

Scale-Up Accelerator



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High Temperature Material Systems
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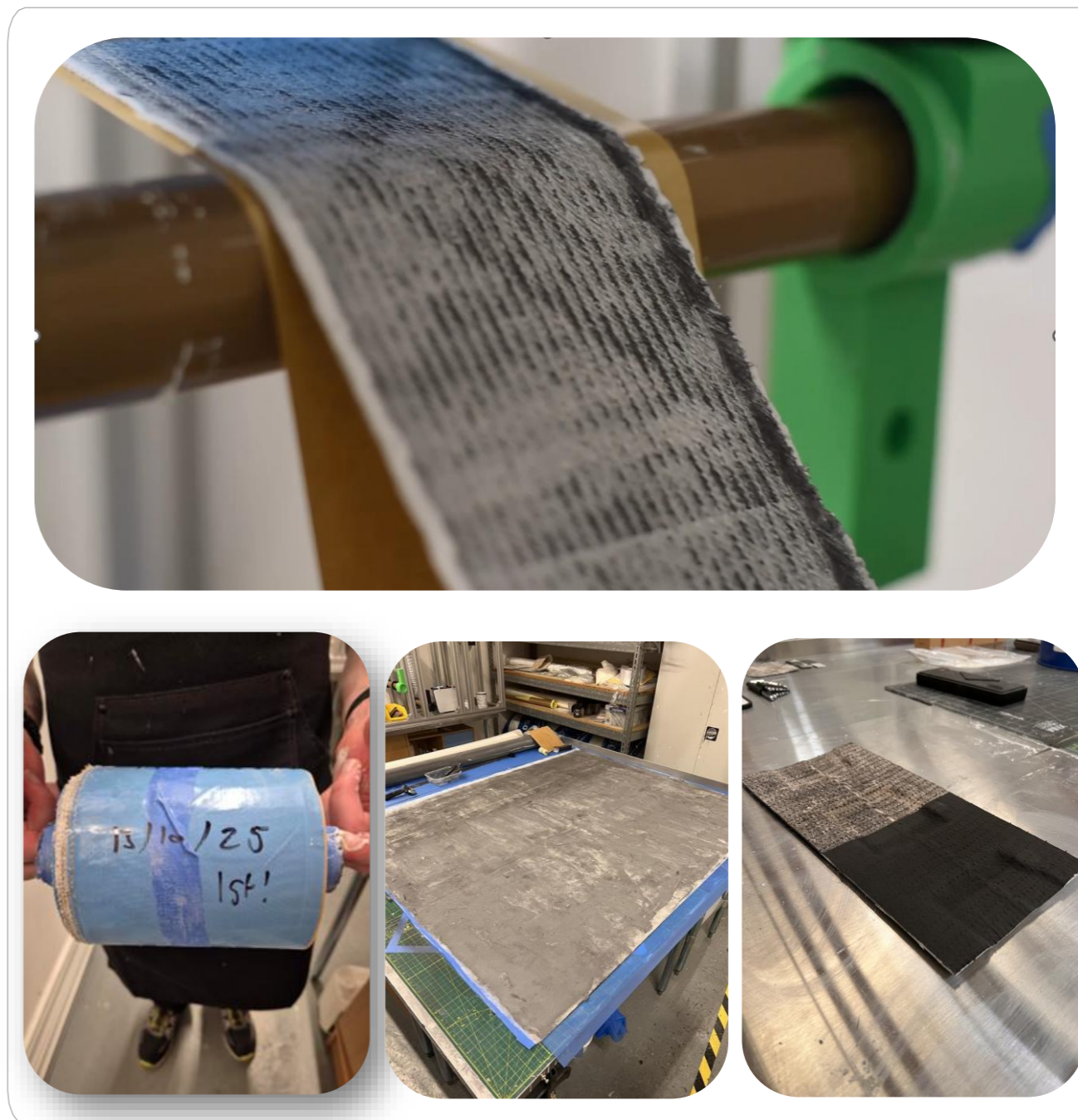
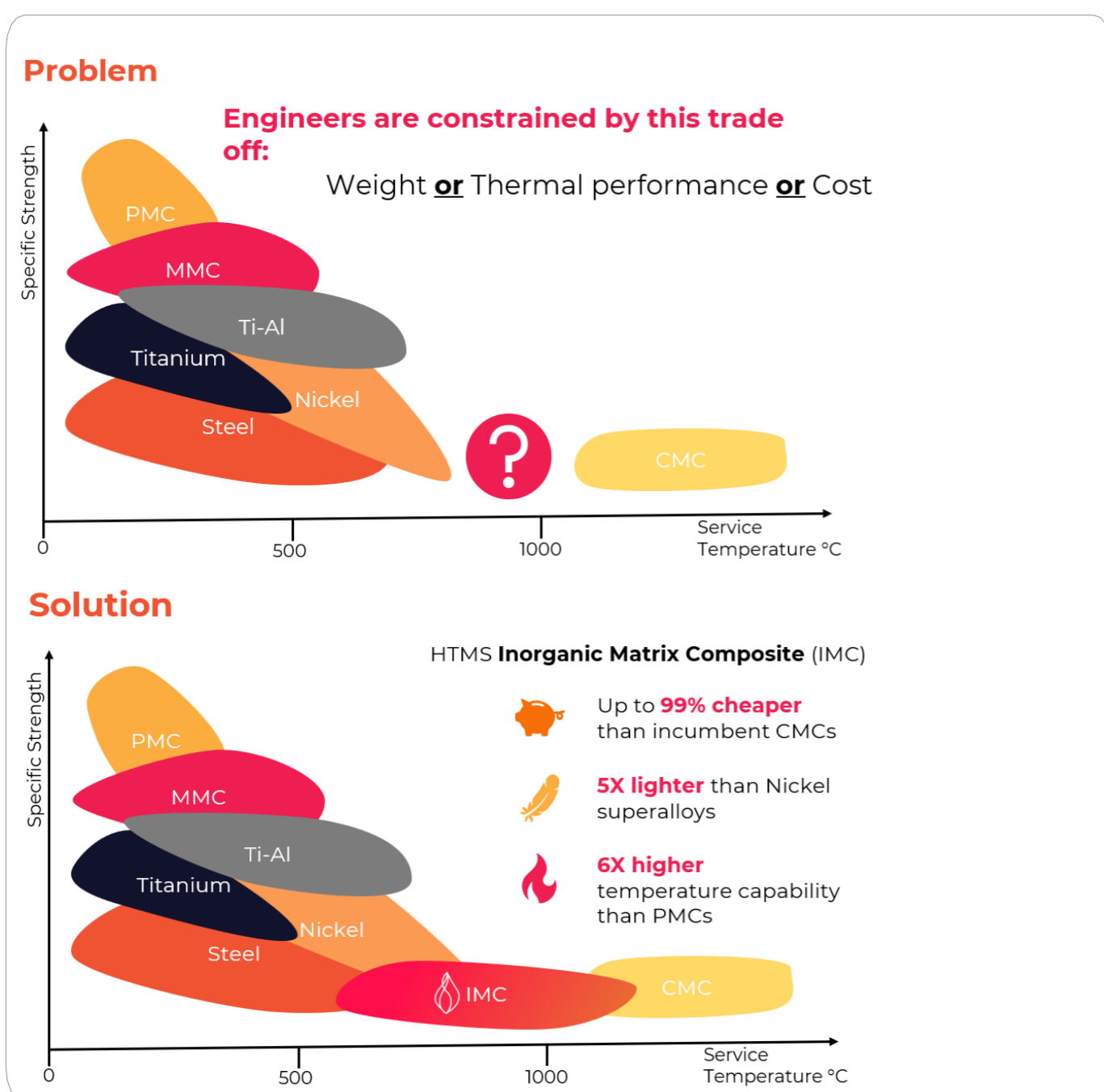
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»» THE CHALLENGE

