NanoWeld[®]

Stronger now means... ...even Lighter

Vassilis Drakonakis, PhD Managing Director





OUR VISION

AmaDema aims for reliability. AmaDema is committed to achieve the highest level of quality in order to establish high-performing advanced material products in niche applications worldwide, and maximizing its own as well as its customers profits.

OUR MISSION

Respecting and adding value to people's everyday life through high-tech innovation, research, and development





AmaDema GOALS

Develop and manufacture novel smart textiles for advanced composite applications

Develop and manufacture novel and tailor-made advanced composite materials

Establish an Industrial Research and Development Hub in South East Europe for Design and Processing of Advanced Textiles for Composite Materials

□ Put Cyprus on the world map of composite material innovative products



Strengths



AmaDema has:

- A Superior Certified & Awarded Technology for Advanced Fiber Reinforced Composites
- Secured Intellectual Property (Patent & Trademark registered)
- □ Technology Flexibility; It can be implemented to:
 - any type of fabric (<u>Knitting</u>: UD, woven, etc. and/or <u>Material</u>: carbon, aramid, glass, etc.), and
 any existing fabric or prepreg production line
- Capability of Computer Aided Design and Structural Analysis
- A multi disciplinary Team (4 PhD Engineers, 2 Master Engineers, and 3 Financial and Marketing People)

https://youtu.be/aQyAsnxHxDE

NanoWeld[®] - AmaDema's Spearhead Product



www.nanoweld.net



powered by AMDM



Inspired by Nature



NanoWeld® Technology within the composite multilayer structure



NanoWeld® Description



NanoWeld[®] Process / Technology





NanoWeld[®] CFRP **Panels**

NanoWeld® CFRPs Potential

NanoWeld[®] CFRP Vs Conventional CFRP



Ama**D**ema

NanoWeld[®] Demand







NanoWeld[®] 4 years progress

powered by

AmaDema Office and Lab Facility

AmaDema moved to its new premises (Offices & Industrial Space) in the Industrial area of Kaimakli, Nicosia, Cyprus in June 2018



- PC work-stations with engineering software
- Project Management and Collaborative Tools

Engineering Equipment

- R2R Ultrasonic Welding machine | Thremocompression
- Electrospinning unit.
- Tools for measurement of physical properties (dimensions, weight).
- Mechanical testing equipment accessible through academic partners (CUT).



- 3D Printing
- Screen Printing
- Hot plates with magnetic stirrer.
- Weight Scale of high accuracy.
- Sonication machine for materials activation.





NanoWeld[®] Fabrication



Processing Equipment

- Lamination stations. Lamination stations Utilities and tools for Composites Processing.
- Resin infusion KIT: It includes all the necessary equipment and consumables to process CFRP textiles with resin infusion.
- Resin Hand lay-up KIT: It includes all the necessary equipment and consumables to process CFRP fabrics with resin hand lay-up.
- Molding material: Wood, Metal, Glass, Foam, Candle and other materials used for molding creation for particular-custom made CFRP products.
- Manual hydraulic Presser machine with customize heating elements used for low cost & high quality manufacturing of CFRP simple parts (Thermosets or Thermoplastics) under increased heat & pressure.

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