

Number 12

CHECK LIST FOR ANALYZING EMULSION INSTABILITY DIFFICULTIES WITH WATER SOLUBLE OILS SUCH AS TECTYL[®] 810

- 1) Check to see if the oil and water are being mixed correctly. When mixing, always add the oil to the water slowly with vigorous agitation. Premixed emulsion can be added safely to machines or central systems in service, but soluble oil should not be dumped on top of emulsion in a tank or pit; it may be totally wasted if it floats on top and is not mixed immediately by the circulating pump. Check concentration by using refractometer.
- 2) Check bacteria count. This can be checked by sending samples to the Tectyl[®] laboratory for analysis.
- 3) Check for any change in water hardness. Extreme water hardness in excess of 22 grains could cause emulsion stability difficulties.
- 4) Check oil and water temperatures. Best emulsions are obtained when oil and water are 70°F. to 90°F (21°C to 32°C). Care should be taken to prevent overheating--120°F (49°C) maximum--or contamination by additional water.
- 5) Check the pH of the water being used. Highly acidic waters (low pH) cause emulsion instability. Highly alkaline waters (high pH) tend to cause foaming. For best results, check the pH of the water emulsion in the tank in which the difficulty is being encountered.
- 6) Check the process to see if acid or alkaline contaminants such as pickling or cleaning solutions are being introduced inadvertently into the emulsion tank.
- 7) Check for other possible sources of contamination by foreign material.