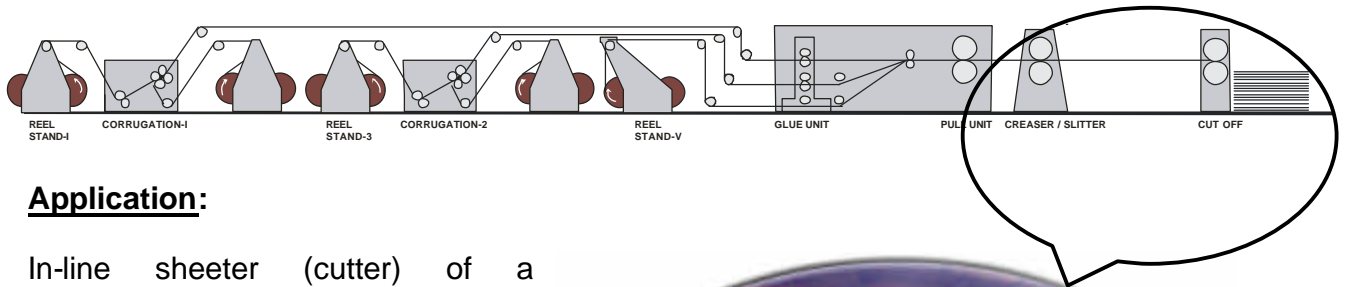


IN-LINE CUT-TO-LENGTH CONTROLS FOR CORRUGATION LINES



Application:

In-line sheeter (cutter) of a corrugated sheet manufacturing plant. Corrugated paper is fed to the sheeter (cutter) section by felt section cum scoring / pull unit. Line speed of the machine is 50 metres per minute.



Earlier arrangement:

Originally, an eddy current drive was driving the pulling section of the machine. A PIV was used for adjustments of sheet length. Input of the PIV was driven from the main (eddy current) drive with the output of PIV connected to a rotary cutter through mechanical transmissions.

Requirements:

Dynaspede was commissioned to retrofit new drives and a control system to enhance the machine performance, accuracy and consistency of cut lengths from 700 mm (min) to 2500 mm (max). With the earlier arrangement, cut lengths were found to vary as much as 15 mm from desired lengths.

Modifications:

The PIV was replaced by a 7 kW ac Servomotor with a built-in pulse resolver and suitable torsional couplings. An independent pulse resolver (attached to a spring loaded measuring wheel in direct contact with the moving web) keeps track of the line speed and feeds this information to an advanced digital control system. A specially developed engineering software provides a perfect electronic gearing to the rotary cutter and controls its position and velocity profile for precise speed matching during the cutting operation.

Man-Machine interface through user friendly keypads for settings of cut lengths is also provided in the form of a machine mounted operator station.

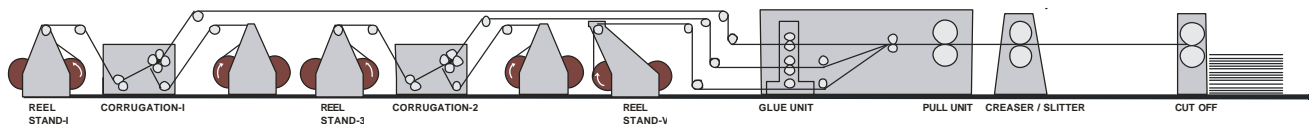
Benefits:

Production increased substantially. Savings on time and material resulted in a sharp increase in plant productivity, to the extent that the client claims - the system will pay-back in less than 6 months' period. All this is possible due to factors described below:

- ▶ **Accurate cutting** – The accuracy of cut lengths was found to be within 1mm of the desired length.
- ▶ **Consistent lengths** – Long-term consistency of cut lengths was found to be within the specified tolerance of 1mm, thus eliminating rejects and wasteful activities of inspection/ sorting.
- ▶ **Setting made easy** – Gets it right the first time. Operator keys in the desired length and revs up the machine to full speed without any waste... even during speed changes. No skilled operator needed for repeated trial and error methods of length settings. Moreover, a digital read-out shows the length of cut and thus obviates the need for manual pre or post length measurements.



Our offerings for Corrugation lines:



Dynaspede System Components

- | | |
|--|---|
| Corrugating Sectional drives (EC / AC) ● | ● Creaser / Slitter drive (EC / AC) |
| Reel Stands (AIR brake / MPB) ● | ● Cut-off Drive (EC / AC) |
| Glue Unit drive (EC / AC) ● | ● Main Control Panel |
| Pull Unit drive (EC / AC) ● | ● Local Control Stations at Unwind & Rewind |

For more details and application assistance, contact:



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