

- *ELBC 2020 Paper Abstract* -

*Latest Works on the Properzi Wheel and Belt Caster and rolling Mill to
produce Wide PB Strip for Punched Grids*

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Properzi is in the battery industry since that late 1970s, when first expanded lead metal strip lines for SLI batteries was produced.

The introduction of wide punched grids format with full frame, a substantial innovation enabling the low cost superior alternative component for deep cycle battery applications and UPS, led Properzi to develop innovative solutions for the Wide strip Casters and Rolling mill.

Here below is a summary of the content:

1. Furnace set with high energy efficiency
2. New design Wheel and Belt Type casting machine, user Friendly and fed with water from cooling tower (up to 35°C)
3. Dross free casting machine to achieve laminar/steady molten metal flow.
4. New design Rolling Train:
 - a. Independently driven rolling stands to enable highest production flexibility
 - b. Compact design mill basement with integrated emulsion circuit tank and filter
 - c. Rolling Stand Calibration is accomplished with wedges which determine the precise position of the upper roll
 - d. Finishing Rolling Stand equipped with servomotors for the automatic calibration on the base of a laser gauge detected value.
5. Automatic Tween Reel Coiler with automatic spool coils discharge
6. Automation System ready for Industry 4.0.

The paper will describe how the design difficulties have been overcome and the advantages of the Properzi battery equipment resulting in:

7. High Quality and low tolerances finished lead strip
 8. High Efficiency equipment (proven OEE \geq 93%)
 9. Wide range of Capacities available
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