

NEWS RELEASE

ATAS International's Pre-Paint Steel & Aluminum CTL Line

Allentown, PA – ATAS International, a manufacturer of commercial and residential metal roof, wall, and ceiling systems with production facilities in Pennsylvania, Arizona, and Tennessee, has installed a Precision Servo-Feed Cut-to-Length Line in its flagship facility in Allentown, PA. The new Cut-to-Length Line, manufactured by Braner/Loopco, Schiller Park, IL, converts 15-ton x 60" wide surface-critical aluminum, copper, galvanized steel, and pre-painted steel & aluminum coils in gauges from .015" through .075" into precise length panel flat sheets. Equipped with a Computer Controlled Hydraulic Leveler and a Precision AC Servo-Feed, the line generates sheets at production rates to 60-PPM. The new Cut-to-Length Line joins a Braner/Loopco 61" Single-Loop *Turret Head™* Slitting Line in the ATAS plant.



Precision Hydraulic Leveler-Servo-Feed Steel & Aluminum CTL Line

Entry Section: The CTL Line Entry Section employs a Telescoping Blade Peeler, Non-Marking Pinch Rolls, Non-Contact Hydraulic Servo Edge Guide, and a Hydraulic Crop Shear to prepare and quickly thread surface-critical strip into the Leveler. A sheared scrap cart collects the cropped coil head ends for quick and easy disposal.



Cut-to-Length Line Entry Prep Section

Precision Shape-Correction Hydraulic Leveler: A massive 4-post 1,500" x 17-roll x 7-flight x 5-Hi Roller Leveler produces panel flat shape corrected surface-critical sheets for ATAS. Leveler work roll and back-up adjustments are accomplished by microprocessor controlled hydraulic cylinders rather than the old motor, gear reducer, sliding wedge, and jack screw Leveler adjustment method. Hydraulic cylinders installed at the entry and exit ends of each back-up flight accomplish entry-exit work roll gap and side-to-side shape correction roll bend adjustments. Precision electronic linear transducers are employed to independently position each of the 14-hydraulic cylinders. Adjusting the entry end and exit end cylinder elevations causes the work rolls to be "tilted" front-to-back for coil-set correction.

Adjusting back-up flight cylinder elevations from side-to-side across the Leveler roll face accomplishes "roll-bend". Precise "roll bend" is necessary for edge-wave and center-buckle shape correction. Hydraulic Leveler benefits include elimination of mechanical screw-wedge backlash, the ability to precisely repeat roll position settings, automatic set-up, automatic Leveler calibration in 5-minutes with no tools, and excellent reliability.



Precision Microprocessor Controlled Hydraulic Leveler

Computer Leveler Controls: 14-independently adjustable hydraulic cylinders position the ATAS Leveler for strip shape correction. Because there are so many possible back-up and work roll position adjustments, a computer is employed for Leveler set-up. The operator enters the material yield strength and strip thickness, while the computer calculates the proper entry and exit work roll gap dimensions and sends position commands to the cylinders. Precision linear electronic transducers



Hydraulic Leveler Producing Shape Corrected Strip



Side view of the ATAS CTL Line. Coil mechanical properties are entered into the "touch-screen" computer terminal console (center). A Laminator applies protective PVC film ahead of the Shear.

communicate position data to the computer as the Leveler automatically sets itself up. Edge wave and center-buckle strip defect correction is accomplished via automatic computer command or operator override. A computer memory commits the back-up and work roll positions to a memory for future recall. This feature is a valuable time saver particularly when processing partial coil runs. Leveler calibration is a time-consuming job with old screw jack and wedge Levelers. The Hydraulic Leveler includes an "Automatic Calibrate" feature that calibrates the Leveler in a few minutes without dismantling Leveler components.

Precision Electronic Servo-Feed: A high-traction non-marking Servo-Feed driven by a precision microprocessor AC servo feeds and meters the surface-critical strip to $\pm 0.005"$ length tolerances. The Servo-Feed draws the leveled strip from the free-loop and feeds the strip to a pre-set length through the Shear. Part lengths are precisely measured by an electronic encoder, while a microprocessor automatically establishes ideal acceleration/deceleration rates. Sheet length and batch count are quickly entered into the digital operating system. Servo Feeds compare favorably to "reciprocating mechanical feeders" in productivity and reliability. A reciprocating mechanical feeder grabs the strip, shoves forward to an adjustable positive stop, engages holding clamps, shoves the reciprocating clamp backwards, grabs again, and releases the holding clamp before starting another feed cycle. Grabbing, releasing, sliding backwards, and re-grabbing consumes the majority of a reciprocating feeder cycle time. By comparison a Servo-Feed simply rotates feed rolls in one direction. The need to make multiple reciprocating feed cycles further diminishes a reciprocating mechanical feeder's productivity when producing long sheets. The Servo-Feed's non-reciprocating operation, low acceleration/deceleration rate, few moving parts, and a total absence of chains, length adjust screws, shock absorbers, limit switches, valves, pumps, slides, clamps, & hydraulic hoses gives it consistent accuracy and "bullet-proof" reliability.



Hi-Cyclic Rate Precision Electronic AC Servo-Feed Processing Surface-Critical Aluminum

Hi-Speed Hydraulic Shear: The ATAS CTL Line employs a heavy-duty hydraulic cylinder powered Shear to cut sheets to length. The Hi-Speed Hydraulic Shear is capable of a 60-strokes/minute cyclic rate, comparable to a mechanical shear cyclic rate. The Shear employs PLC controlled hydraulic cylinders to power the upper guillotine ram through its cycle. 4-edge shear blades are mounted on the guillotine ram and the lower blade holder. Blade gap is adjustable from a single point for processing the entire gauge range. The ATAS Shear is quick, has a virtually silent shear cycle, and offers *bullet-proof* reliability



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Hi-Speed Hydraulic Shear Offers Silent Cycle and Bullet-Proof Reliability

Reject Belt & "Flipper" Sheet Stacker: Cut sheets are carried away from the Shear on a variable-speed Belt Conveyor. The Belt Conveyor has the ability to direct cut sheets to a scrap cart to discard scrap head & tail ends or into the Sheet Stacker. The Sheet Stacker carries cut sheets on a set of non-marking roller "flippers" until the sheet is directly above the stack where it is released. The flippers are pivoted open and closed by air cylinders. An Elevating Stack Table is automatically elevated to just below the sheet release elevation to minimize the sheet drop distance. An air float system generates an air film that helps support light gauge sheets during the stacking sequence. Pushbutton adjustable side skirts and end stop contain the sheet stacks and produce solid-block sheet packages.



Automatic Sheet Stacker and Side Discharge Chain



Exit End View of the ATAS Surface-Critical CTL Line

Panel flat sheets, precise tolerance, solid-block sheet packs, *productivity, and bullet-proof reliability* made the choice of a Braner/Loopco Cut-to-Length Line a "no-brainer".



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