CLAIMS:

1. A system, comprising:

refrigerated storage containers;

local controllers respectively coupled with corresponding refrigerated storage containers to control operations thereof in accordance with controller parameters; and

a supervisory controller configured to issue control commands to the local controllers based on respective responses of the refrigerated storage containers to local controller control,

wherein the supervisory controller is coupled with each local controller to receive first data reflective of the controller parameters and with each refrigerated storage container to receive second data reflective of respective responses of the refrigerated storage containers to the local controller control, and

wherein the first data comprises condenser air inlet temperature measurements of at least one refrigerated container and operational parameters of at least one refrigerated container, the operational parameters comprise refrigerated container on/off mode information, desired set point information, allowable temperature variability information and ambient temperature information and

the second data comprises at least one or more of refrigerated container cargo space controlled temperature information and electrical power draw information.

2. The system according to claim 1, wherein the local controllers are configured to override the control of the supervisory controller.

3. The system according to claim 1, wherein the supervisory controller issues control commands to each local controller, the control commands comprising supervisory controller output and an optimal on/off command schedule.

4. The system according to claim 1, wherein the supervisory controller is configured to issue the control commands to the local controllers based on the respective responses of the refrigerated storage containers to local controller control and at least one or more of:

a learned time constant of one of the refrigerated storage containers,

a time constant associated with an interaction of a group of the refrigerated storage containers, and

knowledge of expected environmental conditions.

5. The system according to claim 1, wherein each refrigerated storage container comprises a cargo space temperature sensor.

6. The system according to claim 1, wherein the supervisory controller is configured to:

determine a correlation between electric power consumption of each refrigerated storage container and a local controller command, and

determine an optimal on-off control strategy based on the correlation that satisfies cargo space temperature requirements and minimizes power consumption and short cycling.

7. The system according to claim 1, wherein the supervisory controller is provided as a plurality of supervisory controllers respectively associated with clustered local controllers and corresponding refrigerated storage containers.

8. A supervisory controller of a ship or a yard on which refrigerated storage containers are provided, the supervisory controller comprising:

an input unit disposed to receive first data from at least one local controller of the refrigerated storage containers and second data from at least one sensor of the refrigerated storage containers;

an output unit disposed to issue control commands to the at least one local controller; and

a processing unit configured to generate the control commands based on an optimized control strategy derived from a correlation between the first and second data,

wherein the supervisory controller is coupled with each local controller to receive first data reflective of the controller parameters and with each refrigerated storage container to receive second data reflective of respective responses of the refrigerated storage containers to the local controller control, and

wherein the first data comprises condenser air inlet temperature measurements of at least one refrigerated container and operational parameters of at least one refrigerated container,

the operational parameters comprise refrigerated container on/off mode information, desired set point information, allowable temperature variability information and ambient temperature information, and

the second data comprises at least one or more of refrigerated container cargo space controlled temperature information and electrical power draw information.

9. The supervisory controller according to claim 8, wherein the optimized control strategy satisfies cargo space temperature requirements and minimizes power consumption and short cycling.

10. The supervisory controller according to claim 8, wherein the processing unit is configured to generate the control commands based on the optimized control strategy derived from the correlation between the first and second data and at least one or more of:

a learned time constant of one of the refrigerated storage containers,

a time constant associated with an interaction of a group of the refrigerated storage containers, and

knowledge of expected environmental conditions.

11. The supervisory controller according to claim 8, wherein the processing unit is configured to:

determine a correlation between electric power consumption of each of the refrigerated storage containers and local controller control, and

determine an optimal on-off control strategy based on the correlation that satisfies the cargo space temperature requirements and minimizes the power consumption and the short cycling.

12. The supervisory controller according to claim 8, wherein the supervisory controller is provided as a plurality of supervisory controllers respectively associated with clustered local controllers.

13. A method of operating refrigerated storage containers provided on a ship or in a yard, the method comprising:

receiving first data from local controllers of the refrigerated storage containers;

receiving second data from sensors of the refrigerated storage containers;

identifying a correlation between the electric power consumption of the refrigerated storage containers and operations of the refrigerated storage containers from the first and second data; and

determining an optimal on-off control strategy for each refrigerated storage container based on the correlation that satisfies cargo space temperature requirements and minimizes power consumption and short cycling,

wherein the supervisory controller is coupled with each local controller to receive first data reflective of the controller parameters and with each refrigerated storage container to receive second data reflective of respective responses of the refrigerated storage containers to the local controller control, and

wherein the first data comprises condenser air inlet temperature measurements of at least one refrigerated container and operational parameters of at least one refrigerated container,

the operational parameters comprise refrigerated container on/off mode information, desired set point information, allowable temperature variability information and ambient temperature information,

the second data comprises at least one or more of refrigerated container cargo space controlled temperature information and electrical power draw information.

14. The method according to claim 13, wherein the determining is further based on at least one or more of:

a learned time constant of one of the refrigerated storage containers,

a time constant associated with an interaction of a group of the refrigerated storage containers, and

knowledge of expected environmental conditions.

15. The method according to claim 13, further comprising issuing control commands based on the optimal on-off control strategy for each refrigerated storage container to the local controllers.

16. The method according to claim 13, wherein the determining comprises determining a correlation between electric power consumption of each of the refrigerated storage containers and local controller control.