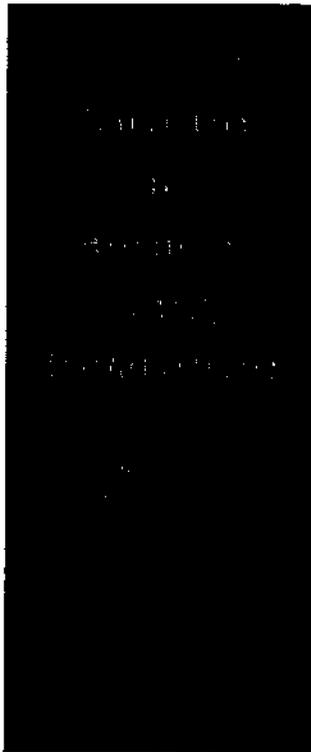


# Trapped asphalt can kill a kettle

The ever-increasing cost of labor and equipment downtime makes a good equipment maintenance program essential. For BUR contractors, part of this program should involve the regular care and cleaning of asphalt kettles and tankers.

The need for proper kettle maintenance is even more urgent with today's asphalt, which rapidly produces an abundance of carbon and sludge. If these byproducts are not routinely removed, they will produce a heavy buildup under and around the equipments' tubes causing considerable damage. When carbon collects in a kettle, it prevents quick heat dissipation from the fire tubes, which causes higher tube temperatures and much higher fuel consumption. In a heavily carboned kettle, this will change the molecular structure of the steel tube wall, causing it to collapse and leak.

*Cleasby Manufacturing Co., based in San Francisco, produces the SpeedKing line of roofing equipment.*

