CLAIMS

1. A motorized apparatus for use in maintaining a turbine assembly, said motorized apparatus comprising:

a body configured to move through the turbine assembly;

at least one maintenance device coupled to said body, wherein said at least one maintenance device comprises a repair tool;

a drive system configured to move said body relative to the turbine assembly, said drive system comprising a motor and a steering component configured to steer said motorized apparatus relative to the turbine assembly;

a coupling mechanism configured to couple said body to an interior surface of the turbine assembly during motion along the interior surface; and

an anchoring component configured to maintain said motorized apparatus in position relative to the interior surface of the turbine assembly during at least one of the following: rotation of said motorized apparatus, inspection of a surface by said motorized apparatus, and repair of the surface by said motorized apparatus.

2. The motorized apparatus in accordance with claim 1, wherein said at least one maintenance device comprises said repair tool and an inspection device.

3. The motorized apparatus in accordance with claim 2, wherein said inspection device comprises at least one of the following: a visual sensor, an acoustic sensor, a mechanical sensor, a thermal sensor, an eddy current sensor, and a magnetic sensor.

4. The motorized apparatus in accordance with claim 1 further comprising a plurality of wheels, wherein said motor is drivingly coupled to said plurality of wheels.

5. The motorized apparatus in accordance with claim 1 further comprising a communication component configured to remotely communicate with a controller.

6. The motorized apparatus in accordance with claim 5, wherein the communication component comprises a wireless transceiver configured to receive information from the controller and/or send information to the controller.

7. The motorized apparatus in accordance with claim 5, wherein said communication component is further configured to send inspection information of the turbine assembly to the controller.

8. The motorized apparatus in accordance with claim 5, wherein said communication component is configured to receive user inputs relating to control of said motorized apparatus.

9. The motorized apparatus in accordance with claim 1, wherein said repair device comprises at least one of the following: an applicator, a drill, a grinder, and a heater.

10. A system for maintaining a turbine assembly, said system comprising:

a motorized apparatus comprising:

a body configured to move through the turbine assembly;

at least one maintenance device coupled to said body, wherein said at least one maintenance device comprises a repair tool;

a drive system configured to move said body relative to the turbine assembly, said drive system comprising a motor and a steeling component, said steering component configured to steer said motorized apparatus relative to the turbine assembly;

a communication component configured to perform at least one of the following: receive information and send information;

a coupling mechanism configured to couple said body to an interior surface of the turbine assembly during motion along the interior surface; and

an anchoring component configured to maintain said motorized apparatus in position relative to the interior surface of the turbine assembly during at least one of the following: rotation of said motorized apparatus, inspection of a surface by said motorized apparatus, and repair of the surface by said motorized apparatus; and

a controller positioned remotely from said motorized apparatus, said controller configured to perform at least one of the following: send information to said motorized apparatus and receive information from said motorized apparatus.

11. The system in accordance with claim 10 further comprising a localization system configured to determine a position of said motorized apparatus relative to the turbine assembly.

12. The system in accordance with claim 10, wherein said at least one maintenance device comprises said repair tool and an inspection device.

13. The system in accordance with claim 12, wherein said repair tool comprises at least one of the following: an applicator, a drill, a grinder, and a heater, and wherein said inspection

device comprises at least one of the following: a visual sensor, a mechanical sensor, a temperature sensor, a magnetic sensor, an infrared sensor, an acoustic sensor, an inclinometer, a rotational velocity sensor, and an eddy current sensor.

14. The system in accordance with claim 13, wherein said inspection device comprises a camera and said controller comprises a user interface to display image information of the turbine assembly based on information received from said motorized apparatus.

15. The system in accordance with claim 10 further comprising a user interface configured to enable a user to input information relating to control of said, motorized apparatus.

16. The system in accordance with claim 10, wherein said motorized apparatus further comprises a plurality of wheels, wherein said motor is drivingly coupled to said plurality of wheels.

17. The system in accordance with claim 10 further comprising a memory configured to store maintenance information collected by said motorized apparatus.