

Trial Report

Enessco Trial Report

To: xxxxxxxx

From: Jeff Marks, Stan Schiher / Technical Department

Date: xxxxxxxx

Subject: Enessco Program First Trial Results

Trial Program

An Enessco stickies control trial was started on xxxxxx and was scheduled for a minimum of two weeks, depending upon successful achievement of maintaining current quality, and paper machine runnability with turning off the disperser. It was agreed upon to begin the Enessco and document the reduction in stickies using derris tester and dirt analysis. The objective was to produce the same quality stock going into the disperser with Enessco as you were generating out of the disperser without Enessco. Once this was established the disperser would be shut down in 25% increments until the steam was completely off (this was started xxxx). Then the program would be monitored to prove that all gains could be maintained.

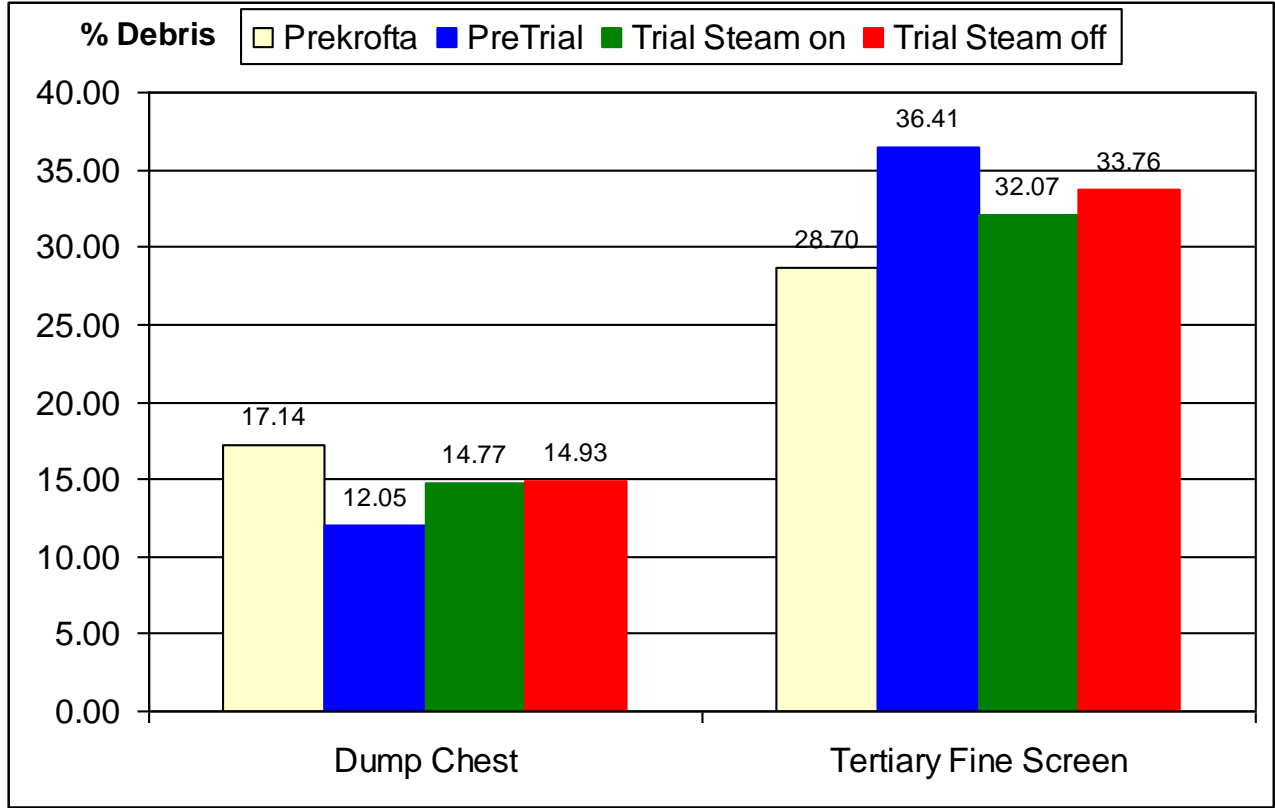
Enessco was made down to a liquid form on site and feed to the pulper at a dosage of 0.8 pounds per tons on a continuous basis. Samples were taken and debris tests and handsheets were made on a daily basis. Data / graphs and handsheets were reviewed and given to you on a regular basis.

On xxxxxx the trial was stopped and equipment taken down for storage until such time as this first trial results were reviewed and justification for continuation could be made.

