



New Coil Stretcher for MRS Sheets

The new coil stretcher is another major milestone in AMAG's quality initiative to produce MRS qualities¹⁾.

AMAG has an excellent reputation as a supplier of MRS sheets. To develop this area of strength, a new coil stretcher was started up in June 2013 to increase the capacity for thin stretched sheets and especially for MRS qualities. This will ease the load on existing facilities and eliminate bottlenecks.

When designing the new coil stretcher, we deliberately used the existing and proven technology of the existing stretcher. The goal was to increase AMAG's performance for its customers in terms of capacity and quality.

Process in general

Coil is fed into the coil stretcher through the coil preparation station. After threading, the strip passes through the preleveler, which compensates for coil curvature and enables the cut-to-length unit to cut

the strip into flat sheets. Upstream of the cut-to-length unit, a printing device prints the preset data on the strip.

The optimum stretching strain is calculated as a function of the sheet cross-section and the material characteristics to ensure uniform strain, resulting in a homogeneous distribution of residual stress.

After stretching, the sheet is removed from the stretcher bed using a vacuum manipulator and placed on the destacker.

The paper trolley located at the destacker covers the sheet surface with paper to prevent scratches caused by slipping and protect the surface from contamination and damage.

We attach great importance to special surface protection during sheet handling:

- Belt conveyors made of soft, smooth plastic to prevent surface damage
- Small vacuum suction cups attached to the manipulators to prevent thin sheets from cambering

The complete stretching process, from the uncoiler to the destacker, can be fully automatically performed according to the state of the art.

It goes without saying that we placed great emphasis on ergonomics and occupational health and safety as early as at the design stage.

The new coil stretcher will earn AMAG an excellent position with regard to the production of shales and MRS sheets for demanding applications, e.g., in the aircraft industry. ■

CUSTOMER VALUE

The new coil stretcher allows AMAG to significantly increase the range of manufacturing options for its customers:

- Sheet thickness 0.8 mm to 8 mm
- Sheet width currently up to 1,600 mm (designed for 1,900 mm in width), sheet length up to max. 6,750 mm
- Alloys: 2xxx, 5xxx, 6xxx, 7xxx (clad and unclad); other alloys upon inquiry
- Top surface quality, no scratches
- Homogeneous distribution of residual stress within narrow tolerance limits
- Applications: aircraft industry, automotive industry, sporting goods, consumer electronics