

Resolution of Evaporator Scaling Extends Uptime Nearly Two-Fold

Application of SC100 Successfully Arrests Scaling of Liquor Evaporator Surfaces

Background

A paper mill in the Southern U.S. was experiencing decreased throughput of their black liquor evaporators. Shortly after cleaning the evaporators, a calcium carbonate build-up on heat exchange surfaces would occur. The steam valve would open to maintain target temperature, leading to scale formation. Over time the scale would increase until the evaporators had to be shut down for cleaning, well before a scheduled outage.

Solution

ChemTreat analyzed the scale from the evaporator and recommended a program for crystal inhibition and dispersion. The ChemTreat SC100 proposal was accepted and a program targeting 20 ppm was initiated. The program was applied to the incoming weak liquor to target the effects where the problem was most pronounced.



Results

Following implementation of the ChemTreat SC100 proposal, the customer immediately noticed an improvement in the function of the evaporators. According to the customer, the steam valve position trend did not show the sharp upward curve which they had seen in the past. The interval between cleaning the evaporators increased from four weeks to the mill's targeted ten weeks. The evaporators were much cleaner and only required a cursory cleaning during the outage. The hard scale present in the past was less of an issue. ChemTreat SC100 was also applied to the green liquor line, helping to limit the scale build-up in the system's piping.

“That stuff is gold!”

– Mill Power and
Recovery Manager