Trial results

F% debris results from the dumb chest (see two graphs below) show for the full 24 days that essentially the furnish coming into the process remained very consistent, i.e. no major fluctuations were noted. The % debris at the tertiary screen showed a step decrease in the amount of contaminants going back to the process during the trial, this was the result of the increased removal out through the rejects streams.

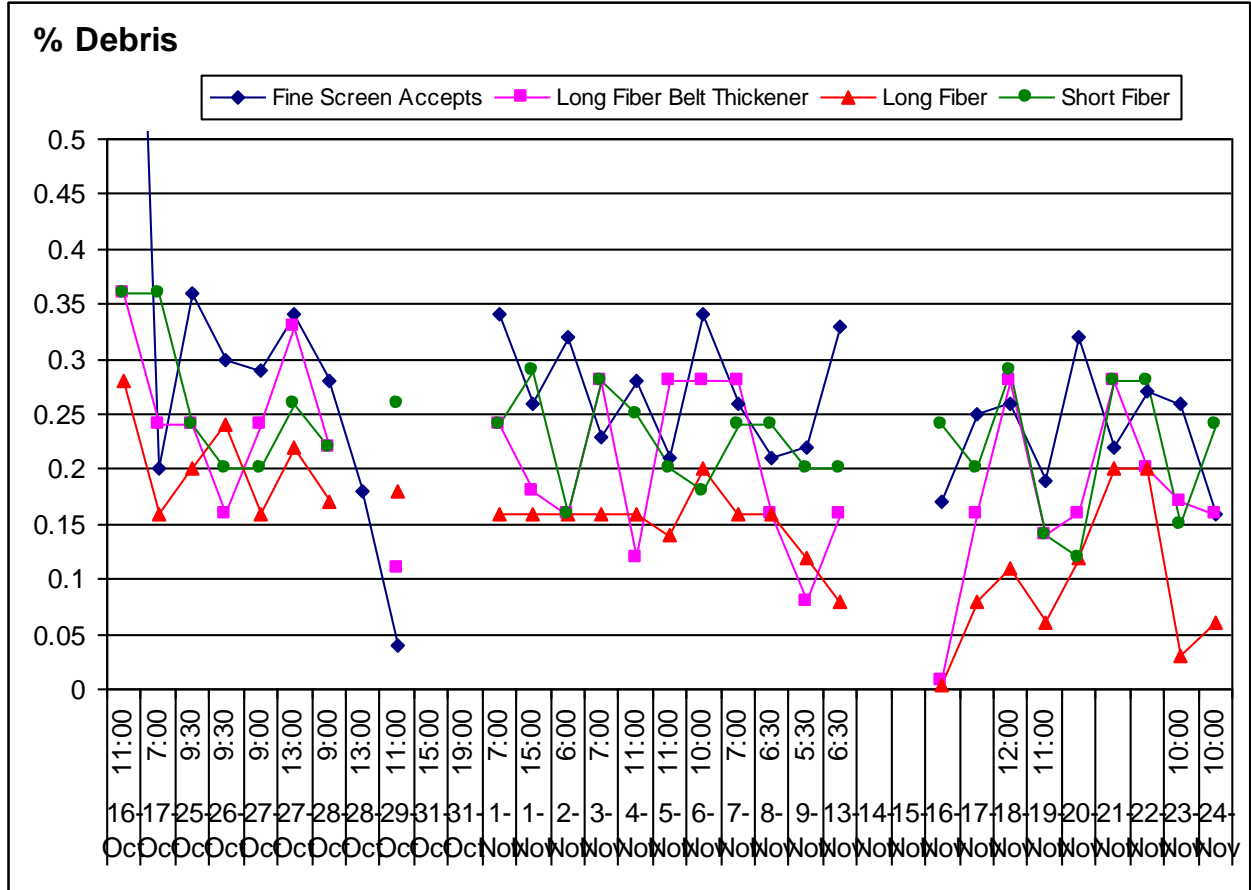
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Graph 1 AVERAGE % DEBRIS VALUES FOR DUMPCHEST AND TERTIARY SCREEN

