



Anders Dahlberg by the screw press that now runs better and with a reduction of the energy use.

When M Anders Dahlberg, in charge of maintenance, at the CTMP construction plant at Stora Enso Skogshall's mill, and his colleagues started to get problems with one of their screw presses, a cheerful Norwegian solved their problem. The result;

The production of that particular screw press increased by 15 per cent, together with a reduction of absorbed power.

MATS AHLSTEDT

ANDERS DAHLBERG SAYS:

- Six months before the autumn shut, the problems had started to get worse. The screw press ran wild, not only in amp fluctuations but also in the speed, which led to the need to manually control the press. Causing an extra burden to the operators.

The screw press was not able to have a continuous run, every now and then it had an ammeter peak, the screw threads stalled, and the operators had to stop and clean the system before they could proceed. Because of these ammeter peaks production had to be reduced, this to lower the power curve.

BY RUNNING the press in a modified way, and despite the problems we could keep the production at an acceptable level. Though a fairly close surveillance was demanded. It was crucially arduous for the staff and poor, from a production point of view.

Some time before the autumn shut, the crew did a detailed inspection of the press, they opened it up, cleaned it methodically and measured the distance between screw threads and the perforated screen plates, to determine what the screw thread looked like and what kind of wear it had been subjected to etc.

At that time we discovered that the screw had started to tilt – it lay out of line because it has started to erode. This was noticed this when we did calculations of the perforated screen plates and their position in accordance with the screw. Because of the screw leaning, pulp was pressed up against the screen plates, which made the pulplug rotate. This being why the ammeter peaks appeared.



The CTMP construction plant at Stora Enso Skogshall's mill.



WHEN THE FAULT was identified, the next step was to determine how to correct the problem and repair the system. There were three alternatives:

1. To replace the screw.

- That would simply be too expensive, says Anders Dahlberg.

2. To remove the screw for renovation.

- Possible, but it would take too long, we skipped that as well.

3. To renovate the press in-situ, which is not as simple as it may seem?

- There are only a handful of companies in Scandinavia who can manage this kind of project.

DIFFERENT REASONS forced each alternative to be rejected, one by one.

It was when Anders Dahlberg talked with Idar Vandsvik at Folla Tech - Trondheim in Norway that the last piece of the puzzle fell into place. Anders and Idar have worked together for a long time with vacuum pumps at KM7 (where also Jan-Erik Djuplin is active).

- Idar told us he could repair the screw. And I know, after all our years together that if Idar says it can be repaired then it is a fact, Anders Dahlberg ensures.
- Price and timescale was discussed and it was decided that Folla Tech should carry out the repair during the autumn shut. Another thing that is very impressive with the Norwegians is that they carry out performance measurements and size calculations before and after the repair. Thorough reports are produced on all aspects, Anders says.
- You always know where you have those guys...

AFTER MEASUREMENTS the screw threads were welded. They were ground to the right dimensions and pitch; the abrasion resistant parts in the high-pressure area were exchanged as well. The roundness of the abrasion resistant parts was carefully inspected, and a complete measurement of the screen plates made.

- Since the renovation there have been no problems. The dewatering is superior, the production of the press has now increased 15 per cent and we haven't noticed any disturbance's what so ever. It is almost as good as new. And for the record we have also seen a reduction in power for this particular press.
- We received that as a bonus within the purchase, so to speak. The aim was to repair a fault. We got increased production and a reduction in power. These procedures will now be implemented in all our future maintenance. We are now evaluating the remaining presses and there are, as I see it, no obstructions to restoring these as well in time. Even though we haven't had the same difficulties with any of them.