

SAFETY IS OUR FIRST PRIORITY



# **OUR PRODUCT RANGE**

















PROTECTOWIRE® FireSystems



























































# Introduction

Petroyas Group of Companies whilst having the benefit of having around 2 decades of experience is now a well-established leading international company in the field of Mechanical, Electrical & Electronic Engineering. The company's entire history since its inception in 1996 has been an ongoing process of growth and expansion.

Petroyas Group of Companies is one of the major vendors to Oil & Gas Industries, Commercial & Residential Buildings, Industrial and Logistical Warehouses, Oil production Plants, Petro Chemical Plants & Power Plants. This unique position having been achieved in such a short span, not only due to the aggressive marketing approach adopted by the staff and management of the company but also due to the excellent after sales services which have frequently been acknowledged and appreciated by many of its customers.

Petroyas Group Of Companies having a fire & safety division (NFK Fire Fighting & Safety Equipment Trading Co.LLC) of vast experience in the field of Design, supply, Installation & Commissioning of Fire Detection (LHD System & Fire Alarm Systems), Protection & Gas Suppression System. Petroyas Group Of Companies having an in house production Division with specialized

manufacturing team for Fire Doors, Cabinets, Cable Trays, etc.

Petroyas Group is staffed with a highly skilled team who can truly combine good technical ability with solid job site experience are available to give service throughout the complete job spectrum. We have expertise in taking turnkey projects for various fields and complying with international codes, regulations and standards.

Being an approved organization, Petroyas is working with the quality and technical standards of the USA (NFPA) and UK (BS). Our professional expertise with a hand on experience is enabling to work as an independent third party organization in all matters relating to our activities.

Petroyas' staff of 30 plus specialist engineers and marketing professionals with skills and knowledges in their respective fields is committed to quality and indepth service to its customers throughout the region. And, as always, the accent has been on professionalism, expertise and efficient service, which have cumulatively contributed to the premier position that Petroyas enjoys today.

# **OUR SERVICES**

# **Trading Division**

We are having a wide range of international products with a dedicated sales team coverage in Middle East Region & European Region.

FIRE FIGHTING EQUIPMENTS **SPRINKLERS VALVES** FIRE ALARM FIRE HOSE FIRE DOORS FIRE CABINETS FIRE HYDRANTS FIRE DETECTION SYSTEMS FIRE ALARM SYSTEM LINEAR HEAT DETECTION SYSTEM **GAS DETECTION SYSTEM** FLAME DETECTION SYSTEM FM 200 / INERT GAS SYSTEM FOAM SYSTEM **DELUGE SYSTEM** PPF FOUIPMENTS HIGH PRESSURE CYLINDERS **INTERNAL CAMERAS** 



# **Production Division**

Petroyas Production facility is located at Dubai FreeZone occupied with all latest equipments, and the production process is under the through monitoring & Supervision of high experienced engineering and technical team.



# **Projects Division**

Our Projects Division is in the name of NFK Fire Fighting & Safety Equipments Trading Co.LLC operated from Dubai with a group of well experiened proessionals. Handling full range of Fire Protection Projects.



# Linear Heat Detection

# Fire Detection System





### **Construction:**

There are two types of linear heat detection available in Protectowire range of product's, they are digital type and fibre optic cables. Digital type is comprised of two steel conductor individually insulated with a heat sensitive polymer. The insulated conductors are twisted together to impose a spring pressure between them, then wrapped with a protective tape and finished with an outer jacket suitable for the environment.

#### Features & Benefits:

- Identifies and displays, at the control panel, the alarm location anywhere along its length.
- When used with Protectowire Alarm point location meter.
- Sensitivity not affected by changes in ambient temperature or length of LHD cable.

- Resistant to mechanical damage, Simple in install & splice to common tools.
- Compatible with alarm initiating devices like MCPs, thermal detectors & smoke detectors.
- Compatible in hazardous areas with approved Protectowire Fire System Control panels.
- Different temperature detectors may be utilized in the same initiating circuits.
- Available with stainless steel messenger wire for mounting in difficult large open areas.
- Suited for activation of extinguishing systems like deluge or pre-action sprinkler systems.







