# Feedback

*Hi Ian,*
*Thanks for your input!*
*I am convinced and do not have any doubts that this is one important step to optimise our materials in terms of weight/performance per cost within manufacturing, and I believe that the HD guys will feel sorry they did not start earlier.*

*Things are going great thanks Ian. You are right, the more we have the DST the more we find benefits. It is enabling us to analyze our processes much more quickly and accurately. We are also able to predict whether we are going to get a good DST reading or not. I think 'the sky's the limit' with the DST. We have identified a number of issues which we may not have with conventional tests.*
*I am impressed!*
*Regards,*
*Steve.*

All
The results of the original board tested for both BCT and DST koru of the XX Dairy cases were producing performance figures below those of our competitor's case, this was despite our board grade being slightly higher spec.

A re-make of the board then took place and the board was tested straight off the corrugator, however once we tried to convert the board it became apparent that even with the most minimal settings we were crushing the fluting.Board straight from the corrugator gave a DST result of 15.4 Bpi (board performance indicator). Board with zero feedroll pressure gave a result of 13.7Bpi but the job could not be run like this due to slipping in the feed. Once set to run with enough pressure to hold the cases through the 718, we were only achieving 7.3 Bpi, showing that we were crushing the fluting significantly.

The board was taken to the 924 and the feed settings adjusted to allow us to run with almost zero crush. Start point 15.4 Bpi and after converting we achieved an average of 14.4Bpi.

**Previous BCT test results of this board grade gave a presentable result of 240Kgf however the board through the 924 and adjusted for optimal Bpi returned a significant improvement with a BCT of 372Kgf average.** Design right target for this board grade is around 210Kgf.
This shows what we can achieve when we optimize and eliminate crush from our fluting, the whole purpose of the DST testing.

*Hello, Ian,*
*The Chalmers DST arrived in good shape on Monday.*
*I checked it out except for the computer interface and found it to be in good shape, and I signed the papers indicating so yesterday.*
*It looks like a very nice piece of work. It is durably constructed. It has a small footprint. It is simple to use. The manual is very well done. The check sample has its own protective case. The power is US compatible. All in addition to the special engineering request that you responded to. I see why you are willing to put your name on it.*

Hi Ian,
thanks for your comments.
The most basic thing that the Chalmers DST showed us is that none of our corrugators were setup properly. All of our operators thought they were great but the DST pointed out huge problems with fluting and glueing.

We could not measure this before, we only wish we had started using the DST earlier.

VISY

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Technology & Innovation Centre: 13 Reo Crescent, Campbellfield VIC 3061, Australia
Telephone: +61 3 9247 4500 Facsimile: +61 3 9247 4595 Website: www.visy.com.au
Visy Industries Australia Pty Ltd A.B.N. 74 004 337 615

Dear Ian,

Please find enclosed some feedback on the outcome from the DST introduction to Visy Industries' box plants.

The programme to introduce the DST tester into Visy's production plants began in 2005. The objective of the programme was to use the DST as a method to measure and then minimise the degree of crush in the corrugating and converting process.

The implementation in each plant typically took 6 months and covered installation of the test equipment and data analysis system, a crush survey of each machine, machine operator training and finally ongoing data collection and monitoring. The technique is now running in our box plants at Gepps Cross, Carole Park, Yatala, Coolaroo and Dandenong.

The key benefits from the DST test are:

- Reduced crush off both the corrugators and finishing machines
- An understanding of where and how much crush occurs in each step of the production process
- Improved operator awareness on the need to minimise crush
- Accurate plant wide monitoring of crush performance on every corrugator and finishing machine
- Reduced box failures at the customer
- Reduction in plant waste due to damaged boxes

The above benefits have contributed to more consistent boxes with less failure at the customers.

Visy is very satisfied with the outcome of this programme and found the DST to be a valuable tool to optimise our production process and box quality.

With kind regards,

**Anthony Mackay**
R&D Manager Paper and Board
Visy Technology and Innovation Centre

Hi Ian,

I am well and I hope you are enjoying your latest visit to Europe!

We have been doing a lot of work with the DST and in terms of process improvement we have made significant progress. We now know which parts of our machinery cause damage to which areas of our boxes, which area - if damaged - is critical to the performance of the box and we have been able to minimise this damage. There have been a number of cases where we have been able to reduce the weight of board for our customers. There have also been a number of cases where, during tendering processes, our competitors have matched their proposed grades to ours and have not been able to match the performance; or we have tendered for competitors business and been able to offer a lighter weight grade which performs as well.

The DST has been a really valuable tool, we have got it on a trolley and are wheeling it to the machine side for the operators to use. We have used it to set up first time production runs so that we can identify the optimal settings for new jobs. Our European colleagues have had a different approach to us in using the DST, so we are now working together to see what we can learn from each other and from that, hopefully, we will continue to make progress,

Many thanks,