CLAIMS

1. A method of controlling monitoring of a vacuum system, said method comprising:

selecting at least one of a plurality of processes for monitoring said vacuum system from a data store storing said plurality of processes; and

executing said at least one selected process; wherein

one of said at least one selected processes comprises a process for monitoring a parameter of said vacuum system and for responding to changes in said parameter to trigger ~~at least one of~~:

execution of a further one of said plurality of processes~~;~~

~~output of an alarm or notification signal; and~~

~~output of a control signal for controlling operation of at least one component of said vacuum system~~.

2. A method according to claim 1, wherein said process for monitoring a parameter of said vacuum system and for responding to changes in said parameter further triggers at least one of:

output of an alarm or notification signal; and

output of a control signal for controlling operation of at least one component of said vacuum system.

3~~2~~. A method according to claim 1 or claim 2, wherein

at least some of said plurality of processes stored within said data store comprise one or more of:

a process for monitoring a parameter of said vacuum system;

a process for monitoring at least one of: a value and rate of change of a value output by at least one sensor sensing a parameter of said vacuum system;

a process for comparing a value output by at least one sensor sensing a parameter of said vacuum system to a threshold value; and

a process for performing a predefined mathematical function on at least one parameter sensed by a sensor in said vacuum system; and

a process for adjusting a threshold at which to respond to changes in said parameter in dependence upon data from previously executed processes; and

a process for triggering an alarm, notification or control signal.

43. A method according to any preceding claim, wherein said process of monitoring a parameter of said vacuum system comprises requesting said parameter from a data interface, said parameter requested comprising at least one of a current value of said parameter and one or more historic values of said parameter.

54. A method according to any preceding claim, wherein said step of selecting comprises one of:

periodically selecting at least one of said processes for execution from said data store;

selecting at least one of said processes for execution from said data store in response to an output of an executed process; and

selecting at least one of said processes for execution in response to an input from a user.

65. A method according to claim 54, wherein said step of selecting comprises:

periodically selecting one of said plurality of processes for execution every predetermined first period;

periodically selecting another of said plurality of processes for execution plurality of processes for execution every predetermined second period, said predetermined second period being different to said predetermined first period.

76. A method according to any preceding claim, wherein said parameters comprise at least one of:

temperature;

flow rate;

vibrations;

counter values;

pressure; and

power.

87. A method according to any preceding claim, comprising in response to determining execution of one of said processes failing, terminating operation of said process.

98. A method according to claim 87, comprising following terminating of said operation of said process deleting said process from said data store.

109. A method according to any preceding claim, comprising storing data determined from execution of said process in a further data store.

1110. A method according to any preceding claim, comprising periodically storing said process to said data store at preselected points during execution of said process.

1211. A method according to any preceding claim, wherein said step of selecting comprises uploading said process for execution from said data store and decrypting said process prior to said execution.

1312. A method according to claims 1110 and 1211, comprising encrypting said process prior to storing said process to said data store.

1413. A method according to any preceding claim, comprising a further step of at least one of adding, updating or deleting at least one process from said data store.

1514. A computer program comprising a plurality of computer executable instructions which when executed by a processor are operable to control said computer to perform a method according to any one of claims 1 to 1413.

1615. A control system for controlling the monitoring of at least one vacuum system, said control system comprising:

a processor; and

a data store associated with said processor storing said computer program according to claim 1514.

1716. A control system according to claim 1615, further comprising

a data store storing a plurality of applications each comprising a plurality of computer executable instructions operable when executed by said processor to control said processor to perform a corresponding plurality of monitoring processes, at least some of said plurality of monitoring processes comprising one or more of:

a process for monitoring a parameter of said vacuum system;

a process for monitoring at least one of: a value and rate of change of a value output by at least one sensor sensing a parameter of said vacuum system;

a process for comparing a value output by at least one sensor sensing a parameter of said vacuum system to a threshold value; and

a process for performing a predefined mathematical function on at least one parameter sensed by a sensor in said vacuum sensor;

a process for adjusting a threshold at which to respond to changes in said parameter in dependence upon data from previously executed processes; and

a process for triggering an alarm, notification or control signal.

1817. A vacuum system comprising at least one of: a vacuum pump and an abatement unit, a plurality of sensors, a data interface for receiving and storing data from said plurality of sensors, and a control system according to any one of claims 1615 or 1716 for controlling the monitoring of said vacuum system.

1918. A plurality of vacuum systems each comprising at least one of: a vacuum pump and an abatement unit, and a plurality of sensors; a data interface for receiving and storing data from said plurality of sensors of each of said vacuum systems; and a control system according to any one of claims 1615 or 1716 for controlling the monitoring of said plurality of vacuum systems.