In the market, current materials are limiting the design of next-generation technology. **Engineers** are forced into a **trade-off** for **weight, thermal performance, or cost**. Solving this challenge represents a market opportunity worth more than \$400 billion.

»» THE SOLUTION

HTMS **Inorganic Matrix Composites (IMC)** introduced a new class of materials that removes this traditional trade-off. Our proprietary chemistry enables lower-temperature processing, the use of more affordable fibres, and a simpler manufacturing process. As a result, our materials deliver industry-leading thermal performance at a significantly lower cost than incumbent CMCs.



KEY PRODUCT INFORMATION

- Withstands temperatures up to 1400°C for extreme heat applications.
- Low density (1.3–2.0 g/cm³), delivers lightweight performance.
- Manufacturable via autoclave, oven cure, or press moulding processes.
- Compatible with multiple fibres including glass, carbon, basalt, mineral, and alumina.
- Cost parity with carbon–epoxy composites.

IMPACT & APPLICATIONS

Use Cases for IMC's

- Defence:** Thermal Shielding
- Performance Automotive:** Exhausts, Shims, Exhaust Shielding, Engine Shielding
- Civil Aero:** Exhausts, Hot Section Thermal Shielding, Battery Pack Enclosures, Cell Separators, Gen. Thermal Shielding
- Clean Transport:** Battery Pack Enclosures

HTMS provides prepreg manufacturing services alongside R&D consulting solutions.