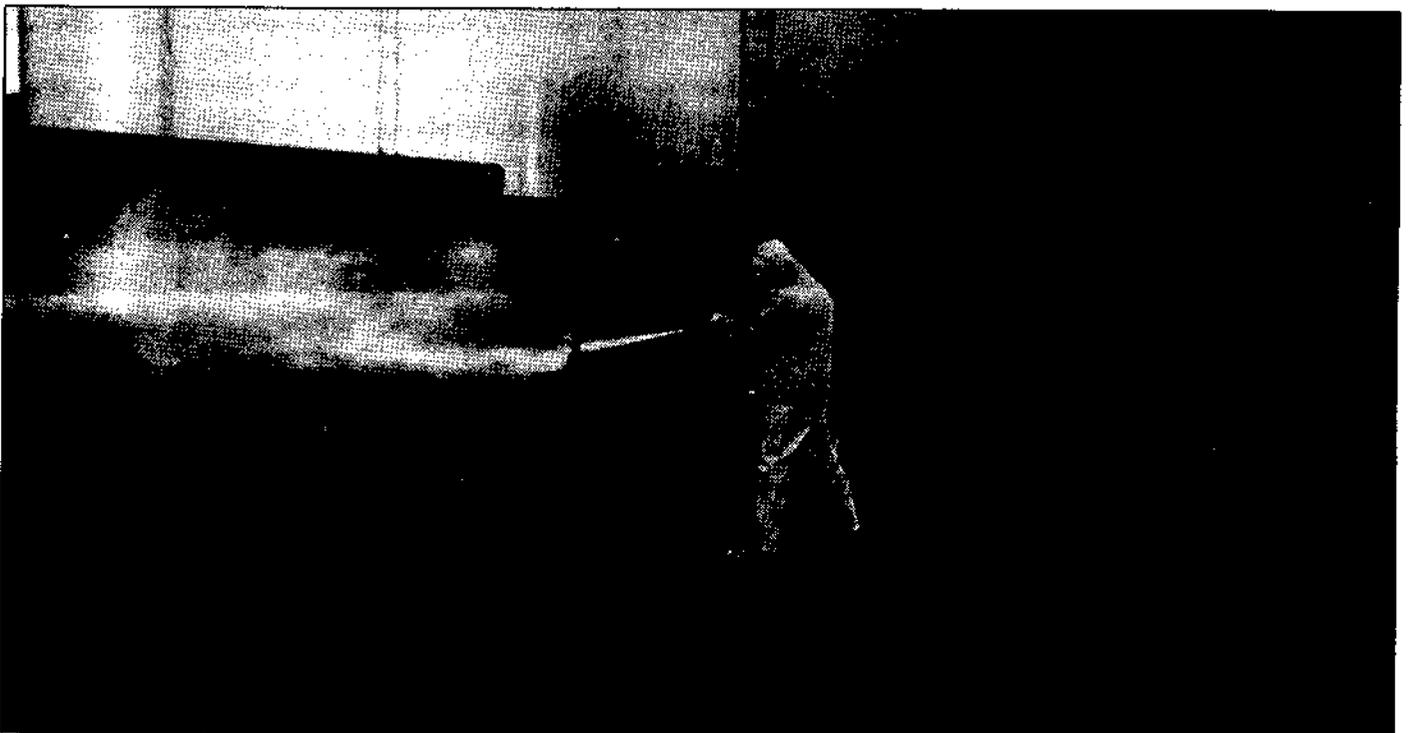


## An ounce of prevention . . .

To avoid costly equipment breakdowns, it is best to clean and maintain kettles and tankers frequently. One problem that can be eliminated with regular maintenance is trapped asphalt, a little-known and often-overlooked phenomenon.

Asphalt can become trapped in kettles where hot asphalt circulation is greatly reduced or eliminated during the heating process. Asphalt is most likely to collect in areas such as the draw-off valves at the rear of the kettle and inside pump lines within the kettle vat.

The problems occur when asphalt in these areas is continually heated but not circulated. This constant heating breaks the material down, forming carbon deposits that plug the pump system's draw-off valves and circulation lines. With the system blocked at these points, the engine and pumps must work harder. The constricted or plugged circulation lines also create additional back pressure, which greatly reduces the life of both the pump and engine.



*To keep pump lines free of constrictions, asphalt should be circulated through them daily after the discharge line has been capped off.*

There is an easy solution to the problem of trapped asphalt, however. At least one bucket of asphalt, or "hot," should be drawn off daily from the draw-off valve and poured back into the kettle to prevent carbon deposits from forming. To keep pump lines free of constrictions, asphalt should be circulated through them daily after the discharge line has been capped off.

Carbon buildup can cause problems in other parts of the kettle as well. It may cause flashing or, should oil-soaked carbon accumulate around exhaust stacks and under the tube platform, it may cause a fire that is difficult to extinguish. Large

amounts of carbon in these areas can also reduce the kettle's capacity. Enough carbon may accumulate inside a 230-gallon kettle to reduce its capacity to 175 gallons.

The kettle's performance will also be affected by carbon accumulation. Carbon around submerged centrifugal pumps can cause the siphon pipe's check valve to jam open or closed, or reduce asphalt flow to the roof. Carbon partially covering the tubes on the bottom of a kettle will reduce production. Hard carbon on the tubes and manifold will prevent the kettle from heating properly because the heat will be unable to pass through the tubes and into the kettle.

If there is carbon buildup around the temperature sensing tube, the kettle's thermostat will not work properly. This condition prevents the thermostat from quickly perceiving temperature changes in the asphalt. The delay causes the thermostat to turn the burner on and off at inappropriate times. Should carbon accumulation on the sensing tube be a problem, the temperature of the asphalt inside the kettle will vary from extreme to extreme within a short period of time.

A crack in a tube can also be a problem. As the asphalt leaks from the crack it can drip into the burner well, causing asphalt smoke to rise from the exhaust stacks. If a small leak or a little smoke is ignored, it can lead to very expensive kettle damage. In the worst cases, the carbon around the crack breaks loose and floods the tubes.

All of these costly and bothersome problems can be avoided with routine kettle cleaning and maintenance. At Cleasby, we have initiated a complete kettle cleaning and repair service to help contractors keep their equipment operating at top efficiency.

