



CRANE

Innovation Infosheet

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Magnaframe: A Laminate Processing Frame

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Categories:

- Materials and Manufacturing
- NSWC Crane

Keywords:

- Crane
- Magnetics
- Materials and Manufacturing

Currently, printed circuit board fabricators use adhesive tape to secure thin laminates to leader boards before sending them along a conveyor. The adhesive tape is difficult to use because separation of the frame from the thin laminate can cause damage.

Naval Surface Warfare Center, Crane Division (NSWC Crane), has designed, patented, and implemented a frame for holding laminate during processing. The innovative multiframed system is designed for the handling and holding of ultra-thin delicate materials in a vertical orientation for such purposes as inspection and processing without introducing wrinkles or flaws in the material. Materials smaller than 1/100th of an inch or 10 mils are very difficult to move through the manufacturing process without handling and processing errors. With this new frame, first pass yield of the manufacturing process is increased by cutting down on waste caused by wrinkles and flaws introduced during the handling and processing of ultra-thin materials.

Advantages:

- Reduced switch over time
- Full access to the surface of materials
- Ease of handling thin materials
- Allows implementation of vertical dipping and vertical conveyor processes

Potential Applications:

- Circuit board manufacturers
- Materials manufacturers
- Printed wire board manufacturers

People:

- Ferguson, Jason (Project leader)

Intellectual Property:

Application Date: (None)

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