



**SCREENS  
AND STENCILS  
FOR SMT**

*Electroforming  
technology*

# Electroforming technology for SMT screens and stencils

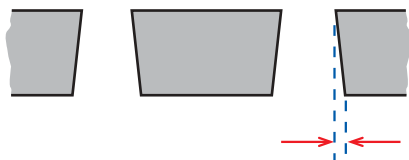
Electroforming is an additive technology that produces nickel foils through a process of extremely precise galvanic deposition. The quality of the process derives from the migration of the nickel around 3D geometries (the matrix) produced at photographic resolutions.

This process is ideal for screenprinting solder paste for SMD components with very fine pitch, BGA components, micro BGA and Wafer Bumping applications.



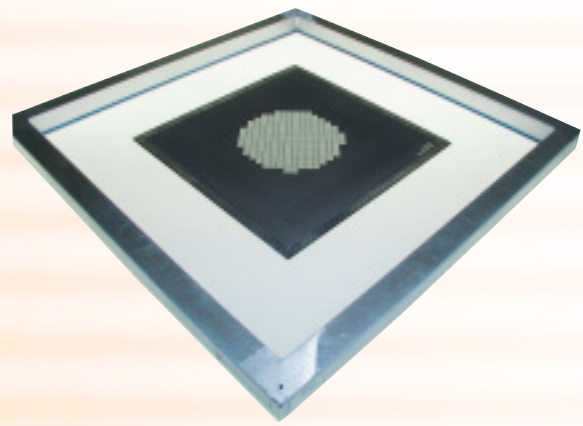
## Geometrical characteristics of stencil apertures

Dimensional tolerance of apertures  $< \pm 10\mu$   
Inclination of sidewall  $< 25\mu$



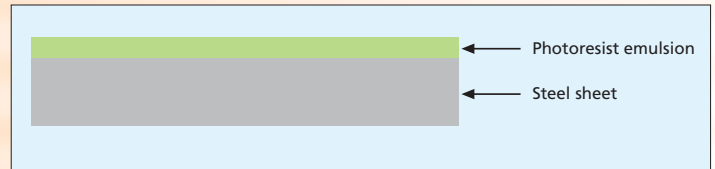
## Advantages of electroforming

- Elevated dimensional accuracy
- Enhanced trapezoidal aperture
- Low internal surface tension of foil even with high concentration of apertures
- Super-smooth sidewalls
- Ability to accurately determine stencil thickness even at non-standard values
- Excellent print quality

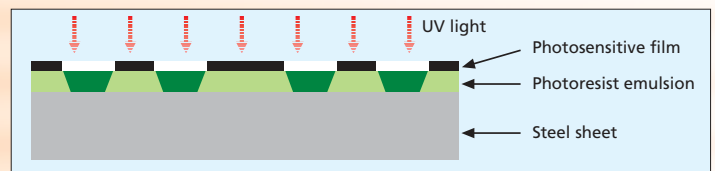


## Process stages

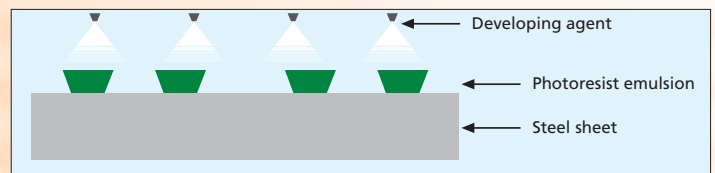
### 1 - Lamination



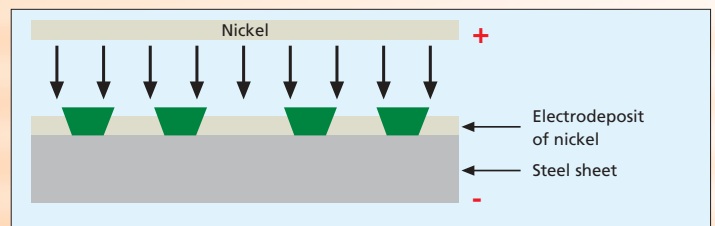
### 2 - Exposure



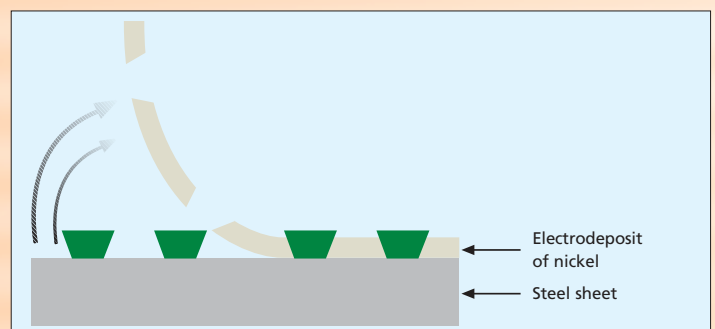
### 3 - Development



### 4 - Deposition



### 5 - Separation



Vaiarelli srl - C.so Vercelli, 16  
10078 Venaria Reale (Torino) - Italia  
Tel. +39 0114070811 - Fax +39 0114070812  
www.stv-italia.com e-mail: info@stv-italia.com

STV France sarl  
Zone d'activité Les Marlières, 59710 Avelin (Lille) - France  
Tél. + 33 (0)3 20160008 Fax + 33 (0)3 20961922  
www.stv-france.com e-mail: info@stv-france.com