

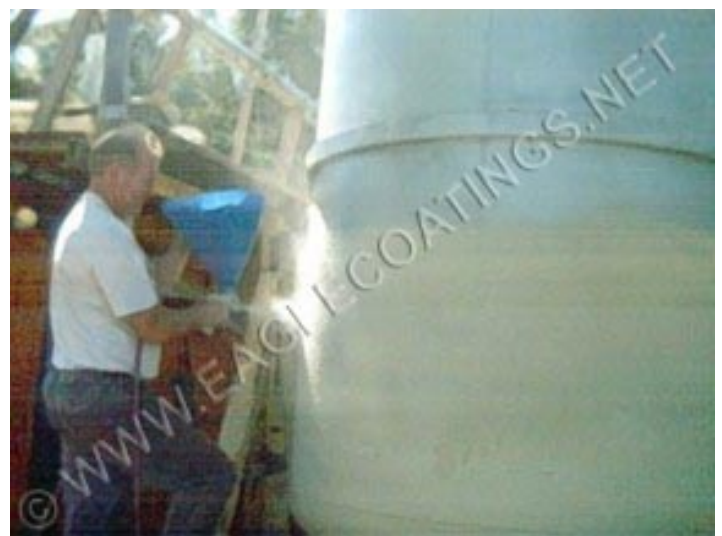
CEDAR LEAF OIL DISTILLATION TANK LANGLEY

August 2003

The process for distilling the cedar leaf oil involves the application of steam @ **100°C \ 212°F** at the bottom of the tank. The " cook " is done when the steam breaks through at the top. Uninsulated this required 5-6 hours depending on ambient temperature. The time required was reduced by 2 hours after insulating with the [HPC® COATING](#). This new coating is the latest addition to our thermal protection package and is right out of research and development. HPC® COATING is designed specifically for straight backside conduction.



The tank was first coated with [RUST GRIP®](#) to permanently stop the corrosion. Surface temperature readings were taken prior to the application of the HPC® COATING and registered at a steady state of **100°C / 212°F**. The ambient temperature on 08/28/03 at 12:09PM was **30°C / 86°F**.



A primer coat of HPC® COATING was applied using a hopper gun and compressor at a thickness of approximately 50 mils \ 1.27 mm (50/1000"). Initial surface temperature readings showed **70°C / 158°F**. The temperature reduction will increase as the moisture evaporates. The Canadian Roofing Association testing shows that just 1-1 1/2% moisture content reduces the effective thermal benefit (R Value) by at least 30% as water is a thermal conductor not a thermal resistor.

A build coat was applied to approximately 100 mils and the surface temperature dropped to 42°C / 104°F



A final build coat was applied before the SUPERTHERM ® \ ENAMOGRIP ® topcoats with a final thickness of 250 mils \ 6.35 mm (250/1000" or 1/4 of an inch). The final readings showed a surface temperature reduction from **100°C / 212°F** to **24.7°C / 76.46°F**.



The total coating system is comprised of:

- ~ RUST GRIP ® to eliminate any possibility of CUI (Corrosion Under Insulation)
- ~ HPC® COATING no mold, mildew, fungus or other bio hazards growing in the insulation
- ~ [SUPERTHERM ®](#) no deterioration by weathering (exterior applications only)
- ~ [ENAMOGRIP ®](#) on the front only for protection from the boiling hot water that is poured out.