

Spiral Cycle and Environmental Protection Technologies

- *Electrical Power Generation*
- *Treatment of flue gas to pristine state to the environment*



Green Power



Universal Technologies Corporation

Spiral Cycle Technologies with Spiralflexx

UTC has developed over fifteen Spiral Cycle Technologies for generating electrical power to achieve the maximum thermal, mechanical and electrical efficiencies to minimize the capital, operational and maintenance costs and deliver higher margins.

Hybrid Spiral Cycles with Spiralflexx

- Installed in conjunction with existing Gas Turbine / Steam Turbine Systems to capture waste heat and steam condensing heat.
- Generates up to 25 - 50% more electrical power without consuming additional fuel.

Spiral Cycles with Spiralflexx

Converts any low, medium or high level heat into:

- Electrical Power
- Refrigeration - any level
- Cooling

Industries Generating Flue Gases - Waste or Unused Heat

- Power & Utility Industries (Gas, Diesel, Coal, Refuse, Petcoke)
- Single and Combined Cycle Units
- Heavy Industries
- Refinery, Petrochemical & Gasification Plants
- Incinerators
- IC Engine Exhaust
- Heavy Industries
 - Steel
 - Aluminum
 - Copper
 - Cement
 - Pulp & Paper
 - Glass
 - Soda Ash
 - Waste Recycle

Ultimate Flue Gas Scrubbing Technology

- As temperature of Flue Gas is lowered, the SO_x and NO_x are very reactive at these conditions. The atomic Oxygen in the NO_x will also react with both SO_x and Oxides of Nitrogen to produce corresponding acids under the wet conditions.
- Flue Gas is scrubbed with dilute alkali solution to produce stable salts. For the Flue gas loaded with particulates, the two scrubbers in series are applied: First, venturi scrubber is applied to remove the particulates and Second, a packed bed type is used to remove the pollutants, thus producing the flue gas into pristine state. The pristine flue gas will disperse to atmosphere instantaneously without any visible plumes.
- Pollutants such as SO_x and NO_x can also be converted into fertilizers or specialty chemicals.
- Plumes - These plumes are known to carry wet acid gases which are very corrosive in nature to the surrounding environments. Our scrubbing technology can compliment or supplement existing or new installations and eliminate the visible plumes.

Imagination is the Limit



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