

TIP 0304-17

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TIP Category: Data and Calculations
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Addendum to *Corrugating Defect Terminology Manual* **- defects related to the use of fingerless singlefacers**

Scope

Over the past few years, many fingerless singlefacers, either of the vacuum type or pressure type, have been purchased by the corrugating industry. Because fingerless corrugating is a relatively new technology, defects arising from the operations of these singlefacers were not included in previous editions of the Corrugating Defect Terminology Manual or its predecessor, the Fabrication Manual. These several pages will correct that deficiency.

Safety precautions

There are no safety precautions.

Content

Slot lines - Unbonded bare streaks in the singleface glue pattern

These areas in both width and spacing correspond to the slot locations in the lower corrugator roll of a vacuum or pressure singlefacers.

Causes

- a. Too much vacuum or pressure.
- b. Too much brake tension on medium.
- c. Too little brake tension on medium.
- d. Wet medium
- e. Not enough adhesive.
- f. Medium roll out of round.
- g. Uneven roll web tension cause by out of parallel roll stand or roll clamp arms or a tight edge on a roll.

Remedies

- a. Reduce vacuum or pressure.
- b. Reduce brake tension on roll stand. Reduce tension adjustment on splicer. Too much wrap on preconditioner drum. Preconditioner drum not driven or not running at correct overspeed. Medium idler roll bearings bad. Spreader bar lowered into web too much.
- c. Increase brake tension.
- d. Reduce shower, increase wrap on preheater.
- e. Increase adhesive.

- f. Reshape roll using roll truck clamps or remove roll.
- g. Parallel machine elements or use an adjustable idler roll to achieve even web tension.

High-low corrugations

High-low corrugations shown by irregular glue pattern on double backer liner occur when corrugations are not formed uniformly in height.

TIP 0304-17 Addendum to Corrugating Defect Terminology Manual - / 4 ***defects related to the use of fingerless singlefacers*** **Singlefacer liner loose along web edge**

Liner not bonded to corrugations along trimmed edge(s).

Causes

- a. Worn pressure roll
- b. Uneven wear of corrugating rolls caused by running various web widths.
- c. Pressure roll out of alignment
- d. Setting of pressure roll stops incorrect.
- e. Loading force of pressure roll insufficient (hydraulic or pneumatic).
- f. Glue deposits on pressure roll or lower corrugating roll.
- g. Uneven tension across paper web.
- h. Vacuum system not providing enough vacuum.
- i. Vacuum system- no vacuum.
- j. Wet or very cool edges on liner or medium.
- k. Dry edges on liner or medium.
- l. No glue at edges.
- m. Viscosity of adhesive too high or too low.
- n. Gel temperature incorrect.
- o. Gap settings incorrect: Glue applicator roll to lower corrugating roll or doctor roll to applicator roll.
- p. Variations in steam pressure (low temperature) on corrugating rolls or pressure rolls.
- q. Elevator belt conveyor overspeed too great.
- r. Preconditioner or preheater drum(s) too narrow or have concave edge(s).
- s. Excessive adhesive at edge(s).

Remedies

- a. Replace pressure roll.
- b. Replace corrugating rolls or replate or regrind depending on degree of wear.
- c. Realign.
- d. Readjust.
- e. Increase pressure.
- f. Clean.
- g. Make adjustment. Replace paper roll, reduce line speed. Increase brake tension.
- h. Increase vacuum.
- i. Check system
- j. Increase wrap on preheater or preconditioner. Reduce speed. Increase tension on wet edge using

adjustable idler roll.

k. Reduce wrap on preheater or preconditioner. Use all medium showers. Increase speed.

l. Adjust settings of glue dams.

m. Change formulation.

n. Change formulation.

o. Correct settings.

p. Check steam system: traps, syphon pipes, drainage.

q. Check and adjust.

r. Change preconditioner or preheater.

s. Check applicator roll ends for excessive wear.

Check for wear on pan dams. Check parallel at gaps between meter and applicator and lower corrugating roll.