

SPECIFICATION: DRY CHEMICAL GAS ISLAND FIRE SUPPRESSION SYSTEM

1) GENERAL

- a) The Gas Island Fire Extinguishing System shall be stored pressure, dry chemical, pre-engineered, fixed nozzle type as manufactured by Pyro-Chem, Inc. 1 Stanton Street, Marinette, WI.
- b) This system shall provide protection of the gasoline station vehicle fueling area(s) as described and defined in the drawings.
- c) The system shall be capable of automatic and manual actuation. It shall be tested in accordance with the latest revision of the **U.L. 1254 STANDARD FOR PRE-ENGINEERED DRY CHEMICAL EXTINGUISHING SYSTEM UNITS** and shall be listed by Underwriters Laboratories.
- d) The system shall be installed and maintained in accordance with the following documents:
 - (1) N.F.P.A. 17,
 - (2) N.F.P.A. 30,
 - (3) Pyro-Chem, Inc.'s UL Listed Design, Installation and Maintenance Manual
 - (4) Local and State Codes.
- e) The system shall be designed for operation at ambient temperatures from -40 deg. F to 120 deg. F. The system shall be designed for operation in a minimum wind of 10 M.P.H.

2) CYLINDER AND AGENT

- a) AGENT. The Extinguishing Agent shall be Pyro-Chem Sodium Bicarbonate based dry chemical agent (BC).
- b) CYLINDERS. Steel cylinders manufactured, tested and marked in accordance with D.O.T. 4BW350 shall be used to store the agent. Cylinder Model ADT-80-SBC shall be filled with 80 lbs. of agent and charged with dry nitrogen at 350 PSIG @ 70 deg. F.
- c) CYLINDER VALVE. A pressure sealed poppet type valve having a brass body, stainless steel stem with rubber seat washer, fusible safety relief and pressure gauge shall be used.
- d) CYLINDER BRACKETING. Cylinders shall be stored vertically. Cylinders shall be affixed with a steel mounting bracket to a rigid structure capable of supporting the weight and concussion of cylinder discharge.

3) ACTUATION CONTROLS

- a) CONTROL HEAD. A Model ECH Series Control Head shall be used. Control Heads shall be mounted directly on a PAC Series Pneumatic Actuating Cylinder. Control Head status shall be visually indicated by a SET/FIRED indicator.
- b) CYLINDER ACTUATORS. Cylinder actuation shall be achieved pneumatically by a Model PDA-D2 Cylinder Discharge Adaptor affixed to the actuation port of the ADT-80-SBC Cylinder Valve Assembly.
- c) ELECTRIC ACTUATION. The System shall be capable of being actuated electrically by either a Model RPS-E2 Manual Release Station or Thermal Detectors.
- d) DETECTION. Fixed Temperature/ Rate-of-Rise detectors shall be used. When the temperature fix point is exceeded or the temperature rises rapidly, an integral contact switch shall change state sending a signal to the ECH Control Head. A solenoid within the Control Head operates, activating the system.
- e) SYSTEM MONITORING. An ECH Series System Circuit Monitor shall be installed. This device shall have an indicator lamp, that when lit, indicates that the system is in the ready position. This monitor shall also do the following:
 - (1) Reset the input circuit after the system discharges,

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- (2) Contain a relay to control power to a pump shutdown device.
- f) PUMP SHUTDOWN. A pump shutdown device shall be integrated with the system so that upon system discharge, the power to pumps dispensing gasoline is shutdown. This shutdown device shall route control power through a relay on the ECH Series System Circuit Monitor.

4) SYSTEM ACCEPTANCE

- a) The system installer shall demonstrate perform a function test of the completed system installation to the Authority Having Jurisdiction.
- b) The system installer shall provide personnel training to the customer.
- c) The system installer shall provide an Owner's Manual to the customer.