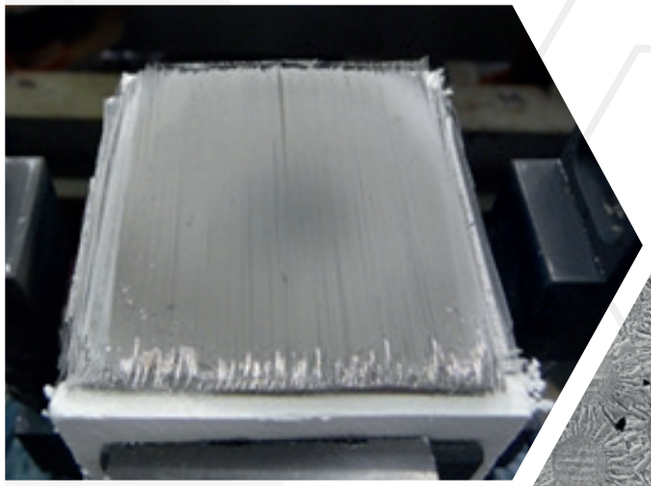
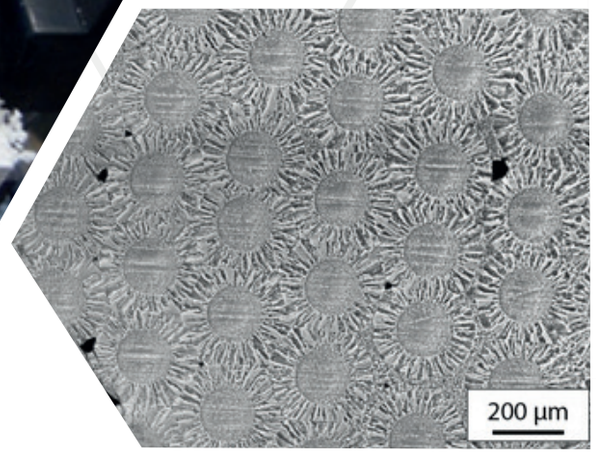
ATL
Advanced Coating Solutions

Case Studies

Case Study 1

Pseudo-ductile tungsten composite



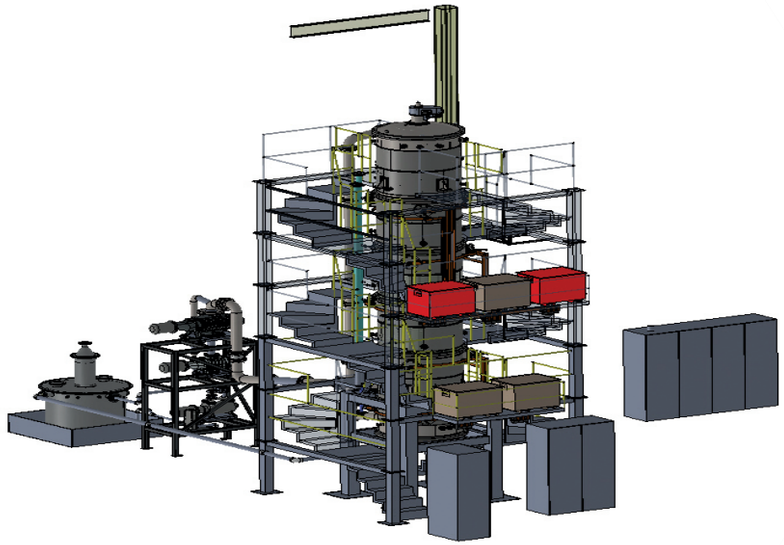


It's not often you can say that you are part of a team that has developed a brand new material, but so far as ATL is aware we have done just that, in partnership with the Max Planck Institute for Plasma Physics near Munich and the Forschungszentrum Jülich. The new material in question is a tungsten fibre reinforced tungsten metal. What is so wonderful about that? Well if you carefully tailor the interface between the fibres and the matrix, you can turn a relatively brittle material into a material with considerable toughness. This is particularly useful in high temperature environments where high thermal stresses and radiation damage can cause solid tungsten to crack up. An example being a nuclear fusion power plant such as ITER, currently under construction in Caderache in France.

The tungsten fibre is the same as you find in old fashioned filament light bulbs and the matrix material is deposited using ATL's specialism - chemical vapour infiltration or CVI for short.

Case Study 2

R&D to full scale production



ATL has been working with one particular for 10 years. We started out with supply of one of our standard R&D CVD/CVI systems, the HT1414. Whilst this system was in construction, and to get their R&D programme started, we were able to do coating work for them on our in-house CVD/CVI system.

In the next stage of the program, a second larger machine was then supplied to continue process development and start producing larger test pieces. This machine was also installed and fully supported by ATL in USA.

In the latest stage of the program, over the last two years a full-sized prototype reactor has been designed and built for the customer. This machine is by far the tallest ATL has ever built. It can produce 5m long CMC tubes from its 6m tall hot zone.

Learn more about our approach at **www.cvd.co.uk**

Solutions developed for multiple industries

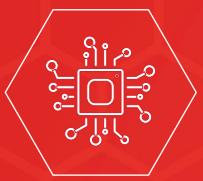
Aerospace

Automotive

Space

Medical

Nuclear



Semi-Conductor

Your global coating solutions partner. Learn more at www.cvd.co.uk

ATL
Advanced Coating Solutions

Progress Road, High Wycombe,
Bucks, HP12 4JD, UK

+44 (0) 1494 462101

info@cvd.co.uk

www.cvd.co.uk