CLAIMS

1. An inlet assembly for an abatement burner, comprising:

an inlet conduit operable to convey an effluent gas stream to be treated from an inlet aperture via a bore to an outlet aperture for treatment; and a lance conduit operable to convey a fuel gas from a gas inlet aperture via a gas bore to a gas outlet aperture positioned within said bore for mixing with said effluent gas stream, a cross-sectional area of said gas bore increasing towards said gas outlet aperture wherein said lance conduit comprises a taper section which tapers outwardly proximate said gas outlet aperture and wherein said taper section defines at least one void operable to convey gas between said bore and said gas bore.

2. The inlet assembly of claim 1, wherein a cross-sectional area of said gas outlet aperture is greater than a cross-sectional area of said gas inlet aperture.

3. The inlet assembly of claim 1, wherein said inlet conduit and said lance conduit are dimensioned to decrease a cross-sectional area of said bore towards said gas outlet aperture.

4. The inlet assembly of claim 1, wherein an external cross-sectional perimeter of said lance conduit increases towards said gas outlet aperture.

5. The inlet assembly of claim 1, wherein said taper section has a taper angle of up to around 60º

6. The inlet assembly of claim 1, wherein said at least one void is configured to direct said effluent gas stream from said bore radially inwards into said gas bore for pre-mixing therewithin.

7. The inlet assembly of claim 1, wherein said at least one void is configured to direct said fuel gas from said gas bore radially outwards into said bore for pre-mixing therewithin.

8. The inlet assembly of claim 1, wherein said taper section defines a plurality of said voids.

9. The inlet assembly of claim 1, wherein said taper section defines an opposing pair of said voids.

10. The inlet assembly of claim 1, wherein said taper section defines two opposing pairs of said voids.

11. The inlet assembly of claim 1, comprising a flow restrictor positioned within said bore proximate said lance conduit.

12. The inlet assembly of claim 11, wherein said flow restrictor extends along said axial length of said bore no further than said gas outlet aperture.

13. A method, comprising:

conveying an effluent gas stream to be treated from an inlet aperture of an inlet conduit via a bore to an outlet aperture for treatment; and

conveying a fuel gas from a gas inlet aperture of a lance conduit via a gas bore to a gas outlet aperture positioned within said bore for mixing with said effluent gas stream, a cross-sectional area of said gas bore increasing towards said gas outlet aperture wherein said lance conduit comprises a taper section which tapers outwardly proximate said gas outlet aperture and wherein said taper section defines at least one void operable to convey gas between said bore and said gas bore.