We Claim:

1. A rotary regenerative scrubber for removing a selected gaseous component from a flow of gas to be cleaned, the scrubber comprising:

a housing defining a chamber having a first flow passage for a flow of gas to be cleaned and a second flow passage for a flow of regenerating gas;

a rotor assembly disposed within the chamber for rotation through the first flow passage and the second flow passage, the rotor assembly carrying a regenerative material capable of removing the selected gaseous component; and

a pinion gear and spur gear drive arrangement for rotating the rotor assembly about an axis.

2. The rotary regenerative scrubber as recited in claim 1 wherein the pinion gear and spur gear drive arrangement comprises:

a spur gear extending circumferentially about an exterior surface of the rotor assembly;

a drive motor mounted to the housing, the rotor having a drive shaft into the chamber; and

a pinion gear mounted to a distal end of the drive shaft, the pinion gear engaging the spur gear in intermeshing drive relationship.

3. The rotary regenerative scrubber as recited in claim 2 wherein the spur gear is formed integrally with a rotor of the rotor assembly.

4. The rotary regenerative scrubber as recited in claim 2 wherein the drive motor comprises a DC brushless motor.

5 The rotary regenerative scrubber as recited in claim 1 wherein the rotor assembly carries a regenerative absorbent material capable of adsorbing carbon dioxide gas.

CLAIMS

1. A rotary regenerative scrubber for removing a selected gaseous component from a flow of gas to be cleaned, the scrubber comprising:

a housing defining a chamber having a first flow passage for a flow of gas to be cleaned and a second flow passage for a flow of regenerating gas;

a rotor assembly disposed within the chamber for rotation through the first flow passage and the second flow passage, the rotor assembly carrying a regenerative material capable of removing the selected gaseous component; and

a pinion gear and spur gear drive arrangement for rotating the rotor assembly about an axis;

wherein the pinion gear and spur gear drive arrangement comprises:

a spur gear extending circumferentially about an exterior surface of the rotor assembly;

a drive motor mounted to an outer surface of the housing, the drive motor having a drive shaft extending through the outer surface of the housing and into the chamber; and

a pinion gear mounted to a distal end of the drive shaft, the pinion gear engaging the spur gear in intermeshing drive relationship.

2. The rotary regenerative scrubber as recited in claim 1 wherein the spur gear is formed integrally with a rotor of the rotor assembly.

3. The rotary regenerative scrubber as recited in claim 1 wherein the drive motor comprises a DC brushless motor.

4. The rotary regenerative scrubber as recited in claim 1 wherein the rotor assembly carries a regenerative absorbent material capable of adsorbing carbon dioxide gas.