



SRIM AUTOMATION

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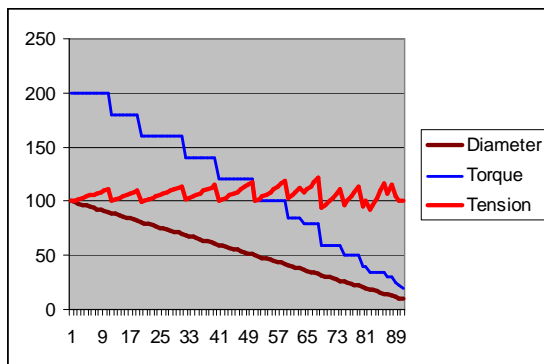
Application information

Tension control system for Unwinders and rewinders of Converting Machines

Constant tension during converting process is one of the main criteria in ensuring good quality end product. Tension of web is decided by the braking/driving torque applied to the roll shaft and the roll radius.

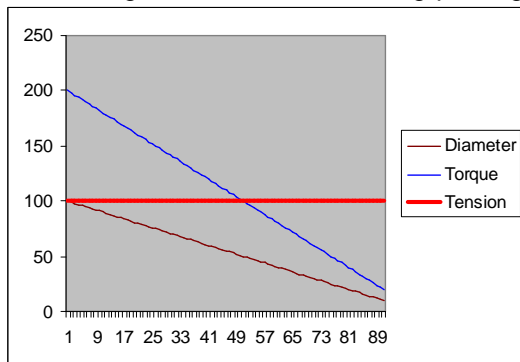
$$\text{Tension} = \text{Torque} / \text{radius}.$$

As the roll diameter starts reducing from full diameter, or increases from core diameter, the torque should be adjusted from time to time in order maintain constant tension.



With conventional brake system, the machine operator adjust the brake in steps due to which tension will not remain constant during the process.

Auto-mate series of controllers from Srim Automation help convertors achieve higher productivity, lesser wastes and increased profits by maintaining constant tension during printing process.



The following are major components with **Auto-mate** series tension controller system.

- Tension controller
- Tension transducer
- Magnetic particle brake/clutch



Some of the major benefits achieved when using **Auto-mate** series tension controller are:

1. Set value of tension is maintained constant during the process.
2. Wastages are reduced since the roll can be used until last few layers.
3. Line speed can be increased.
4. Operator can focus on other critical parameters of the process during machine running condition.
5. Constant tension helps in reducing major shift in registration while printing which normally occurs when frequent adjustments are done with manual systems.
6. Payback period is usually between 6 months to 2 years depending on type of material used, machine speed etc.