

Expander Roll Instruction Manual

[1] Mounting Location

The closer the mounting positional relationship (Ref. Fig.1) of Expander roll and lower roll, the better the job of eliminating wrinkles can be accomplished. Less than 2.5 times of the Expander roll diameter is most suitable for the distance with between the lower roll (Ref. Fig.1 middle section). When an upper roll and a lower roll position are too far, web is floated from Expander roll surface, and flattening longitudinal creases tend to decrease.

However, depending on the exchange with the existing roll and problem of the installation space, mounting such as the above may be difficult.

Please assume as a guideline.

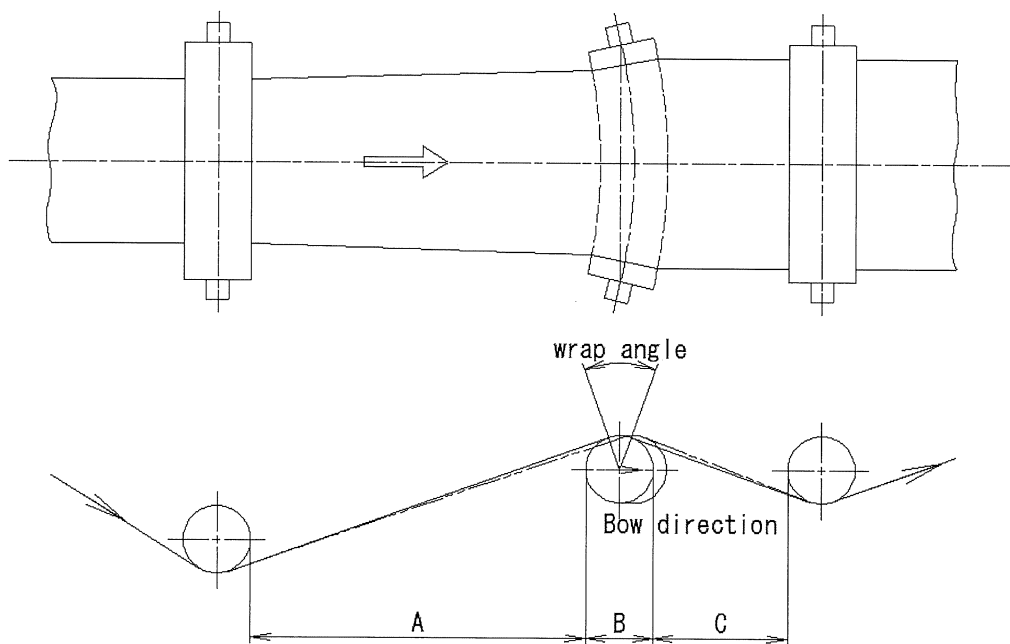


Fig.1 Mounting position

Fig.1 middle A : 5~7.5 times of the Expander roll diameter

B : Expander roll diameter

C : Less than 2.5 times of the Expander roll diameter

[2] Operation

When the web winds over the Expander roll, lead in the sheet into the concave side of the curved axle, and lead out to the convex side.

About the adjustment of the quantity of widening, please refer to the following cases.

(1) Widening Not Enough (Wrinkles Not Removed)

It is effective to increase the wrap angle (Ref. Fig. 2 middle section α) in contact with the Expander roll. There are two ways to increase the wrap angle, one is to adjust the mounting height of the Expander roll (Ref. Fig. 2 middle section, up to b direction) and the other is to shorten the distance between upper roll and lower roll (Ref. P.1 Fig.1 middle section, shorten A and C).

In the Vari-bow (adjustable bow) Expander type, it is also effective to increase the bending.

