What Is Claimed Is:

1. A method associated with a valve package having a process valve, an actuator and a controller, the method comprising:

obtaining a baseline signature corresponding to opening or closing the valve as the valve moves from a first position to a second position;

obtaining an operating signature corresponding to values associated with the baseline signature each time the valve moves from the first position to the second position;

comparing the operating signature to the baseline signature; and

determining if one or more of the values associated with the operating signature is within an acceptable range from the corresponding one or more values in the baseline signature.

2. The method according to claim 1 further comprising triggering an alarm notification when the one or more values of the operating signature exceed the acceptable range.

3. The method according to claim 1 wherein the operating signature is stored in memory each time the valve moves from a first position to a second position.

4. The method according to claim 3 wherein a plurality of operating signatures are stored in memory in accordance with a first-in, first-out method.

5. The method according to claim 4 wherein four operating signatures are stored.

6. The method according to claim 1 wherein the values include differential pressure and time.

7. The method according to claim 6 wherein the acceptable range includes a first acceptable and a second acceptable range.

8. The method according to claim 7 wherein the first acceptable range includes a differential pressure range of approximately 80 psi to 5 psi at and a time range of approximately 0.5 seconds.

9. The method according to claim 1 wherein the baseline signature corresponding to closing the valve includes a first section wherein differential pressure is exhausted, a second section including a slew time and a third section wherein the valve is closed.

10. A method associated with a valve package having a process valve, an actuator and a controller, the method comprising:

obtaining a baseline signature corresponding to opening or closing the valve as the valve moves from a first position to a second position;

obtaining an operating signature corresponding to values associated with the baseline signature each time the valve moves from the first position to the second position;

storing a plurality of operating signatures in memory in accordance with a first-in, first-out method;

comparing the operating signature to the baseline signature;

determining if one or more of the values associated with the operating signature is within an acceptable range from the corresponding one or more values in the baseline signature; and

locking an operating signature having one or more values that exceed the acceptable range.

11. The method according to claim 10 further comprising triggering an alarm notification when the one or more values of the operating signature exceed the acceptable range.

12. The method according to claim 11 wherein the operating signature is stored in memory each time the valve moves from a first position to a second position.

13. The method according to claim 12 wherein a plurality of operating signatures are stored in memory in accordance with a first-in, first-out method.

14. The method according to claim 13 wherein four operating signatures are stored.

15. The method according to claim 14 wherein the values include differential pressure and time.

16. The method according to claim 15 wherein the acceptable range includes a first acceptable and a second acceptable range.

17. The method according to claim 16 wherein the first acceptable range includes a differential pressure range of approximately 80 psi to 5 psi at and a time range of approximately 0.5 seconds.

18. The method according to claim 10 wherein the baseline signature corresponding to closing the valve includes a first section wherein differential pressure is exhausted, a second section including a slew time and a third section wherein the valve is closed.

Claims:

1. A method associated with a valve package having a process valve, an actuator and a controller, the method comprising:

obtaining a baseline signature corresponding to moving the valve from a first position to a second position and including a first baseline section, a second baseline section, and a third baseline section;

obtaining a plurality of operating signatures associated with the baseline signature and each obtained operating signature including a first operating section, a second operating section, and a third operating section, a single operating signature of the plurality of operating signatures obtained each time the valve moves from the first position to the second position;

comparing each obtained operating signature to the baseline signature;

determining if the first operating section of each obtained operating signature is within a first acceptable range from the first baseline section; and

determining if the third operating section of each obtained operating signature is within a second acceptable range from the third baseline section.

2. The method according to claim 1 further comprising triggering an alarm notification when either the first operating section of one of the plurality of obtained operating signatures is not within the first acceptable range from the first baseline section or the third operating section of one of the plurality of obtained operating signatures is not within the second acceptable range from the third baseline section.

3. The method according to claim 1 wherein one or more of the plurality of operating signatures is stored in memory each time the valve moves from the first position to the second position.

4. The method according to claim 3 wherein the one or more of the plurality of operating signatures are stored in memory in accordance with a first-in, first-out method.

5. The method according to claim 4 wherein four operating signatures are stored.

6. The method according to claim 1 wherein the baseline signature and the plurality of operating signatures represent measured values of differential pressure and time.

7. The method according to claim 6 wherein the first acceptable range includes a differential pressure range of approximately 80 psi to 5 psi and a time range of approximately 0.5 seconds.

8. The method according to claim 1 wherein the baseline signature corresponds to closing the valve and in the first baseline section differential pressure is exhausted, the second baseline section includes a slew time wherein the valve is closing, and in the third baseline section the valve is moving into a valve seat and subsequently closed.

9. A method associated with a valve package having a process valve, an actuator and a controller, the method comprising:

obtaining a baseline signature corresponding to moving the valve from a first position to a second position and including a first baseline section, a second baseline section, and a third baseline section;

obtaining a plurality of operating signatures associated with the baseline signature value and each obtained operating signature including a first operating section, a second operating section, and a third operating section, a single operating signature of the plurality of operating signatures obtained each time the valve moves from the first position to the second position;

storing each obtained operating signature in memory in accordance with a first-in, first-out method;

comparing each obtained operating signature to the baseline signature;

determining if the first operating section of each obtained operating signature is within a first acceptable range from the first baseline section;

determining if the third operating section of each obtained operating signature is within a second acceptable range from the third baseline section; and

locking an obtained operating signature if either the first operating range of the obtained operating signature is not within the first acceptable range from the first baseline section or the third operating range of the obtained operating signature is not within the second acceptable range from the third baseline section.

10. The method according to claim 9 further comprising triggering an alarm notification when either the first operating section of one of the plurality of obtained

operating signatures is not within the first acceptable range from the first baseline section or the third operating section of one of the plurality of obtained operating signatures is not within the second acceptable range from the third baseline section.

11. The method according to claim 9 wherein four operating signatures are stored.

12. The method according to claim 9 wherein the baseline signature and the plurality of operating signatures represent measured values of differential pressure and time.

13. The method according to claim 12 wherein the first acceptable range includes a differential pressure range of approximately 80 psi to 5 psi and a time range of approximately 0.5 seconds.

14. The method according to claim 9 wherein the baseline signature corresponds to closing the valve and in the first baseline section differential pressure is exhausted, the second baseline section includes a slew time wherein the valve is closing, and in the third baseline section the valve is moving into a valve seat and subsequently closed.