

18" Wide Cut-to-Length and Recoiling Line for Mead Metals

Formtek-Maine shipped a Cut-to-Length and Recoiling Line for processing HSLA to Mead Metals in March of 2024. Mead Metals is a St. Paul, MN based service center that specializes in providing coils of specialty, rare, and exotic metals in small quantities. Using a combination of standard machines and custom engineered equipment, we were able to provide a system that is as unique as the materials Mead Metals processes.



The system had to be robust enough to uncoil and straighten coils ranging from 0.135" thick at 80,000 psi yield to 0.070" at 160,000 psi yield and at line speeds approaching 200 fpm. Their existing line had a special edge conditioner to remove burred edges that could also be used to correct for camber on their narrower materials. It also had a small cartridge-style set of vertical and horizontal rollers they could adjust on the fly to remove twist that was inherent in some of their narrow coils. The over arm on their recoiler had a unique roller separator system with nylon sleeves of various sizes they could swap in and combine to match the widths of any of their coils. A stock table located between the cutoff shear and recoiler could be rolled into position to support blanks in cut-to-length mode or rolled out of the way for recoiling.

Our system includes our 4R series stock reel with powered side guide rollers to prevent telescoping of coils and an adjustable sub-base to adjust coil alignment to ensure centered coils.

The coil processor consists of a hold-down peeler station w/ clamping thread-up table, a model HDC straightener head with individual roll adjustment, a combination edge conditioner /camber compensator, a (2) roll ServoMax servo feed with cartridge-style twist compensator, and hydraulic cutoff shear.



Uncoiler



Coil processor with hold-down peeler station



Coil processor control



Edge conditioner



Servo feed with twist compensator and measuring wheel



Hydraulic cut-off shear

The fixed runout table has a rolling base to manually move the table in line for running in cut-to-length mode, or to move out of line when recoiling. A fixed edge is provided on the table for a quick camber check on cut parts.

The recoiler has a full-radius drum mandrel with a manually actuated lead edge locking device on one arm and clearance for fork truck tines cut into the arms to allow loading or unloading of coils. The over-arm roller has a quick release mechanism to allow easy removal of the roller. The operator can switch out the polyurethane spacers and guide plates to the desired coil size to ensure a tight finished coil. A hydraulic powered pusher plate is included to push coils off the spindle for removal.



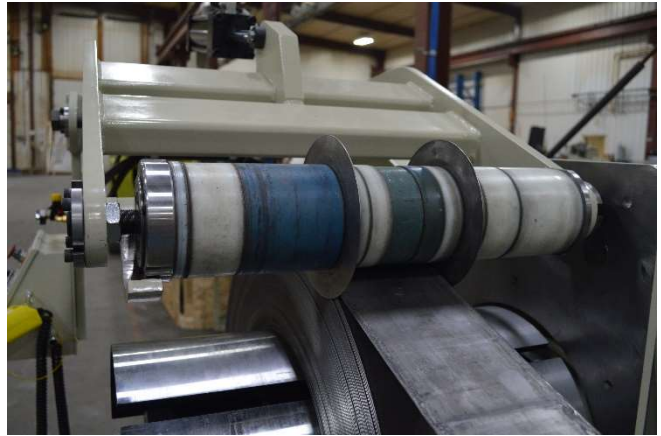
Roll-in / roll-out runout table



Recoiler



Recoiler drum mandrel with edge locking device



Coil clamping arm with over-arm separators

The line is currently being installed with start-up services by Formtek-Maine service technicians scheduled for the end of March.