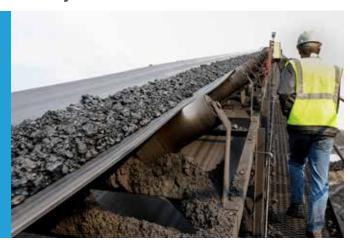




### **Tunnels**

### Conveyors





**Liquid Gas Tank Storage** 

**Transformers** 





**Floating Roof** 

**Cable Trays** 





### **Applications:**

Cable Trays, Conveyors, Transformers, Electrical Apparatus, Air Craft Hangers, Cooling Towers, Floating Roof Storage Tanks, Liquid Storage Tanks, Refrigerated Storage, Roadway Tunnels, Metro Systems, Industrial Machineries, Piers & Self Storage Facility





# **Linear Heat Detection System**

#### **Features**



#### FIBER OPTIC LHD SENSOR CABLE



- Two models available
- Immune to electromagnetic interferences
- Withstands severe environmental conditions
- Little or no maintenance required
- Halogen free, flame retardant jacket
- Programmable alarm temperature
- Model: PFS-554-FR & PFS -654-MF

#### FIBER OPTIC CONTROLLER (PTS 8000 SERIES)



- Unique zoning capabilities. A single length of sensor can contain up to 256 zones
- Multiple alarm initiating criteria by zone
- Available with 1, 2 or 4 channels
- Capable of continuous temperature monitoring in ranges up to 101km (32,800 ft.)
- Graphic display of temperature profile, fire size, and spread using a computer interface
- LAN Interface (TCP/IP) enables remote access from multiple locations

### CTM 530 SERIES INTERFACING MODULE WITH CONFIRMED TEMPERATURE INITIATION (CTI)



- Provides a single zone interface for Protectowire Type CTI<sup>TH</sup> 4 Linear Heat Detectors
- Patented technology can distinguish between mechanical shorts and thermal alarm conditions (Short Circuit Discrimination)
- Integrated Protectowire Alarm Point Location Meter with field calibration
- 4x20 LED backlit LCD
- Modbus over RS-485 communications 4-20mA outputs for status and alarm point location
- 64 Event History Log (FIFO)
- Optional intrinsically safe detection circuit available for use in hazardous locations.

#### PROTECTOWIRE CTI CONFIRMED TEMPERATURE INITIATION LINEAR HEAT DETECTIONS



- Digital operation with short circuit discrimination capable of distinguishing between short circuit and alarm conditions
- Two distinct heat sensing technologies
- Confirmed temperature initiation for highest immunity to nuisance alarms.
- Compatible with Protectowire Alarm Point Location Meter
- Alarm temperature range: 68°C, 88°C, 105°C, 138°C, 180°C
- Approved for hazardous locations
- Available in five alarm temperatures to accommodate the widest range of applications



#### PROTECTOWIRE FIXED TEMPERATURE DIGITAL LHD CABLE



- Line coverage...continuous sensitivity.
- Seven alarm temperature ratings.
- Withstands severe environmental conditions.
- Approved for hazardous locations.
- · Easy to install, test, and splice.
- Compatible with other initiation devices on same circuit.
- Approved for up to 50 ft. (15.2m) spacing.
- Alarm Temperature Range: 57°C, 68°C, 88°C, 105°C, 138°C, 180°C, 260°C.

