

Aluminium that heals itself

STITCHING takes ALMAZIUM®, a self-healing aluminium alloy, from powder-bed printing to wire-based additive manufacturing and welding, for aerospace, defence and space applications.

What makes ALMAZIUM® special

350–400 MPa

yield strength, combined with 20–25 % ductility

400–550 °C

heat treatment that activates healing

2–3 µm

pores healed, while pores in conventional printed alloys grow

Four lines of research



Printing with wire

DED-arc and DED-laser, for larger parts at lower cost than powder



Welding

TIG welding to itself and to wrought aluminium, without porosity growth



Watching healing happen

In-situ electron microscopy and X-ray tomography up to 550 °C



Life cycle assessment

Environmental and cost comparison of powder and wire routes

36

months

9

partners in Belgium, Czechia and France

Scan to visit the website

stitching-meranet.eu
LinkedIn: STITCHING M-ERA.NET

