

Attn: Martin Wadsworth

Managing Director DiscreteHeat Company Limited 1 Victoria Works Industrial Estate Coal Pit Lane Atherton Manchester M46 0RY

Dear Martin,

Loughborough Innovation Centre Loughborough University Loughborough Leicestershire LE11 3TU England

Tel/Fax: 01509 228850 e-mail: cj@ukwta.org

Date: 7th May 2010 Our Ref: 00147/caj

## Re: Suitability of Aluminium for Water Heating and Wet Central Heating System Applications

In response to your enquiry:

Aluminium and its alloys are widely used across the water heating industry with various grades of cast, wrought and extruded product being used for manufacture of a variety of water-contact components. Approximately half of the 1.5 million domestic boilers sold in the UK per annum currently have aluminium heat-exchangers.

Aluminum owes its excellent corrosion resistance, and its usage as one of the primary metals of commerce, to the barrier oxide film that is bonded strongly to its surface which, if damaged, re-forms immediately in most environments.

Aluminium can be prone to pitting corrosion in chloride containing environments where the solution is open to the air but this is generally not a problem with well-designed, properly flushed and maintained central heating systems.

Corrosion resistance is reduced where pH of the water is elevated above 8.4 for long periods.

I trust that is sufficient for your requirements, but please do not he sitate to contact me if I can be of further assistance.

Yours sincerely,

Dr. Carl Jasper CEng MIMMM

Chairman