CLAIMS

1. A method for processing a turbomachine airfoil element, the airfoil element comprising a metallic substrate having:
an airfoil extending from a first end to a second end; and
a cooling passageway system extending through the airfoil, the method comprising:
applying an external vibration via a pneumatic vibrator to an area of the airfoil element targeting internal fouling of the cooling passageway system, wherein a buffer is between the substrate and the pneumatic vibrator and comprises:
a metallic strip having a first face and a second face opposite the first face;
a cushion along the first face; and
means along the second face for registering the pneumatic vibrator;
flushing the cooling passageway system; and
imaging the cooling passageway system.

2. The method of claim 1 further comprising:
an autoclave leaching to clean the element using an alkaline solution after the applying but before the flushing.

3. The method of claim 1 further comprising:
locating the internal fouling, if any remaining, via the imaging; and
repeating:
the applying, the applying targeting the located internal fouling;
the flushing;
the imaging; and
the locating.

4. The method of claim 3 further comprising:
autoclave leaching after the vibrating and before the flushing.

5. The method of claim 4 further comprising:
conductivity testing and drying after the flushing and before the imaging, the conductivity testing comprising:
immersing the element in boiling water;
removing the element from the boiling water;
after the removing rinsing the element in deionized water; and
testing conductivity of a sample of the rinse water.

6. The method of claim 1 further comprising:
conductivity testing and drying after the flushing and before the imaging, the conductivity testing comprising:
immersing the element in boiling water;
removing the element from the boiling water;
after the removing rinsing the element in deionized water; and
testing conductivity of a sample of the rinse water.

7. The method of claim 6 further comprising:
an autoclave leaching to clean the element using an alkaline solution after the applying but before the flushing.

8. The method of claim 1 wherein:
the turbine element is a blade.

9. The method of claim 1 wherein:
the internal fouling is along a turn in the passageway system.

10. The method of claim 1 wherein:

the imaging is an x-ray imaging.

11. The method of claim 1 wherein the means comprises:
an elevated area surrounding a recess.

12. The method of claim 1 wherein the cushion comprises:
a glass fiber tape.