On behalf of Li-Tec GmbH For Sale due to Plant Closure



Complete Lithium-Ion Cell Production Line





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Asia

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Sale Background



Li-Tec Battery GmbH terminates all activities in the field of battery manufacturing and closes her cells production plant at Kamenz, Germany.

The plant **produces lithium-ion cells** from raw and primary material, which are then processed to battery systems (e.g. for usage in electric vehicles) in the next step.

Besides **three Fully Automated Production lines** (by **GROHMANN**), additional **Semi-Automated Lines**, Formation Towers, High-Bay Warehouse, Robots, Handling Systems an Peripherals are For Sale.

The production **ends in October 2015**. Although the assets are therefore only available at the end of the year, the lines **can be inspected under production conditions** up to that time.



Call Now!

For more Information or an Appointment for Inspection

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Premium Asset Base



- Cell-assembly at Li-Tec
 - 3 assembly machines (EFA)
 - First installed in 2011, additional two in 2012
 - by GROHMANN (2011/2012 machines)
- Technical features
 - Very compact design: 30m per line
 - Competitive cycle time
 - Inline drying concept
 - Laser cutting ability
 - Formation without degassing

















Non-vacuum inline drying with short cycle time

- Drying process is integrated part of cell assembly line
- Inline drying of electrodes and ceramic based separator
- Inline annealing of electrodes
- Technical highlights
 - Compact design
 - Drying without vacuum
 - Dew point -55°C
 - Drying time <10min
 - 2 types of radiant heating









- No tool wear and high flexibility for geometric changes
- Cutting-edge technology
- Laser cutting of electrodes and ceramic based separators
- Technical highlights
- State-of-the-art IPG-Laser: 2 x 200W lasers for electrodes
- Cutting speed of 1m/second
- Advantages of no fringes, no wear of tools and fast adaption to new geometries









Process designed to achieve superior performance

- Single sheet stacking
- Technical highlights
 - No bending of active materials minimising probability of cracking of materials
 - Stacking in one step (electrodes & separator)
 - Extremely precise stacking: tolerance of only 0.3mm









• Cell stack is safeguarded against shifting of sheets within stack

- Seven time fixation with PP¹ tape
- Safeguarded against shifting of sheets within the stack
- Fully automated process that reduces local mechanical stress on the stack









Torsional ultrasonic welding with high retention force of tabs

- Torsional ultrasonic welding without additional retaining plates or pre-welding
- Four welding spots per tab with an overall retaining force of over 1,000N
- Sonotrode and anvil geometry is specifically adjusted for the respective material requirements









Inline deep-drawing with hot-cold-sealing for maximum longevity

- Inline deep-drawing of housing half shells
- Load-optimized geometry of housing
- Hot-cold-sealing for maximized longevity and cohesion
- Highly precise alignment of half shells to each other









Precise and short cycle filling and wetting

Filling

- Electrolyte filling with high precision HIBAR pump
- Technical highlights
 - Gravimetric measurement of filling level with tolerance of +/- 2 grams (actual performance +/- 0.5 grams)

Wetting

- Multi-cycle wetting supported by ceramic separator
- Technical highlights
 - Very short cycle times
 - Vacuum sealing









Highly precise final cut allows for narrow tolerance

- Hot-cold-sealing for maximized longevity and cohesion
- Highly precise final cut meets the narrow tolerance of cells dimensions









Press rolling for higher cell performance

- Optimized spread and absorption of electrolyte under defined pressure
- Avoidance of electrochemical inactive areas
- Higher performance of cells and reduced rejection rate in the formation









Tempered 24 hour aging for advanced cell performance

- Tempered 24 hour aging at 40°C
- Highly accurate temperature control (+/- 2 K)
- Conditioning of the cell for the formation (penetration of electrolyte in the pores)









Short cycle formation without degassing

- Initial charge of cell
- Total of 23 formation towers¹
- Unique copper/beryllium contact units specifically developed for Li-Tec together with supplier
- Technical highlights
- Formation without degassing
- Proprietary formation process in <15h</p>
- Precise temperature control throughout the entire process (+/- 2 K)
- Complies with high safety standards









Fully automated high-level rack system

- Two-week aging at room temperature
- Inerted aging area complying with German fire safety regulations
- Remaining oxygen concentration of 12%
- Fully automated high-level rack system with significant capacity reserves
- Final measurement of self-discharge-rate









Three fully automated testing benches for electrical and geometrical cell measurement

- Three fully automated end of line testing benches provided by Branscheid
- Measurement of all relevant electronic parameters (SDR, OCV, Ri, current puls check)¹
- Geometric and gravimetric measuring of cell
- Vacuum measurement and grading of cell (three grades)



¹ SDR: self-discharge rate; OCV: open circulate voltage; Ri: resistance internal.





Fully equipped, semi-automated assemblyHigh production flexibility

- Semi-automated assembly for 40 Ah and 52 Ah cells
 - Flexibility to also produce other cell formats for R&D
 - Vacuum drying
 - Steel rule cutting
 - Robotized pick & place stacking









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Applications

- Cell used in Toyota motorsport applications: E-vehicle time record at Pikes Peak Hill Climb as well as at Nürburgring's "Northern loop"
- Cell already part of electric material handling solutions (Jungheinrich) as well as in stationary storage solutions ("LESSY")





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About Maynards



As global **Auctioneers of Industrial Equipment**, Maynards Europe acts on behalf of Li-Tec in liquidating the production facilities and assets of this site.

Since 1902, the company has **specialized in the asset conversion** of commercial inventories and industrial equipment, and provided comprehensive valuation services for collateralbased lending, asset disposition and acquisition.

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Our Clients



