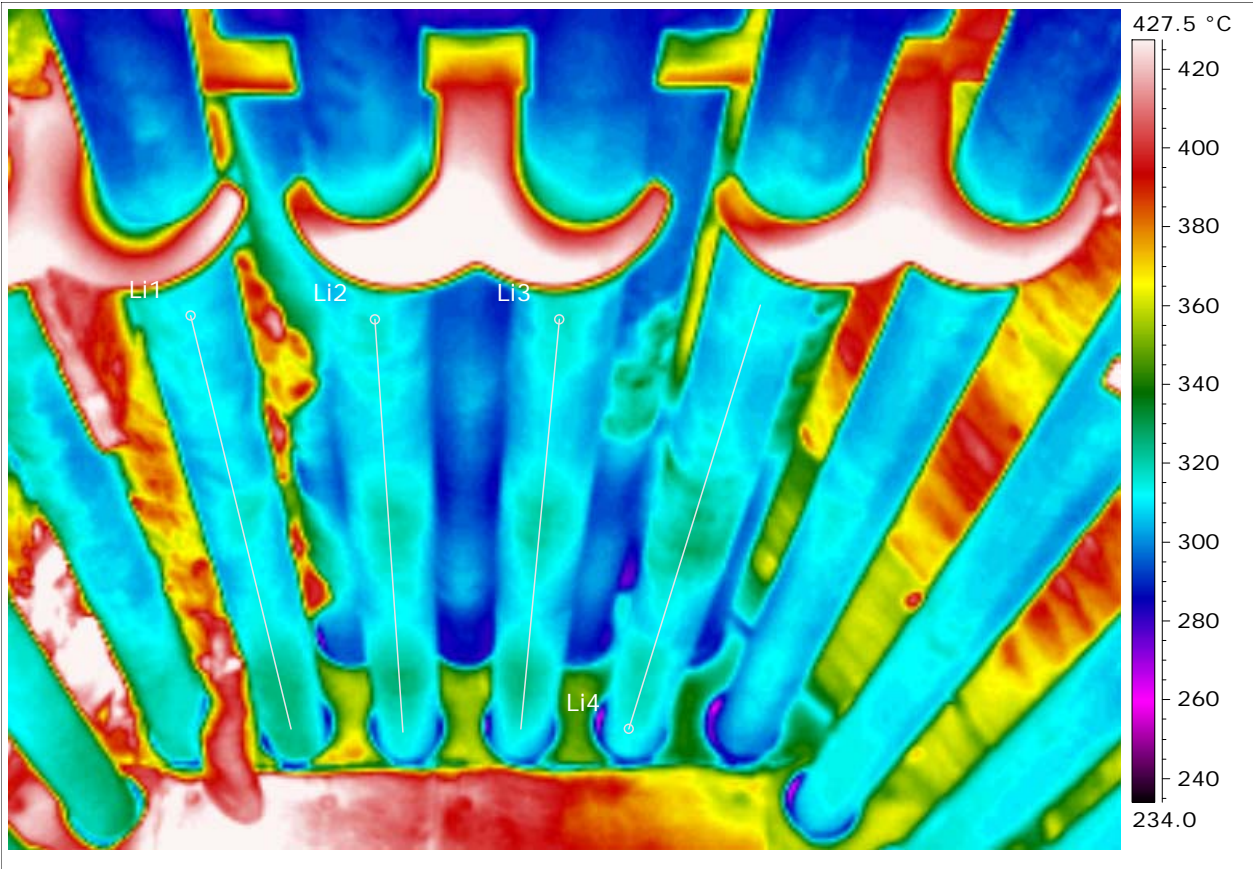
Filename:	IR_34801.jpg	<b>THERMOGRAM COMMENTS:</b> Thermal patterns show anomalies along the tube surfaces normally associated with scale / combustion deposits. Temperatures have decreased slightly from the last inspection.  Li1 = Tube #1            Li3 = Tube #3 Li2 = Tube #2            Li4 = Tube #4	Li1 Max:	319.4 °C
Camera Type:	FLIR GF309		Li1 Min:	304.0 °C
Camera Lens:	FOL38		Li1 Avg:	312.4 °C
Camera Filter:			Li2 Max:	322.9 °C
Emissivity:	0.93		Li2 Min:	307.9 °C
Equipment:	Regen Gas Heater		Li2 Avg:	316.0 °C
Elevation:	Bottom North Radiant Wall @ East End		Li3 Max:	325.4 °C
Addition:	Tube #1 @ The Bottom		Li3 Min:	307.3 °C
Date:	05/02/2015		Li3 Avg:	315.1 °C
Time:	11:30:52 AM		Li4 Max:	318.0 °C
			Li4 Min:	309.1 °C
			Li4 Avg:	313.6 °C

