CLAIMS

1. A modular abatement apparatus (10) for abatement of an effluent stream from a semiconductor processing tool, comprising:

a housing (40) defining a common housing chamber;

a plurality of combustion chamber modules (30), each combustion chamber module (30) comprising a module housing (80), and each combustion chamber module (30) positionable within said common housing chamber for treating said effluent stream, each combustion chamber module (30) containing a foraminous sleeve (90) defining a combustion chamber (120) therewithin and wherein said plurality of combustion chamber modules (30) are releasably retainable within said common housing chamber.

2. The modular abatement apparatus (10) of claim 1, wherein at least one combustion chamber module (30) is shaped and dimensioned to occupy a module cross-sectional area and said common housing chamber is shaped and dimensioned to extend across at least a plurality of said module cross-sectional areas, preferably said common housing chamber is shaped and dimensioned to extend across at least a plurality of adjacent module cross-sectional areas and/or said common housing chamber is shaped and dimensioned to extend across at least an array of N x M of adjacent module cross-sectional areas.

3. The modular abatement apparatus (10) of claim 2, wherein said common housing chamber is shaped and dimensioned to extend across said plurality of said module cross-sectional areas and a pilot module cross-sectional area.

4. The modular abatement apparatus (10) of any one of claims 2 to 3, wherein said common housing chamber comprises a head-plate (150) defining an upstream surface of said housing chamber, said head-plate (150) having a plurality of effluent stream inlets (60), each positioned towards a centre of a corresponding module cross-sectional area, preferably wherein said head-plate

(150) has a plurality of treatment material inlets (70), each positioned towards a perimeter of a corresponding module cross-sectional area.

5. The modular abatement apparatus (10) of any preceding claim, wherein said plurality of combustion chamber modules (30) are tessellatable within said common housing chamber.

6. The modular abatement apparatus (10) of any preceding claim, wherein said plurality of combustion chamber modules (30) comprise combustion chamber modules (30) of differing sizes.

7. The modular abatement apparatus (10) of any one of claims 2 to 6, wherein each combustion chamber module (30) is shaped and dimensioned to occupy a multiple of said module cross-sectional area.

8. The modular abatement apparatus (10) of any one of claims 2 to 7, wherein at least one combustion chamber module (30) is a multiple-sized combustion chamber module (30) shaped and dimensioned to occupy a plurality of module cross-sectional areas.

9. The modular abatement apparatus (10) of any preceding claim, wherein each combustion chamber module (30) contains said foraminous sleeve (90) which surrounds that combustion chamber (120), preferably wherein each combustion chamber module (30) comprises a module housing (80) positioned away from and surrounding said foraminous sleeve (90) to define a combustion chamber plenum (100) which is configured to convey treatment materials from a corresponding treatment material inlet (70) and through that foraminous sleeve (90) into that combustion chamber (120).

10. The modular abatement apparatus (10) of any preceding claim, wherein each combustion chamber module (30) is tubular.

11. The modular abatement apparatus (10) of any preceding claim, wherein each combustion chamber module 930) comprises an outlet for conveying a treated effluent stream to downstream processing apparatus.

12. The modular abatement apparatus (10) of any preceding claim, wherein at least one combustion chamber module (30) comprises a combustion chamber mount (50) through which a corresponding effluent stream inlet extends, said combustion chamber mount (50) being dimensioned to reduce an internal length of that combustion chamber (120) compared to other combustion chambers (120).

13. The modular abatement apparatus (10) of claims 11 or 12, wherein said common housing chamber comprises walls (180) which are configured to extend around said plurality of plurality of combustion chamber modules (30), said walls (180) extending from said head plate (150) to said downstream processing apparatus, preferably wherein said downstream processing apparatus comprises a weir (170) located downstream of said common housing chamber, said weir (170) having a cross-sectional area matching that of said common housing chamber.

14. The modular abatement apparatus (10) of any preceding claim, comprising at least one blanking module positioned within said common housing chamber adjacent at least one combustion chamber module (30).

15. A method, comprising:

providing a modular abatement apparatus (10) for abatement of an effluent stream from a semiconductor processing tool,

dimensioning a housing (40) of the abatement apparatus (10) defining a common housing chamber,

positioning a plurality of releasably retainable combustion chamber modules (30) within said common housing chamber for treating said effluent stream, each combustion chamber module (30) comprising a module housing

(80) and containing a foraminous sleeve (90) defining a combustion chamber (120) therewithin.