

CLAIMS

What is claimed is:

1. A method for maintenance of a turbine assembly, the turbine assembly comprising a rotor and a stator, the stator comprising a damaged region, the method comprising:

disposing a remotely controllable maintenance apparatus on the rotor;

positioning the maintenance apparatus proximate to the damaged region by rotating the rotor; and

repairing the damaged region by operating a repair tool disposed on the apparatus.
2. The method of claim 1, wherein a camera is disposed on the apparatus, wherein the camera is operable to remotely transmit visual data to a receiver.
3. The method of claim 2, wherein the camera is operable to wirelessly transmit visual data to a receiver.
4. The method of claim 1, further comprising anchoring the apparatus subsequent to disposing of the apparatus.
5. The method of claim 1, wherein operating the repair tool comprises remotely transmitting a control signal to the apparatus.
6. The method of claim 5, wherein operating the repair tool comprises wirelessly transmitting a control signal to the apparatus.

7. The method of claim 1, wherein operating the repair tool comprises removing material from the damaged region.
8. The method of claim 1, wherein operating the repair tool comprises disposing a repair material on the damaged region.
9. The method of claim 1, wherein operating the repair tool comprises moving the repair tool relative to the damaged region.
10. The method of claim 1, wherein the damaged region is a crack and repairing the damaged region comprises repairing the crack.
11. The method of claim 1, further comprising removing the apparatus from the turbine assembly.
12. A method for maintenance of a turbine assembly, the turbine assembly comprising a rotor and a stator, the rotor comprising a damaged region, the method comprising:
 - disposing a remotely controllable maintenance apparatus on the stator;
 - positioning the damaged region proximate to the maintenance apparatus by rotating the rotor; and
 - repairing the damaged region by operating a repair tool disposed on the apparatus.
13. The method of claim 12, wherein a camera is disposed on the apparatus, wherein the camera is operable to remotely transmit visual data to a receiver.

14. The method of claim 13, wherein the camera is operable to wirelessly transmit visual data to a receiver.
15. The method of claim 12, further comprising anchoring the apparatus subsequent to disposing of the apparatus.
16. The method of claim 12, wherein operating the repair tool comprises remotely transmitting a control signal to the apparatus.
17. The method of claim 16, wherein operating the repair tool comprises wirelessly transmitting a control signal to the apparatus.
18. The method of claim 12, wherein operating the repair tool comprises removing material from the damaged region.
19. The method of claim 12 wherein operating the repair tool comprises disposing a repair material on the damaged region.
20. The method of claim 12, wherein operating the repair tool comprises moving the repair tool relative to the damaged region.

21. The method of claim 12, wherein the damaged region is a crack and repairing the damaged region comprises repairing the crack.
22. The method of claim 12, further comprising removing the apparatus from the turbine assembly.