

APPLICATION OF WIDE LEAD STRIP FOR PUNCHED GRIDS

16 Technology

Since we first began experimenting with lead in the 1940s, when pure lead as well as lead alloys were transformed through continuous casting and rolling into wire and very narrow strip, we have accumulated a remarkable amount of experience.

This helped us during the 1980s when we introduced the first Line producing lead-calcium strip with a width of 70-80 mm for the production of expanded grids for SLI batteries. The tendency today is towards punched grids requiring a wider strip, approximately 350 mm wide.

The wide strip is punched into grids with a full frame and can therefore withstand the high compression required in the elements of AGM (Absorbed Glass Mat) and semi-AGM batteries and can also be used for the production of motorcycle batteries. The wide strip can be punched according to any design, as defined by the customer, and since the strip is continuously cast and rolled it provides significant savings in weight.

We have further developed and optimized the casting and rolling of wide lead strip. These developments include:

- >> Various configurations of the furnace set: including melting furnaces to melt lead ingots as well as re-melt the large amount of scraps returning from the punching process and holding furnaces for the necessary stabilization of the temperature and alloy
- >> Our wheel-type in-line casting machine configuration: specifically developed for large size cast bar to avoid any deviation from the rolling mill axis thus avoiding any deflection of the cast bar itself
- >> Fully adjustable casting machine cooling system
- >> Minimum thickness of the cast strip
- >> Rolling mill on a single basement with independently-driven rolling stands: this solution allows the highest machine flexibility since the speed of each stand can be adjusted independently, according to the final thickness of the strip which is being rolled
- >> Trimming unit: to cut the strip according to the desired final width allowing tight dimensional tolerances
- >> Double strip coiler: to collect coils of wide strip in a manual, semi-automatic or fully automatic manner
- >> Various capacities starting from 5.5 tph
- >> The only single process available for the production of both positive and negative grids
- >> The only upgradeable equipment

Metallurgical characteristics of the Properzi wide strip include:

- Effective weight reduction
- Increase of specific performance
- Grid with elevated mechanical characteristics
- Strip width up to 360 mm (wider strip can be produced upon request)
- Grid thickness starting from 0.65 mm (thinner strips can be produced upon request)

With experience gained over the last decades from the production of hundreds of continuous casting and rolling lines for nonferrous materials, we have successfully transferred our vast expertise to the Properzi Wide Strip Lines, CRSw.

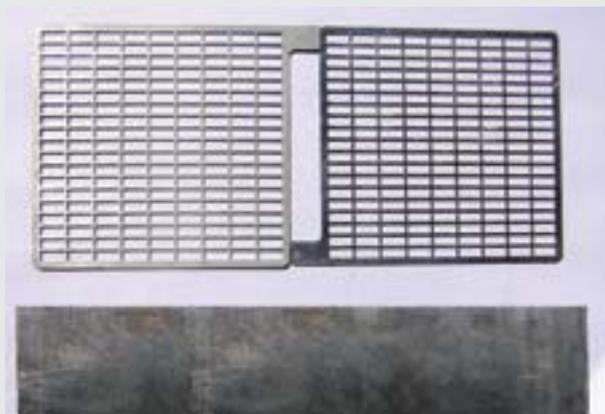
By *Gabriele Muscarnera*



Casting machine tundish set



Wide strip rolling mill



Wide strip and punched grids