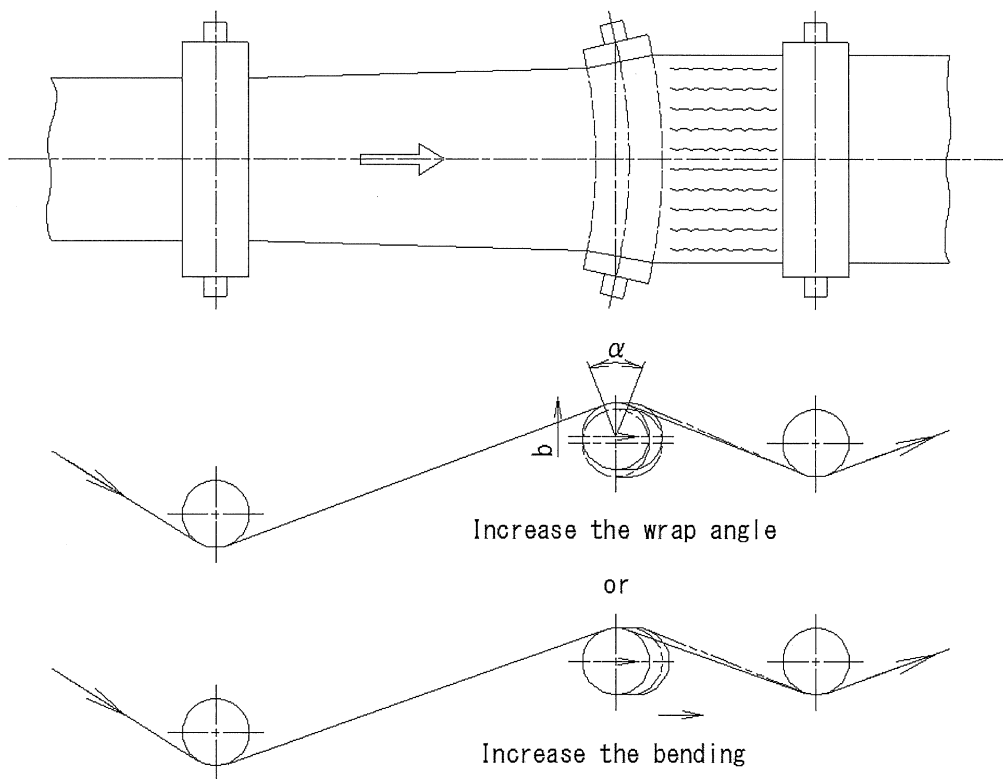


Fig.2 Widening Shorted

(2) Too Much Extended (The web length superfluously)

It is effective to decrease the wrap angle (Ref. Fig. 2 middle section α) in contact with the Expander roll. There are a way of adjusting the mounting height of the Expander roll (Ref. Fig. 3 middle section, down to c direction) and a way of lengthening the distance between upper roll and lower roll (Ref. P1 Fig.1 middle section, lengthen A and C) in order to reduce the wrap angle.

In the Vari-bow Expander type, it is also effective to decrease the bending.

