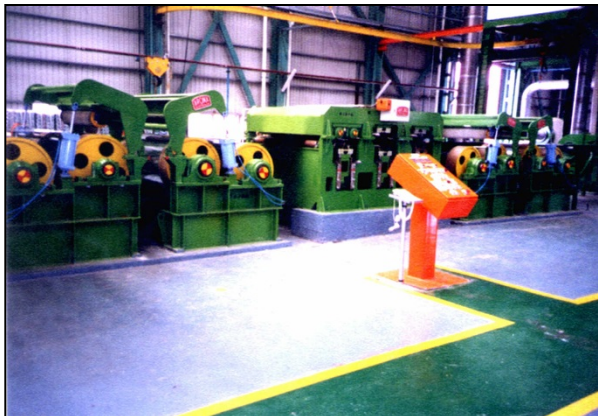
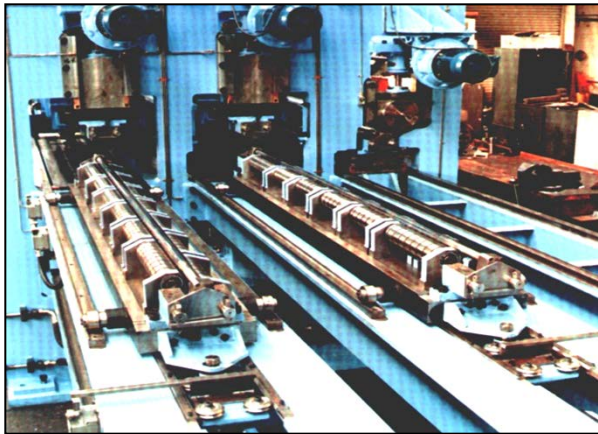


TENSION LEVELLING FROM **BRONX ENGINEERING**

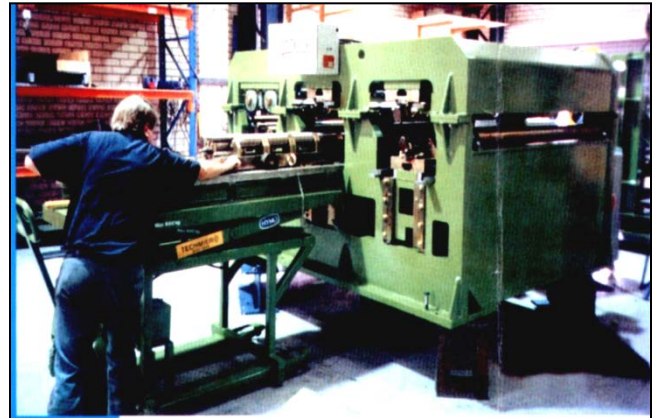


BRONX ENGINEERING LIMITED





Tension leveller installed in a continuous galvanising line



Quick change cassette system

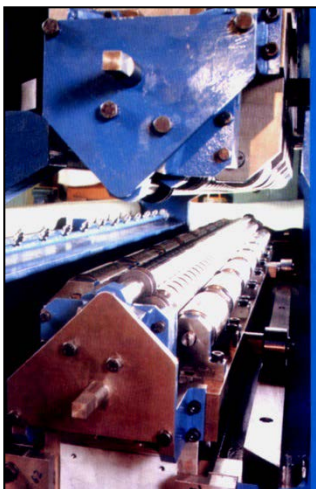
Bronx has a long and successful history of designing and building tension level lines for both ferrous and non-ferrous metals. Lines have been installed in United Kingdom, Belgium, India, Switzerland, Norway, South Africa, Canada, Spain, Korea, Taiwan, Poland, Indonesia, China, Columbia, Turkey, Venezuela, Sweden and Russia.

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.

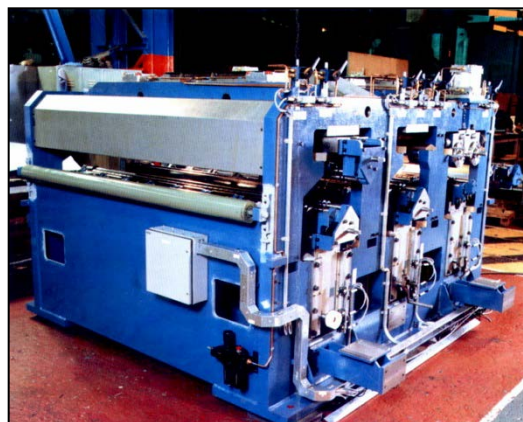
Tension levelling will also greatly improve the physical properties of low carbon steel and other metals susceptible to the appearance of a defined yield point. Without corrections, these types of steel can form unsightly "Luder Lines" which when severely cold worked, usually causes reject components.

Lines are built with speeds of up to 300 mpm, thickness from 0.15 mm to 3 mm, widths to 1830 mm 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 de-curving sections are supplied but in some instances, one de-curving roll section is used to reduce capital cost.

