



GTB®

HRSG BOILERS Scope for Gas Turbine **Basalt in Boilers & Ducts**

Manufactured by MC Resources Ltd, GAS Turbine Basalt represents the benchmark choice for thermal/acoustic applications in gas turbine power generation plants. All GTB® materials are exonerated from classification under EU Directive 97/69EC (MMVF), making these materials a fit-for-purpose, cost-effective alternative to refractory ceramic fibres (RCF) and soluble ceramic substitutes (super-wools) in HRSG applications.

With a proven in-service field record of more than 25 years in the highly dynamic environment of gas turbine exhaust silencing and with more than 15 years as internal insulation in HRSG's, Lancaster Gas Turbine Basalt materials offer key environmental, technical and commercial advantages when installed into boilers, ducts and stacks.

ENVIRONMENTAL ADVANTAGE

Basalt mineral fibre is the only truly "green" MMVF. Comprising natural volcanic rock with nothing added, it can be re-cycled without special treatment. Under EU Directive 97/69EC, Lancaster GTB® materials are unclassified due to their fibre size. In contrast, refractory ceramic fibres are classified as Category 2 Carcinogens.

TECHNICAL ADVANTAGE

Proven durability in exhaust ducts and silencer baffles, comprising the most arduous locations within gas turbine power generation plants, initially confirmed the suitability of GTB® for use as internal insulation in HRSG projects: -

Hot Gas Silencing Environment

High velocity impingement
Highly turbulent flow dynamics (severe pulsation)
Perforated sheet – rapid heat-up (low thermal mass)

Boiler Lining Environment

Lower gas velocities – no direct impingement
Mild flow dynamics
Solid sheet – slower heat-up (greater thermal mass)

Thermal Capability – Lancaster GTB® materials exhibit very low thermal conductivity values when packed at density $\geq 130\text{kg/m}^3$ and can sustain working temperatures of 750°C.

Acoustic Capability – Lancaster GTB® materials deliver excellent acoustic properties, in terms of both noise absorption and transmission loss provision.

COMMERCIAL ADVANTAGE

GTB materials in roll form generally offer cost savings when compared with refractory ceramic fibre (RCF) and soluble ceramic substitutes (super-wools).