**Regen Gas Heater**



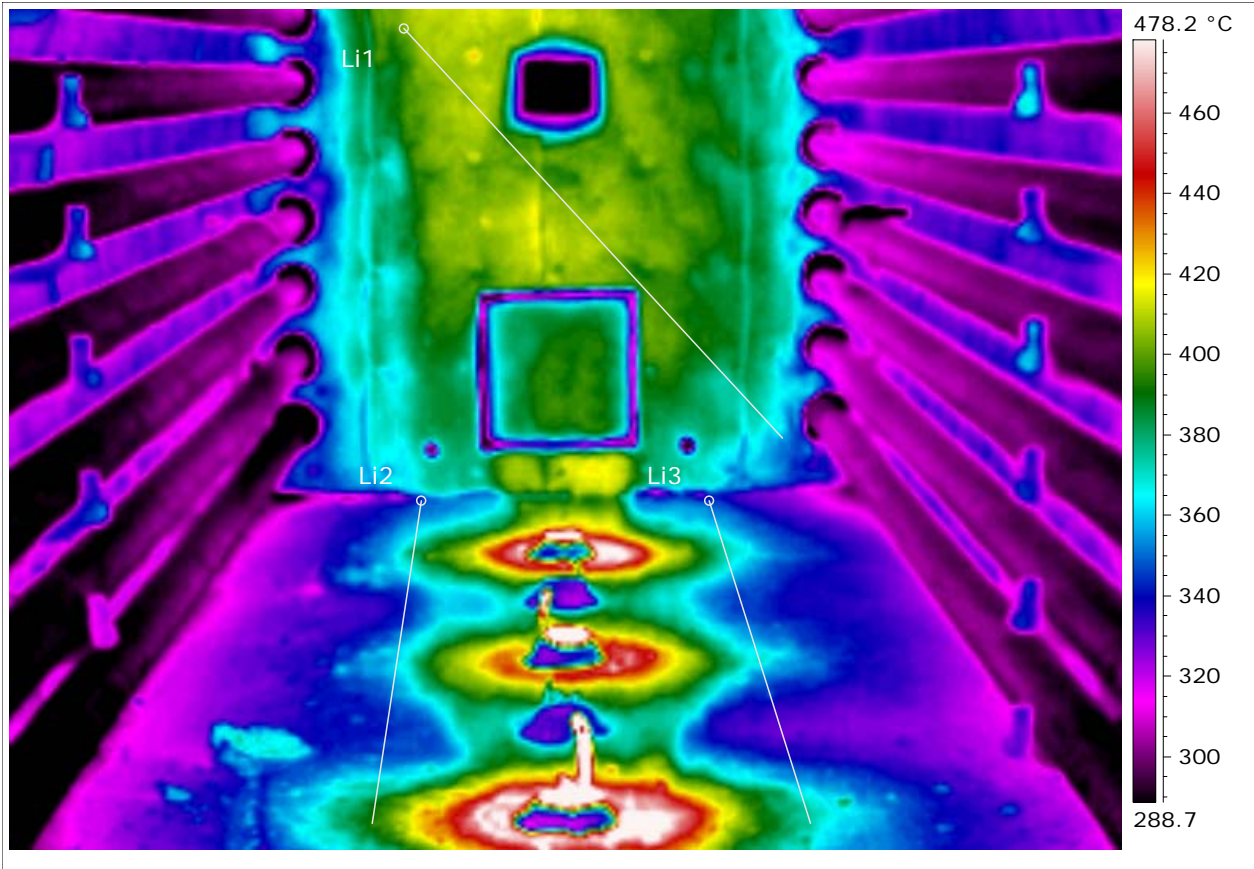
Filename:	IR_34802.jpg	<b>THERMOGRAM COMMENTS:</b> Thermal patterns show anomalies along the tube surfaces normally associated with scale / combustion deposits. Temperatures have decreased slightly from the last inspection.  Li1 = Tube #5      Li3 = Tube #7 Li2 = Tube #6      Li4 = Tube #8	Li1 Max:	327.5 °C
Camera Type:	FLIR GF309		Li1 Min:	308.6 °C
Camera Lens:	FOL38		Li1 Avg:	316.1 °C
Camera Filter:			Li2 Max:	323.3 °C
Emissivity:	0.93		Li2 Min:	308.2 °C
Equipment:	Regen Gas Heater		Li2 Avg:	315.0 °C
Elevation:	Middle North Radiant Wall @ East End		Li3 Max:	324.6 °C
Addition:	Tube #5 @ The Bottom		Li3 Min:	305.1 °C
Date:	05/02/2015		Li3 Avg:	312.0 °C
Time:	11:30:59 AM		Li4 Max:	320.2 °C
			Li4 Min:	302.5 °C
			Li4 Avg:	310.7 °C

