NEWS RELEASE

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AIDA ENGINEERING, LTD.
Toshihiko Suzuki
Representative Director and President

Announcement of the Product Launch of the AIDA DPH Former: A Dedicated Forming Machine for Rectangular Battery Cases Used in Storage Batteries

AIDA ENGINEERING, LTD. (Representative Director and President: Toshihiko Suzuki; hereafter referred to as 'AIDA') will launch its dedicated DPH Former product, which is a specialized machine for forming the rectangular battery cases used in storage batteries.
The DPH Former uses a new mechanism to significantly reduce the number of forming stages compared to press metalforming, making it possible to produce compact and environmentally friendly rectangular battery cases.

■ Development Background

Storage batteries are essential for utilizing renewable energy sources and are key products for achieving carbon neutrality. In recent years, the market has been expanding to include not only automotive applications but also industrial and residential stationary
storage battery applications. Leveraging its accumulated metalforming technology expertise, AIDA has developed a new product with improved environmental performance as a new option for a battery case forming system.

■ Product Overview

- A horizontal forming machine with a lateral forming stage layout.
- Uses a new method (a patented 'Assisted Draw-Forming' methodology) for forming rectangular aluminum cases.
- Hydraulic and servo controls are combined to numerically control the forming motions.

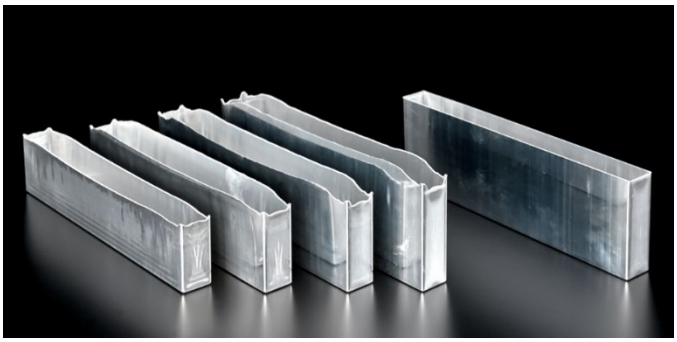
■ Product Characteristics
The characteristics and limitations of our DPH product are explained below.

[DPH Characteristics]

1) Compact and Simple
   - The punch moves horizontally in an incremental step-forming motion, which disperses the forming loads at each stage and enables low-force forming. The multi-stage forming process--from blanking through product ejection--is completed in a single stroke. (Separate dedicated equipment is used for trimming.)
   - Multi-stage forming based on 'assisted draw-forming' significantly reduces the number of forming stages compared to conventional draw-forming applications.
   - Unlike a conventional press, no transfer feeder is required, which eliminates the need for complicated transfer finger adjustments.
   - Since the DPH Former is more compact and lightweight than a press, there are fewer restrictions in terms of floor load capacities and factory floor heights, making it easier to install.
2) Environmentally Friendly
   - It enables low-load, energy-saving forming compared to conventional presses, and less die lube is needed during the forming process.
3) Accommodates Diversified Small Lot Production
   - When making die adjustments, the dies can be easily removed and inserted from above. It also facilitates quick production startup.
4) High-Quality Forming
   - Unlike conventional draw-forming processes where punches are inserted and removed from the interior of the product during the draw-forming at each stage, the draw-forming is completed in a single process, which helps eliminate scratches on interior surfaces.
5) Low Cost
   - Enables forming using inexpensive dies compared to the dies used for conventional press lines.
   - The cost of the entire system configuration is less than that of existing press lines.
6) Shimmy Trimming Machine (TYC-32-5-11)
   - The product is trimmed to the correct product height using a shimmy-type trimming machine.
   - A servo motor drives the trimming die in a continuous motion to achieve single-stage trimming.
   - This prevents uneven/stepped trimmed surfaces, which is a common problem when using a conventional trimmer that performs the trimming in two separate stages.

[DPH Limitations]

Compared to conventional press metalforming:
- Lower productivity.
- Cannot form all case sizes.



■ Product and Sales Overview
Product Launch: June 2025 (To be exhibited at MF-TOKYO 2025)
Available Model: DPH-80-30 (Stroke: 875 mm; Product Length: 315 mm)
※Please contact AIDA for more information about dies, etc.

※Inquiries Relating to This Subject

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