

Pressman's Toolbox: Taking tension out of webs

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Is the tension on your webs too high?

Obviously, the tension is too high if the web breaks out excessively, or if there are stress lines on the web as it runs or if you tap the web and it sounds like a drum.

In some cases an operator will notice the web is loose while the press is running. This might be because other webs running above or below the loose web are too tight.

Adjusting those webs will cause the loose web to appear tighter.

Webs can be drawn or pulled tighter into the folder by excessive nip pressure. Under-packed blankets can also cause the tension to be greater - along with a reduction in print quality.

Mechanical issues can also cause the web tension to be higher than normal. Typical culprits include improper unit impression settings or worn nips.

The mechanical condition of the tension system can also contribute to excessive gain. The floating roller (dancer or governor roller) is the device that senses web tension.

Free the roller

If the floating roller is locked down in some way, or if it does not move freely or is isolated from the unit, tension will increase. The movement of this roller should be checked regularly to make sure it remains free. On manual tension systems, the floating roller gives feedback to the roll brake through a mechanical linkage and brake eccentric to either increase or decrease tension on the newsprint roll. Tension bands are used on larger presses to either increase or relieve the pressure applied to the newsprint roll.

All lead-in rollers need to be inspected regularly as well. Bad bearings can cause web wrinkling, which will require the pressman to reduce the pressure on the web, which will only mask the problem and reduce tension control. More importantly, bad bearings will also cause an increased drag on the web, resulting in excessive tension.

The floating roller can be tested by using a strap that is connected to a frame. A scale can then be attached to the other end of the strap. Mechanical systems should be set for a medium spring pressure. Monitor how much weight has to be placed on the scale to release the tension brake and

adjust accordingly. The same technique can be used to compare tension on larger presses that use tension bands.

Regular maintenance key

Regular maintenance is the only way you can be assured that your tension system is working at its peak performance. Optimum tension increases web control. Optimum tension ensures consistent print registration. Optimum tension also keeps the newsprint roll from running ahead whenever the press is stopped rapidly.

In summary, reduce your tension level by maintaining the tension system and by replacing worn tension components. Maintaining the tension level yields another important benefit: It will also reduce your own stress level.

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