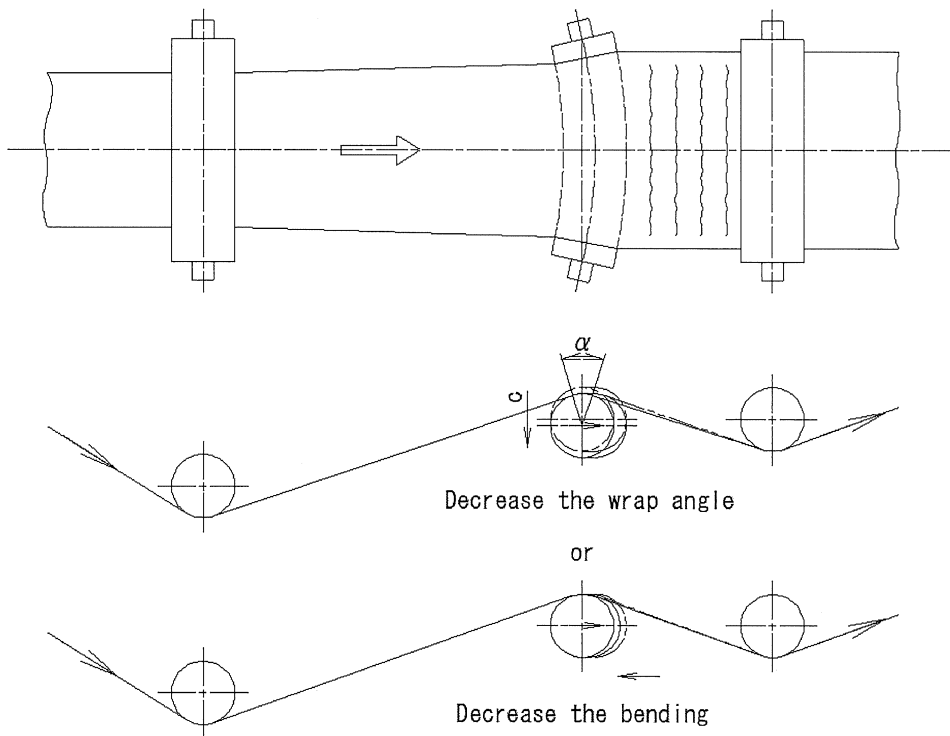


Fig.3 Too Much Extended

(3) Wrinkles are Not Removed Near the Central Portion of a Web

Rotate the axle of Expander roll and control to tighten the center of web.
 (Fig.4 middle section, up to d direction)

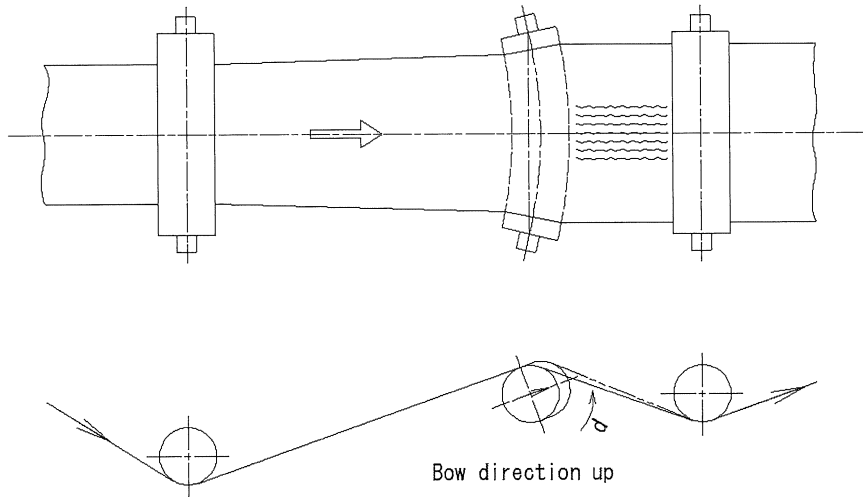


Fig.4 Wrinkles at the Center

(4) Wrinkles are Not Removed Near the Edges

Rotate the axle of Expander roll and control to tighten the edges of web.
 (Fig.5 middle section, down to e direction)

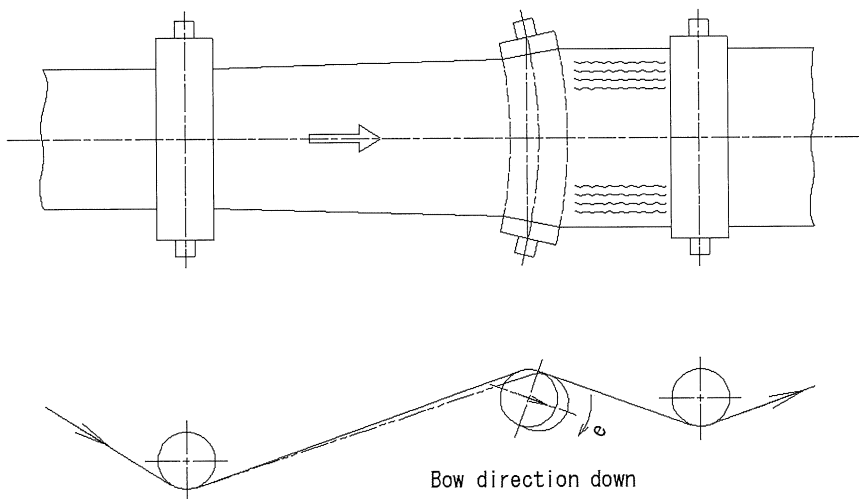


Fig.5 Wrinkles at both ends