

NEWS RELEASE

Eagle Steel Installs 80,000# x 76" Double Loop Slitting/Inspection Line

Jeffersonville, IN – Eagle Steel Products, Inc, a flat rolled steel distributor and coil processor located near Louisville, KY, has installed a new precision double-loop Turret Head coil slitting & surface inspection line with in-line shape correction capability in its expanded 170,000 square foot barge and rail serviced facility on the Ohio River in Jeffersonville, IN. Eagle Steel provides high-quality precision coil slitting, surface inspection, and leveling services for carbon and stainless steel producers, automotive and appliance manufacturers, as well as other OEMs.

The new Braner/Loopco slitting/inspection line is capable of processing 80,000# x 76" wide surface critical coated steel as well as 300 and 400 series stainless steel coil in gauges from .009" through .187" at speeds to 1,200 FPM.



76" Slitting Line (Inspection Station in background)

Double-Loop Processing – The line has the ability to process coils in tight line, single loop, and double-loop operating modes. Based upon material, gauge, and duty (surface inspection, edge trim, multi-cut slitting), Eagle Steel can select the operating mode that would produce the best quality and best operating efficiency. For example, the tight line mode is commonly utilized for edge trimming and surface inspection. Mid-gauge cold rolled is normally processed in the single loop mode, and double-loop is commonly selected for processing light gauge surface critical coil. In the double-loop mode the DC motor driven Uncoiler drives the strip into a free loop ahead of the slitter, causing the strip to be steered and slit under zero back tension conditions. Zero back tension produces tighter slit width tolerances because the strip lays flat into the slitter knives. Zero back tension produces a better quality slit edge because slitter knife slippage is virtually eliminated. Edge trim width can be reduced with zero back tension since the strip can be side guided into the slitter without the fear of rolled-up edges. Higher slitting speeds can be achieved and entry tension induced camber can be eliminated because thin gauge coil "wobble" (coil OD eccentricity) is isolated from the slitter by the free-loop.



Loop control Uncoiler with Outboard Support

Turret Head Slitter™ – The Eagle Steel line is equipped with a quick-change Turret Head Slitter with three (3) 9.500" heads. The Turret Head Slitter is easier and faster to re-tool than any other slitter design, and has the added benefit of changing heads in one-minute. A 300 HP DC motor driving the Turret Head Slitter allows single loop slitting of up to 24 cuts in .075" at 1,200 FPM.



Precision Triple Turret Head™ Slitter

Surface Inspection – Processing surface critical material often requires that coils be quality inspected for surface defects. The Eagle Steel line is equipped with a surface inspection station equipped with multiple fluorescent lamp banks as well as high-intensity strobe lamps to highlight surface scratches, dents, or other surface defects. Surface defects are visually identified, located, and recorded by an inspector as the coil is processed.

In-Line Shape Correction – The Eagle Steel line is equipped with a Cluster Leveler™ capable of eliminating strip shape defects such as center buckle, wavy edges, and cross-bow from the strip. The Cluster Leveler is a corrective roller leveler with adjustable back-ups supporting work rolls that range in size from 3.000" to 1.500". The patented work roll design gives the Cluster Leveler the unique ability to eliminate strip shape defects through the entire .009" to .187" gauge range by applying large or small diameter work rolls to the strip depending on gauge and yield strength. A PLC eliminates leveler set-up trial and error time by making the set-up fully automatic.



Shape Correction Cluster Leveler™

Turret Recoiler – In order to address one of the most time-consuming tasks in a slitting operation, slit coil OD banding and preparation for coil unloading, the Eagle Steel line is equipped with a 300 HP Turret Recoiler with two rewind drums and two Overarm Separators. After a coil is rewind, the 300 HP drive disconnects from the rewind drum and the Recoiler rotates 180 degrees, positioning the finished coil at the unload station while positioning an empty drum at the slitting station. OD banding and coil unloading is accomplished while the strips are fed into and rewind on the opposite drum. Down time is virtually eliminated. To speed-up OD banding, both Overarms are equipped with Tail Hold-Downs, a set of adjustable polyurethane pads that are pressed against the coil OD by hydraulic cylinders. The Tail Hold-Downs prevent the coil tails from clock-springing and provide a clear path for feeding the OD band around the coil. Each Turret Recoiler drum has an independent drive that allows the coil to be rotated at the unload station.



Turret Recoiler w/Speed-Load Fillers

One-Minute Speed-Load Recoiler Fillers – Eagle Steel produces 20” and 24” ID slit coils according to their customer’s specifications. It is common knowledge that changing coil IDs can generate huge down time costs

because switching from 20” to 24” or vice-versa requires “fillers” to be installed and removed from the Recoiler drum, and attaching or removing Recoiler fillers will typically waste 15-20 minutes of production time. The Eagle Steel line is equipped with Braner/Loopco’s exclusive “One-Minute Speed-Load Fillers” that switches coil IDs from 20” to 24” on one-minute. Unlike the common “filler plates” that are comprised of 3-4 individual segments that are secured to the Recoiler drum with 4-6 bolts per segment, the Braner/Loopco Speed-Load Fillers is one-piece hardened steel assembly that uses no Recoiler drum attachment bolts. The Speed-Load is slipped on the Recoiler drum to produce 24” ID coils, and slipped off the drum to produce 20” ID coils. Each cycle takes one-minute instead of 15-20 minutes, allowing Eagle Steel to change the coil ID with no down time.



Slit Coil Packaging Line

Automatic Coil Packaging – The Eagle Steel slitting line is equipped with a slit coil packaging system capable of handling slit coils from 1” to 24” wide, weighing up to 20,000#. An operatorless Programmable Downender removes slit coils from a 4 Arm Turnstile and places the coils onto a powered staging conveyor. Individual slit coils widths are programmed into the Downender controller, and the Downender automatically unloads all the coils unattended. From the staging conveyor, coils are fed into the Coiltech/Signode strapping machine where 3/4” radial bands are applied in a semi-automatic manner. Spacer blocks are placed and the coil is weighed while the coil is on the strapping machine. The strapped coil is then sent into the coil stacker where it is automatically removed from the table and deposited onto any of eight stacking stations on a rotatable turntable. After a coil package is completed on the turntable, the package is discharged onto a runout conveyor where the entire package is weighed. The package is sent onto a runout conveyor where it can be removed and shipped as a palletized package, or upended 90 degrees and removed and shipped cylinder fashion.



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