

# Bronx Representation Worldwide



## Bronx Group Products

- Continuous Galvanising Line - Unique Wet Flux 'Tight Coat' Process
- Continuous Galvanising Line - Non-oxidising Furnace Process
- Galvanising Lines with In-Line Painting
- Continuous Colour Coat Lines
- Colour Coat Lines - Small Service Centre - Stop/Start Satellite Lines
- Tension Level Lines
- Cut-to-length Lines
- Slitting Lines
- Galvanising Coating Control Jets
- Paint and Chemical Coaters
- Strip Joiners
- Equipment Upgrades
- Edge Trim Lines

# TENSION LEVELLING



A Wealth of Coil Processing Knowledge

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*"Sharing Your Vision"*





Tension leveller installed in a continuous galvanizing line.



Basic cassette change system.

Bronx has a long and successful history of designing and building tension level lines and upgrades for both ferrous and non-ferrous metals. Equipment has been installed in United Kingdom, Switzerland, Norway, South Africa, Canada, Spain, Korea, Taiwan, Poland, Indonesia, India, and China.

Tension levelling corrects poor shape imparted in metal strip by cold and hot rolling processes. Table top flatness quality can usually be produced depending on the severity of the poor shape of the incoming strip.

Tension levelling will also greatly improve the physical properties of low carbon steel and other metals susceptible to the appearance of a defined yield point. Without corrections, these types of steel can form unsightly "Luders Lines" which when severely cold worked, usually causes reject components.

Lines are built with speeds of up to 300 MPM, thickness from 0.15mm to 3mm, widths to 1750mm in both 4 and 6 high configurations. Quick change roll cassettes are standard for both top and bottom roll clusters. Usually, two work roll and two decurving sections are supplied and in some instances, one decurving roll section is used to reduce capital cost.

Bronx design Engineers have developed computer programs to ensure efficient leveller design to level full hard steel, annealed steel, stainless steel, and all grades of aluminium, and brass.



A 6 high cassette used for levelling superior surface quality material.



A leveller with two levelling and one de-curving stage.

## Drive Arrangements

After extensive design evaluation Bronx Engineers have standardised all electric drives for the regenerating and motoring bridles. This format produces outstanding operational results and has a number of key advantages over other types of drives.

- 1) Ease and flexibility of operation. Changing the strip elongation on the leveller is as easy as changing the position of one rheostat. This feature is vitally important in continuous galvanizing and paint lines where physical properties of the metal varies from coil to coil and line stoppages produce large amounts of costly scrap product.
- 2) Maintenance of all equipment is lower, particularly when AC drives are used to power the bridles.
- 3) Accurate matching of bridle roll diameters is required at all times in a mechanical drive. This is not required with electrical drives.

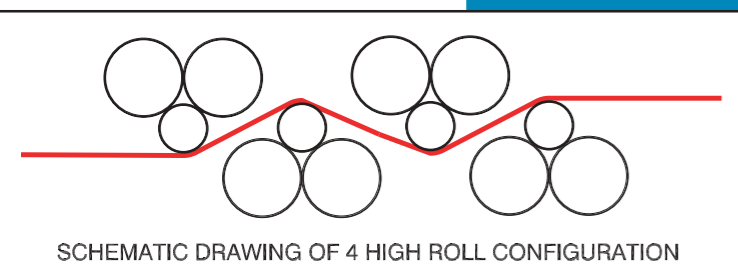
Tension level lines can be supplied as stand alone lines or in conjunction with:

- Coil build up lines
- Coil inspections lines
- Slitting
- Side trimmers
- Degreasing
- Oiling
- Embossing
- Continuous galvanizing lines
- Continuous painting lines

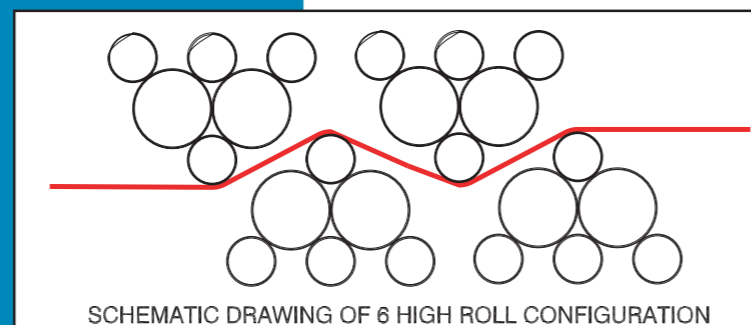


A typical 2 roll bridle - two of these are used on each of the motoring and regenerating bridles.

A leveller with two levelling and two de-curving stages.



SCHEMATIC DRAWING OF 4 HIGH ROLL CONFIGURATION



SCHEMATIC DRAWING OF 6 HIGH ROLL CONFIGURATION