

NEWS RELEASE

Steel Tech Installs 72" Servo Feed Multi-Blanking Line

Huger, SC – Steel Technologies has installed a high-production close-tolerance Multi-Blanking Line in its Huger, SC coil processing facility. The Multi-Blanking line has the ability to convert 80,000# x 72" wide bare and coated carbon and stainless steel coil into panel-flat sheets and precision blanks in gauges from .024" through .135". Equipped with the latest high cyclic rate Servo Feed-DC Shear technology, the line can operate at more than 75-cycles minute. The new Multi-Blanking Line joins a Braner/Loopco 80,000# x 72" double-loop Triple Turret Head™ Slitting Line in the Huger, SC plant.



Hydraulic Leveler, Turret Head™ Slitter, Servo-Feed, DC-Shear Multi-Blanking Line



72" Multi-Blanking Line Exit End View

Precision Hydraulic Leveler: A massive 4-post 17-roll x 9-flight x 5-Hi Roller Leveler produces panel flat shape corrected parts for Steel Tech. All Leveler work roll and back-up adjustments are accomplished by microprocessor controlled hydraulic cylinders instead of electric motors, gear reducers, and sliding wedges. Hydraulic cylinders positioned 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. Electronic linear transducers sense the position of each hydraulic cylinder. Adjusting the entry end and exit end cylinder elevations causes the work rolls to be "tilted" front-to-back for coil-set correction. Adjusting cylinder elevations from side-to-side across the Leveler roll face causes the back-up flights to be set-up for "roll-bending". Accurate roll bend is necessary for wavy-edge and center-buckle shape correction. Hydraulic Leveler benefits include elimination of mechanical backlash, ability to precisely repeat roll position settings, reduced maintenance, and set-up automation.

Computer Leveler Controls: 18-hydraulic cylinders are used to adjust the Steel Tech Leveler for strip shape correction. Because there are so many possible back-up and work roll position adjustments, the Hydraulic Leveler is controlled by a PC



Precision Microprocessor Controlled Hydraulic Leveler

computer. The operator enters the material yield strength and gauge and the computer calculates the entry and exit work roll gap dimensions and sends the commands to the cylinders. Cylinder transducers communicate position data to the computer as the Leveler automatically sets itself up. Edge wave and center-buckle correction can be accomplished via the computer or operator override. A computer memory is available to commit 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 "mechanical" levelers. The Hydraulic Leveler has an "Automatic Calibrate" feature that calibrates the Leveler in a few minutes without dismantling the Leveler.

Turret Head™ Multi-Blanking Slitter: Coils are slit into multiple ± 0.002 " width tolerance strips by a 2-head Turret Head™ Slitter installed immediately after the Cassette Leveler. The Slitter is synchronized with the Leveler to run at a constant non-stop line speed, which results in precise and consistent slit edge conditions. Rubber strippers installed across the entire coil width support wide thin-gauge strips prevent strip buckling and assures precise width tolerances. Specially formulated multi-blanking tooling and "pushbutton" tooling lock-up allows set-ups to be completed in 15-minutes while the line is running. The ability to prepare set-ups while the line is in operation can greatly improve productivity. Like all Turret Head Slitters™, head changes are accomplished in less than 2-minutes, and reliability is "bullet-proof".



Quick-Change "Pushbutton Tooling Lock-Up" Turret Head™ Multi-Blanking Slitter with Next Set-Up Ready to Go

Precision Electronic Servo Feed: High-traction non-marking feed rolls with a microprocessor AC servo drive feeds and measures parts to ± 0.005 " length tolerance. The Servo Feed draws multiple strips from the free-loop and feeds to a pre-set

length into the Shear. Part length is precisely measured by an electronic encoder, while a microprocessor establishes acceleration/deceleration rates. Sheet length and batch count are easily and quickly entered into the digital operating system. Servo Feeds compare favorably to "reciprocating mechanical feeders" in cyclic production rates and maintenance requirements. A reciprocating mechanical feeder grabs the strip, shoves forward to a positive stop, grabs again with 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 consume the majority of a reciprocating feeder cycle time. By comparison a Servo Feed simply rotates feed rolls in one direction. A reciprocating mechanical feed's productivity is diminished further when making multiple feed strokes for long parts. 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

100-Cycle/Minute DC Shear: The Steel Tech line includes a massive top driven mechanical bow-tie Shear. The Shear is powered by a variable speed DC motor. The DC Shear produces pattern size sheets in a 60-stroke/minute "clutch-brake" mode and short blanks in a "non-stop continuous-stroke mode" up to 100-cycles/minute. Combined with the super high-cyclic rate capability of the Servo Feed, the non-stop continuous DC



Servo Feed-DC Shear-Multi-Blank Stacker

Shear cycle offers unrivaled close-tolerance small blank productivity. In the "continuous" shearing cycle, the crankshaft runs non-stop at a speed and SPM synchronized with the Servo Feed. The Servo's "feed forward" cycle begins as soon as the upper shear blade clears the material on its up stroke. The Servo continues to feed the strips well past the Shear's top dead center and stops only when the shear blade approaches the strip in its down stroke. The simultaneous feed-shear cycle generates parts per-minute productivity twice as high as any other feed-shear method.

Programmable Multi-Blank Stacker w/ Programmable

Reject: The Stacker features full automatic multi-blank set-up via microprocessor controlled AC servo motors. The multi-blank blank dividers are automatically positioned to produce "solid-block" straight-sided single sheet and multi-blank packs. Hydraulic locks secure the dividers in the stacking position. An air float system generates a thin air film that guards against sheet-on-sheet scratching during the stacking sequence. A "reject" system sends heads, tails, and other non-prime parts outside the Stacker into a scrap bin. Reject part length and reject sequence is fully programmable.



Programmable Multi-Blank Stacker w/ Auto Reject



Stacker Unloading Finished Multi-Blank Packs

Proven ability to generate huge quantities of precise width, precise length, and panel flat parts per minute, PLUS massive construction and *bullet-proof reliability* make the choice of a Braner/Loopco Multi-Blanking Line a "no-brainer".



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