TECHNICAL SPECIFICATION

Research and Development Services in CVD and CVI

Do you want to:

- **Coat** your parts to improve their lifetime and performance?
- Make your parts perform in more **extreme** conditions?
- **Upgrade** the existing coating on your parts to further improve their lifetime, performance and performance envelope?
- **Improve** the adhesion and other properties of your coatings?
- Produce high grade **composite materials**?
- **Improve** the physical and chemical properties of your composite materials?

Archer Technicoat has its in-depth knowledge of materials and coating/infiltration to put at your disposal. ATL is able to offer a wide range of R & D services to industry:

- Theoretical studies, process modelling and literature surveying.
- Development of new coatings for customers.
- Development of existing coatings for special requirements or new applications.
- Coating of samples for customer testing.
- Coating of pilot scale and small production batches.
- Design studies for new coating equipment from bench top laboratory through pilot plant to full production size machines.
- Supply of new coating equipment from bench top laboratory through pilot plant to full production size machines.

Recent examples of the type of work undertaken:

- CVD of **Silicon Nitride** as high temperature corrosion resistant layer.
- CVD of **Erbium Oxide** as hydrogen diffusion barrier.
- CVD of **Rhenium** layer onto C/C CMC as C diffusion barrier.
- CVD of **TiC, W & SiC** layers onto **diamond** grit to improve bonding and wetting properties.
- CVD of **Iridium** onto a free standing CVD tungsten tube for a high temperature (3000°C) oxidising atmosphere heating element.
- Forced flow CVI of **TiC** into a ceramic sponge for a high temperature filtering application.
- CVD of **Tungsten** on to alumina for protection against molten sodium attack.
- Production of 3D **SiC/SiC CMC** by CVI including interlayers.
- **Pre-treatment** of Carbon weaves by CVI before infiltration of SiC by liquid method.
- Free standing **pyrolytic graphite** tubes for medical applications.
- **SiC** overlay coatings by CVD on carbon parts for oxidation resistance.

For further information, please contact:

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