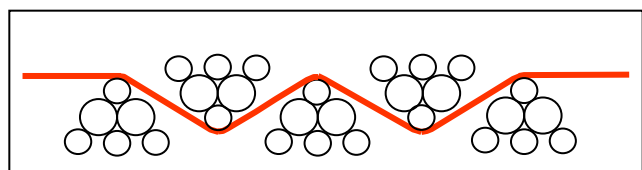
Bronx design engineers have developed computer programs to ensure efficient leveller design to level full hard steel, annealed steel, stainless steel and all grades of aluminium and brass.



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



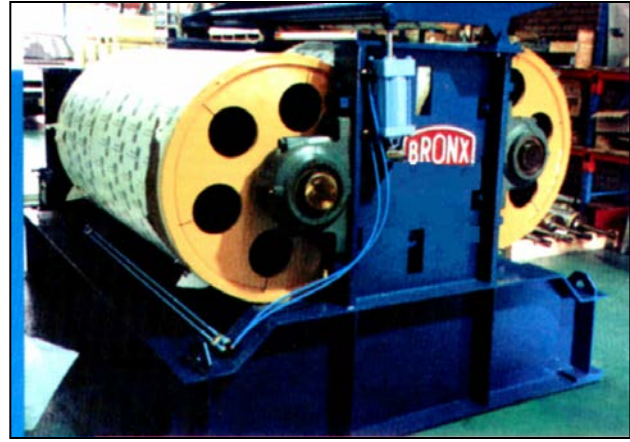
A leveller with two levelling and one de-curving stage



Schematic drawing of 6-high roll configuration



Entry section of tension level line



A typical 2-roll bridge. Two of these are used on each of the motoring and regenerating bridges

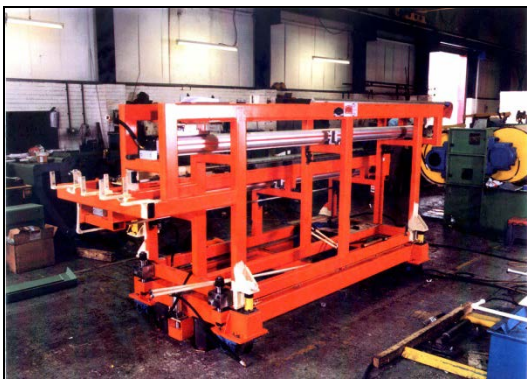
Drive Arrangements

After extensive design evaluation, Bronx engineers have standardised on all electrical drives for the regenerating and motoring bridges. This format produces outstanding operational results and has a number of key advantages over other types of drives.

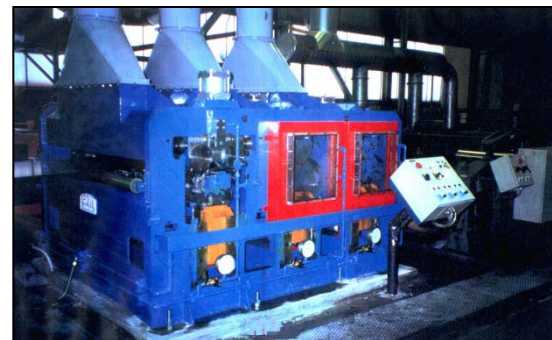
- Ease and flexibility of operation. Changing the strip elongation on the leveller is as easy as changing the position of one rheostat. This feature is vitally important in continuous galvanising and paint lines where physical properties of the metal varies from coil to coil and line stoppages produce large amounts of costly scrap product.
- Maintenance of all equipment is lower, particularly when AC drives are used to power the bridges.
- Accurate matching of bridge 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: -

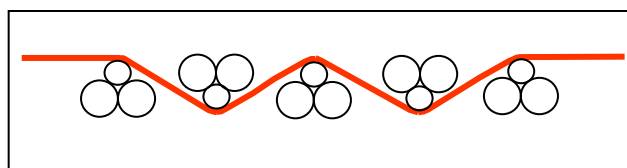
- | | | |
|-------------------------|-----------------|--------------------------------|
| * Coil build up lines | * Side Trimmers | * Embossing |
| * Coil inspection lines | * Degreasing | * Continuous galvanising lines |
| * Slitting | * Oiling | * Continuous painting lines |



Cassette removal rig



Tension leveller with fume extraction



Schematic drawing of 4-high roll configuration



Bronx Group Products

- Continuous Galvanising Line - Unique Wet Flux 'Tight' Coat Process
- Continuous Galvanising Line - Non-oxidising Furnace Process
- Continuous Galvanising Lines with In-Line Painting
- Colour Coat Lines
 - Small Service Centre
 - Stop/Start Satellite Lines
- Coil Separating, Build-up and Recoiling Lines
- Electrolytic Cleaning Lines
- Tension Level Lines
- Cut-to-Length Lines
- Slitting Lines
- Galvanising Coating Control Jets
- Paint and Chemical Coaters
- Coil Packaging Lines
- Equipment Upgrades
- Edge Trim Lines

Professional Services

Bronx offers consultancy services aimed at enhancing both the quantity and quality output of your process line and its operators

- Process technology
- Production training and know-how transfer
- Process upgrades, automation and enhancements
- Site supervision, maintenance and ongoing engineering support

For more information on our range of Bronx Tension Leveller please contact our Sales team or Sales Office

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