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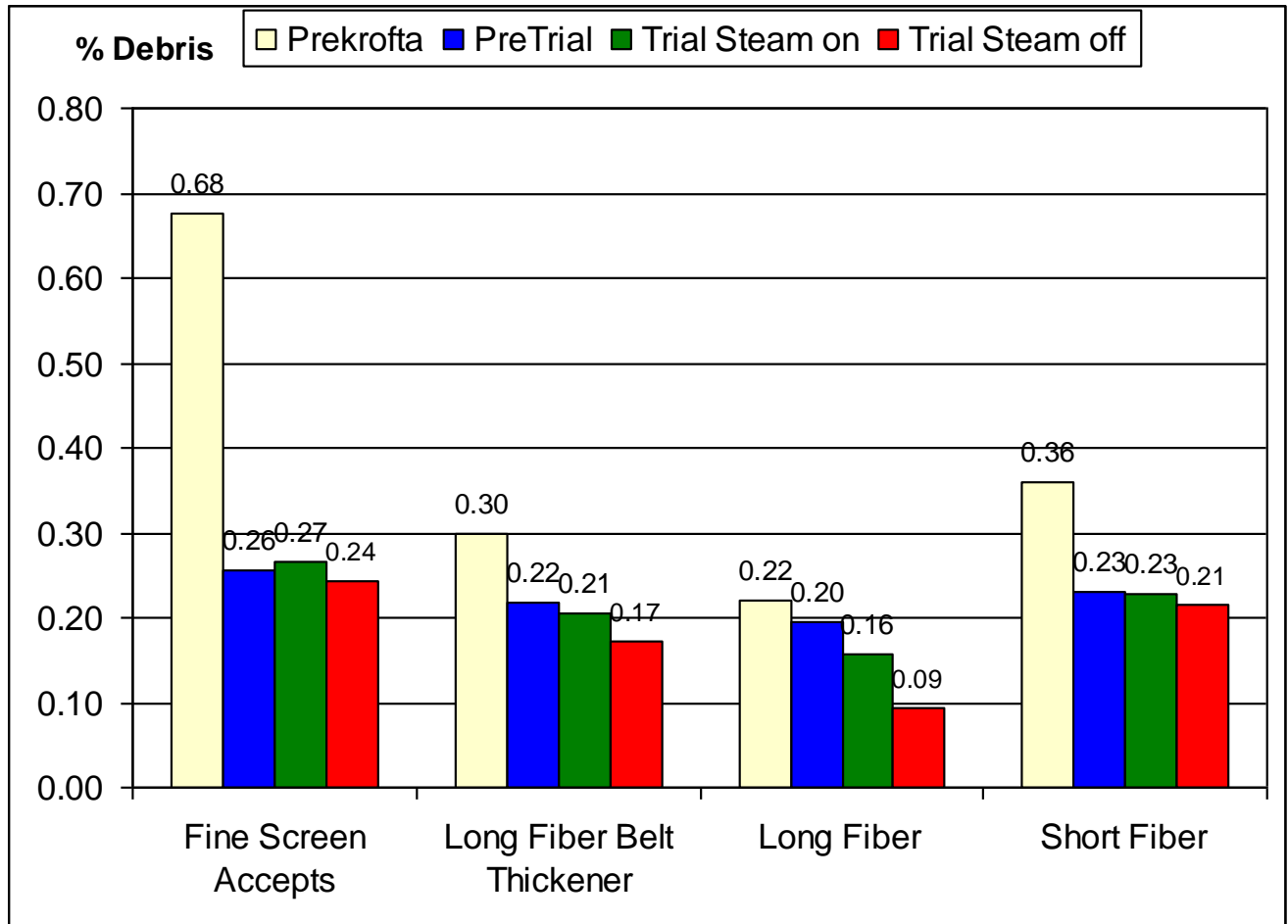
The % debris from other sampling points also showed the decrease as well.



