

OLD NUMBER 205-86
ISSUED – 1982
REVISED – 1994
WITHDRAWN – 2001
REVISED AND REINSTATED – 2002
REVISED – 2011
©2011 TAPPI

The information and data contained in this document were prepared by a technical committee of the Association. The committee and the Association assume no liability or responsibility in connection with the use of such information or data, including but not limited to any liability under patent, copyright, or trade secret laws. The user is responsible for determining that this document is the most recent edition published.

Multiple-out rotary diecut stacking

Scope

By the very nature of running multiple “out” on a rotary diecutter, the blank size of each individual diecut will be small and quite often at or close to press and stacker minimums. As many of these same blanks can also be run two or more across (Or around), one can quickly see the potential for reduced performance if the order is not properly set up.

To achieve successful operation the converter must focus on the following areas of control and pay attention to detail when setting up the press and stacker. It should be noted that it is assumed that the die board has been designed and is good operating condition to ensure full scrap removal prior to the belt section to allow for successful blank transfer.

Safety precautions

Accomplish action with the drive stopped. Use “Lock out/Tag out”(LOTO) procedures established by the plant before initial setup

Press

Under ideal conditions each blank should be immediately controlled as it comes off the die board. As many presses contain creasing and slotting shafts located downstream of the diecut cylinder control of each diecut blank must be maintained at every nip point before the sandwich belts (layboy section). Figure 1 shows the various sections and proper control of the blank. In all cases if control of the blanks is not maintained in this area of the press, jam-ups at the stacker are a certainty.

Sandwich belt layboy section

Like the press section control of the blank within the sandwich belt (layboy) section is critical to the success of running multiple outs. Normally your stacker will be equipped for a three out operation with six belts on top and six belts on the bottom of the board line. That is to say each out will have four belts (two top/two bottom);

For each additional “out” the number of belts on each (top and bottom) should be increased by two.

Should your machine have flat belts the belts are to be aligned on directly on top of one another (see Fig. 1). For round belt machines the belts should be offset by a half inch (12 mm.), top to bottom (see Fig. 2).

It can be an advantage to have the belt positions marked on the die board for ease and consistency of set up.

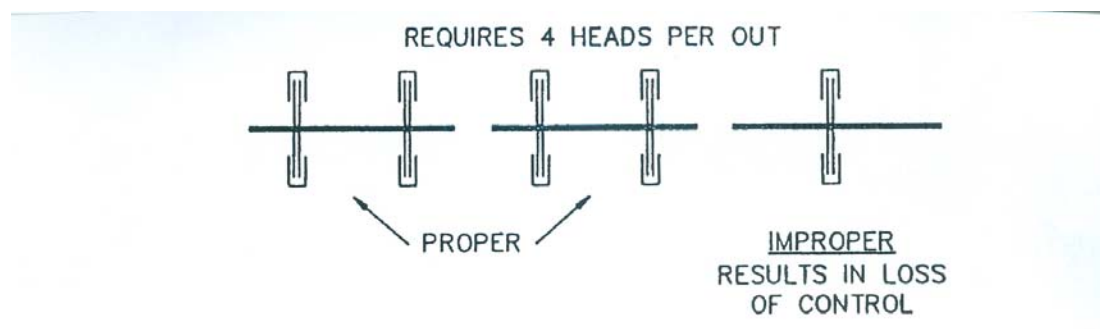


Fig. 1. Positioning of belts

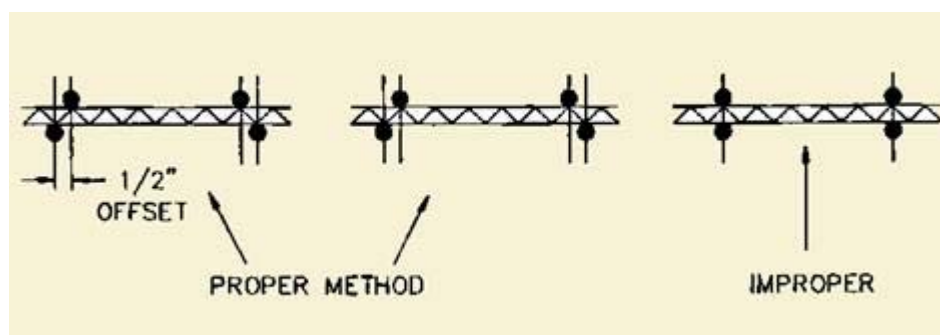


Fig. 2. Various sections and proper control of the blank.

It can be an advantage to have the belt positions marked on the die board for ease and consistency of set up.

Sheet separation

The stacker may have individual arms that can be set at angles to skew the blanks as they leave the sandwich belts. In this case the angle of skew should be in increasing degrees as the number of blanks from centerline increases. However, at no time should 2 degrees of skew be exceeded (Figs. 3 and 4).

On machines with flat belts a solid roll with individual diverter wheels usually follows the sandwich belt section. These wheels must be set for board caliper (so as to control the sheet without crush), and proper angle for blank separation. Should your stacker separate the sheets by skewing the stacking deck mounted belts once again the angles should be enough to get the job done, yet not so great as to lose control of the sheet. In all cases each pair of arms/belts, 4 per blank, must be in parallel to avoid twisting the sheet.