**Regen Gas Heater**



Filename:	IR_34800.jpg	<b>THERMOGRAM COMMENTS:</b> Thermal patterns show anomalies along the tube surfaces. Notice the damaged refractory on the tubes. Temperatures have decreased slightly from the last inspection.  Li1 = Tube #13      Li3 = Tube #14 Li2 = Tube #14      Li4 = Tube #13	Li1 Max:	326.0 °C
Camera Type:	FLIR GF309		Li1 Min:	308.3 °C
Camera Lens:	FOL38		Li1 Avg:	314.8 °C
Camera Filter:			Li2 Max:	328.1 °C
Emissivity:	0.93		Li2 Min:	309.6 °C
Equipment:	Regen Gas Heater		Li2 Avg:	316.2 °C
Elevation:	Shock Tubes @ East End		Li3 Max:	325.1 °C
Addition:	Tube #13 @ The Left		Li3 Min:	310.0 °C
Date:	05/02/2015		Li3 Avg:	316.2 °C
Time:	11:30:33 AM		Li4 Max:	328.9 °C
			Li4 Min:	308.7 °C
			Li4 Avg:	315.9 °C

# Regen Gas Heater



Filename:	IR_34796.jpg	<b>THERMOGRAM COMMENTS:</b> The IR Image show mostly normal thermal patterns for a staggered burner configuration.  Li1 = East End Wall Li2 = North East Floor Li3 = South East Floor	Li1 Max:	411.5 °C
Camera Type:	FLIR GF309		Li1 Min:	355.0 °C
Camera Lens:	FOL23		Li1 Avg:	395.6 °C
Camera Filter:			Li2 Max:	395.3 °C
Emissivity:	0.93		Li2 Min:	341.8 °C
Equipment:	Regen Gas Heater		Li2 Avg:	359.3 °C
Elevation:	Burner Floor Area		Li3 Max:	375.6 °C
Addition:	East End		Li3 Min:	329.3 °C
Date:	05/02/2015		Li3 Avg:	354.0 °C
Time:	11:28:48 AM		Li4 Max:	-
			Li4 Min:	-
			Li4 Avg:	0.0 °C