Graph 2 DAILY % DEBRIS NUMBERS FOR THE REST OF THE SYSTEM TESTED

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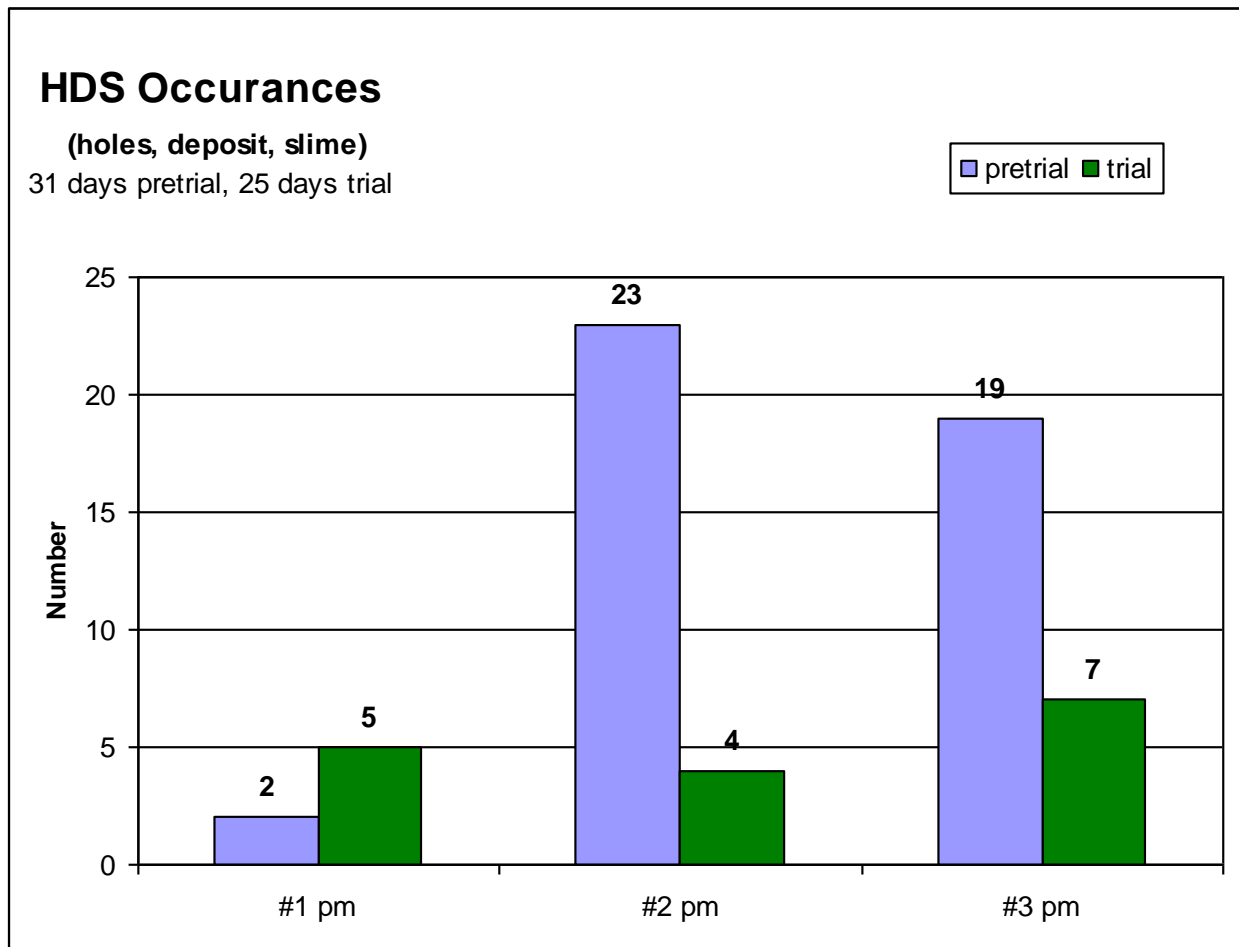
Looking at the averages in the graph below, the **most notable result** was the proof that the contaminant level before the disperser had dropped to the desired goal during the trial. That is, looking at the long fiber average results below, Enessco had successfully produced better quality, 0.09% debris, furnish that had previously been made using the disperser at 0.20%.



Graph 3 AVERAGES FOR % DEBRIS ON THE REST OF THE SYSTEM TESTED.

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Paper Quality remained at a very acceptable level of appearance. Additionally, Paper machine runnability was also improved. As noted here by the daily holes, deposit and slime reports. The graph below shows both pretrial and trial results. This was very encouraging evidence that Enesco was cleaning up the furnish and the paper machine system as it is designed to do.



It was also noted that no breaks on # 3 machine occurred for 6 consecutive days.

Additionally the CAT demand on # 3 pm was cut in half (6 to a 3) and retention polymer was therefore decreased as well.

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Given our experiences in trials with our Enesco technology, we truly feel that this trial has shown a very clear cut **cost effectiveness and much better runability on your machine**. We all would like to thank you and all your staff at xxxxxxx for the cooperation and help given to us during the trial.

If there are any program questions, please contact Jeff or our office at 603-926-4830 at any time. We are looking forward to helping you again in your fight against process stickies issues via a cost effective, easily implemented program and look forward in a longer trial in order to provide additional benefits we saw.

Sincerely,

Enesco USA

Hampton, NH

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