THE BRONX GROUP

ROLL COATER MACHINES

Apply paint solutions seamlessly and simultaneously to your strip with Bronx Roll Coater machines

www.thebronxgroup.com

The Bronx Group

ROLL

Celebrating 85 years of providing high quality coil processing solutions, The Bronx Group of companies continues to remain a trusted specialist across the globe. Our products include Roll Coater Machines, which are used to apply solutions onto both sides of the strip simultaneously.
Roll Coaters have, over the past 15-20 years replaced the traditional method of applying solutions by 'spray' or 'dunk' system, then utilising Squeegee Rolls to wipe off excess amounts.

There are a number of different designs available for different applications but all machines must have some fundamental engineering characteristics to meet global standards. Roll Coater Machines can be used to apply chemicals (pretreatments and passivations), inks and several different types of paint.

Bronx Horizontal Coater

Roll Coater Range

Bronx offers a variety of Roll Coater Machines to suit all possible solution applications.

- Standard Horizontal Coater Machine
- Quick Change Horizontal Coater Machine
- Vertical Coater Machine
- S-Wrap Coater Machine
- C-Wrap Coater Machine
- Quick Change S-Wrap System with Coater Machine A and Coater Machine B
- U-Wrap Coater Machine

Bronx Standard Automation:

- Automatic roll speed changes with line speed
- Automatic heads retract and apply with stitch passage (not on std Compact CCL)
- Automatic heads retract with line or roll stoppage
- Automatic heads retract with oven or ventilation malfunction
- Applicator Roll diameter compensation to ensure correct roll surface speed

Bronx Optional Equipment:

- **Pressure Measurement**- the addition of Load Cells to measure the force between each roll assembly, which is used to set the pre-determined production recipes.

- **Servo Position-** motors for pressure adjustment- replaces the manual gearbox systems. This technology allows for remote coater operation, either inside or outside the Coater Room.

COATERS

Horizontal Coater

The Horizontal Coater Machine is generally used for applications of chemical coating. The strip travels horizontally through the machine. This provides an ideal opportunity to install as an upgrade with minimal equipment disruptions. The coater can be used to apply paint with excellent results.

Bronx Horizontal Coater

Vertical Coater

This machine has similar characteristics as the Horizontal Coater Machine however here, the strip travels vertically upwards through the machine. This machine is mainly used for chemical application on both Paint Lines and Galvanising Lines. These machines allow for excellent operator access.

Bronx Vertical Coater

Bronx 'U' Wrap Coater

'S' Wrap Coater

This machine is one of the most commonly used within the industry. The main advantage of the S Wrap is the strip is supported by a large back-up roll, during the coating process. The back-up roll provides support to the strip, keeping it flat and allowing for a very accurate coating thickness. This machine provides excellent operator access, with visibility on both the top and bottom sides of the strip. '

Bronx 'S' Wrap Coater

‘U’ Wrap Coater - Quick Change

This machine is a variant of the S-Wrap Coater Machine. It provides all the characteristics and benefits of the S-Wrap Machine, however provides the excellent advantage of being a “True” ‘Quick Change Coater’. A Quick Change Coater is a machine that has two top side painting heads. Whilst one head is painting the strip, the second head is being readied. When it is time to change paint colour, the first head is retracted off the strip and the second head with a different colour is applied onto the strip. This eliminates the ‘down-time’ associated with stopping the line for head clean-up to change paint colour. Once the second head is painting, the operator can clean the first head and prepare it for another colour while the line remains in full production. Being a “True” quick colour change it all happens within seconds.

‘C’ Wrap Coater

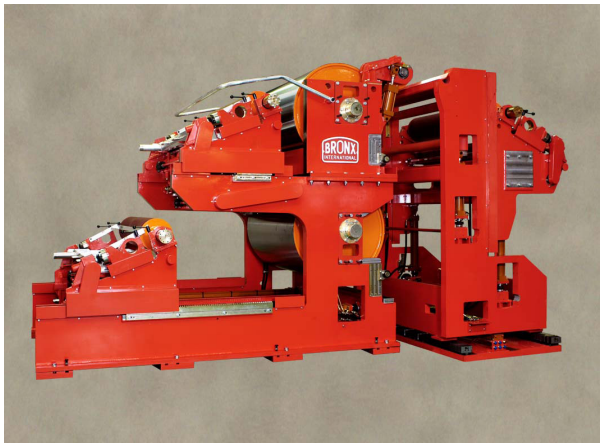
The ‘C’ Wrap Coater is another variant of the ‘S’ Wrap Coater Machine. It operates in a similar manner to the U-Wrap Coater Machine in that it is also a Quick Change Coater. The main difference here is that the two back-up rolls are positioned vertically above each other whereas in the U-Wrap Coater Machine, the back-up rolls are positioned horizontally apart from each other. This also being a “True” quick colour change, it all happens in seconds.

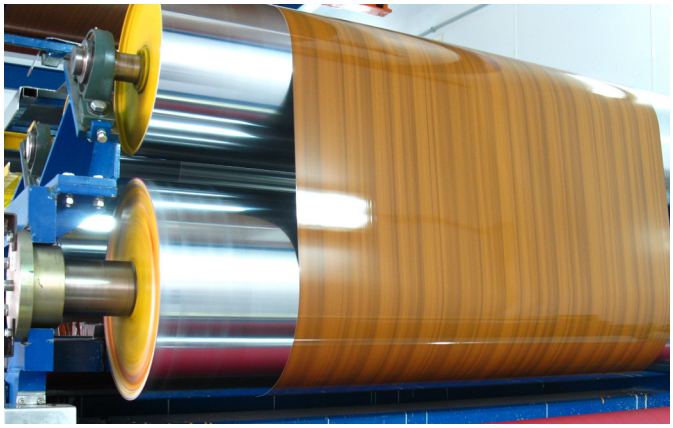
Above: Bronx Chemical Coater
Below: ‘C’ Wrap Coater

Whether a U-Wrap Machine is used or a C-Wrap Machine is used depends on the application area. The U-Wrap machine requires more space horizontally whereas the C-Wrap machine requires more space vertically.

In both cases, the complete painting operation takes place in one room and this provides great advantages for line manning and paint movement as well as storage logistics.

‘U’ Wrap Coater





Pattern Coating with a Bronx 'U' Wrap Coater

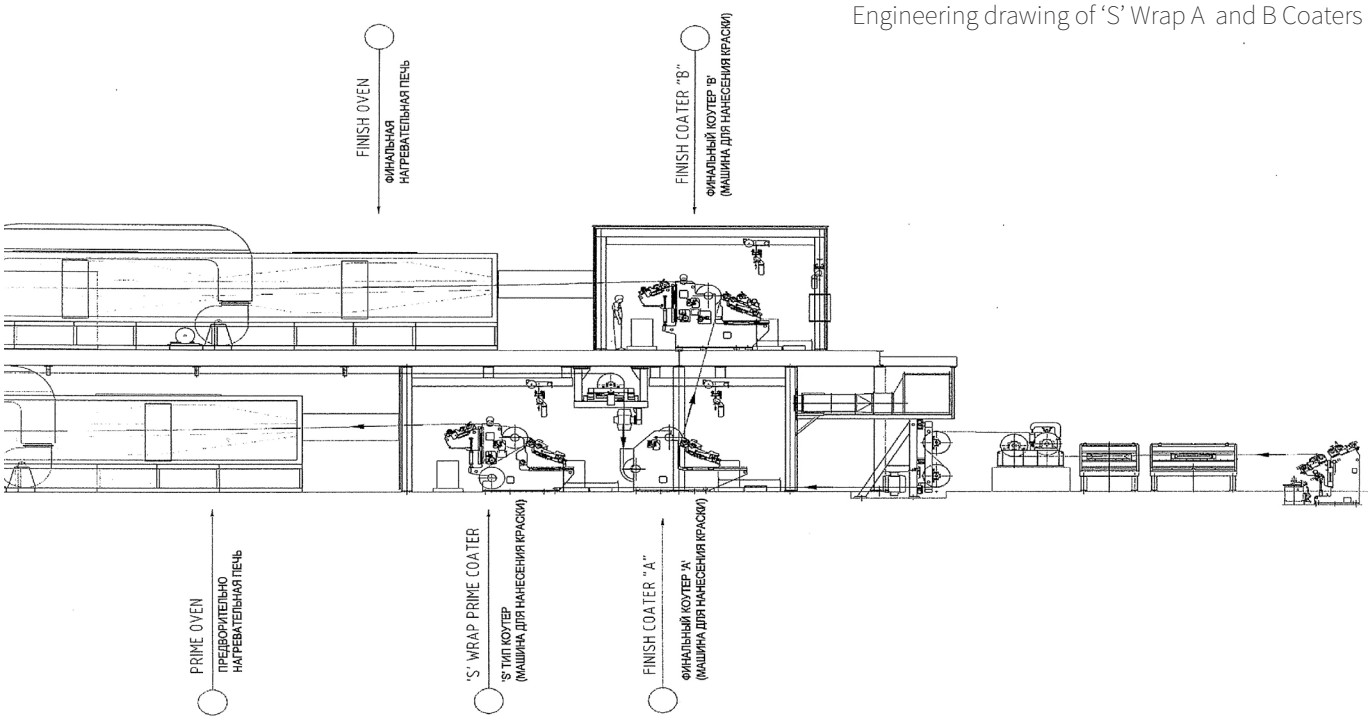
'S' Wrap Coaters A and B

To achieve Quick Change Coater technology, without using a U-Wrap or C-Wrap Coater, an S-Wrap arrangement can be used. This type of set-up is installed on two levels (as opposed to the U Wrap or C Wrap all on ground floor).

One S-Wrap type machine on the ground floor (Coater A) and another S-Wrap ma-chine on the mezzanine floor (Coater B).

These installations have been around for many years, and are often specifically sought out by our clients to suit their needs. Having part of an S-Wrap machine on the ground floor and another S-Wrap machine on the mezzanine floor is a solution used for lines which are housed within smaller operating areas.

Engineering drawing of 'S' Wrap A and B Coaters



In all cases, the Roll Coater Machine must be a very high quality machine as this machine needs to operate very accurately for the next 30-40 years.

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