#### SRP-4X4 FIRE ALARM/ RELEASING CONTROL PANEL

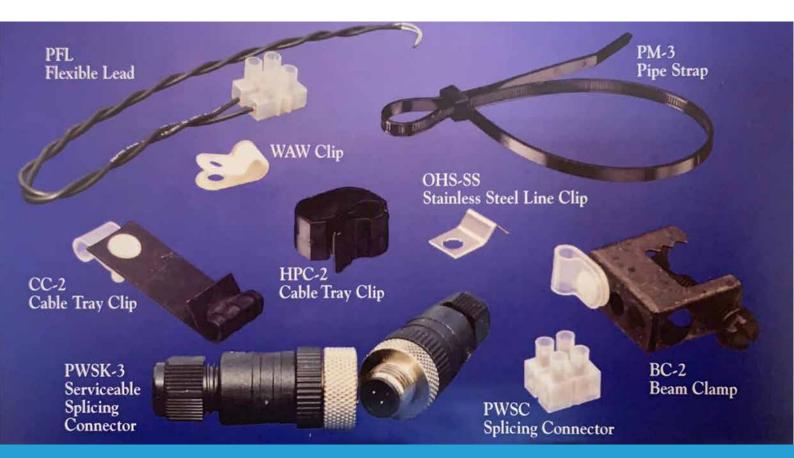


- Four zone fire alarm control and release panel Initiating circuits capable of Class A (Style D) or Class B (Style B) Service
- 10,000 ft. (3,048m) of Protectowire and 5 smoke detectors per zone
- Field selectable input and output configurations Ground fault detection
- Four Class B (Style Y) output circuits Protectowire Alarm Point Location Meter available

#### PROTECTOWIRE FS 2000 SERIES FIRE ALARM CONTROL PANEL



- · Easily expandable. All new plug-in board design
- Two supervised audible circuits Lamp and system trouble circuit test
- Ground fault detection
- LTi Series NEMA 4/12 enclosures available
- Monitors up to 5,000 feet (1,524m) of Protectowlre Linear Heat Detector per zone
- Up to 30 smoke detectors per zone



# **SPECTREX** Flame Detection System





### **SharpEye Flame Detectors**

### 40/40 Series Flame Detectors

- 40/40 SharpEye detectors offer enhanced reliability and durability
- 5 year warranty

### 20/20 Mini Flame Detectors

- Includes Mini IR3 and Mini UV/IR detectors
- Lower cost & lower power

#### 20/20 Mini Indoor Flame Detectors

- Low cost solution for indoor, non Ex-areas
- Compact design with the relay or stepped mA output options
- · Ideal for commercial buildings or large indoor areas

# CCTV Plus Triple IR (IR3) Flame Detector

- The 20/20CTIx is a self-contained IR3 flame detector
- · Incorporates a color video camera

### SafEye Open Path Gas Detectors

### Hydrocarbons

- · SafEye "Flash Source" system is used in the 900, 700 and 200 Series
- · Offers well-proven technology for the fast detection of combustible gases and vapors
- "Line of Sight" up to 660 ft (200 m) long
- Built for reliability and continued operation under extreme environmental conditions

#### **Toxic**

- SafeEye Series 950-960 for toxic gas detection
- "flash source" technology
- Suitable for the detection of Hydrogen Sulfide (H2S), Ammonia (NH3) and aromatic hydrocarbons











# **OGGIONI** Fire & Gas





### Fire & Gas

### 1. CM-10

- · Extremely Compact Programmable unit
- Continuous monitoring of the dangerous concentration of gas and toxic vapours in work areas
- · Monitors up to five different polluting substances
- Alerts the personel for gas emissions of small and high concentrations (%v/v)
- · Calculated in ppm or mg/m3 and easy to use object oriented software
- The units can be connected to each other or in a loop to a remote PC

### 2. CM-20

- · Control units with single (CM-10) or dual (CM-20) input channel
- Designed to operate with 4-20mA transmitters
- LCD Digital Display 8 characters x 2 lines
- Two settable alarm setpoints & relay outputs for fault and alarm
- Serial RS485 Modbus Protocol (CM-20)

#### 3. CM-80

- Control units for analog and digital signals ideal for small
  medium gas detection systems
- Different gas detectors for different gases can be connected
- Gas type, Detection range, Detector full scale, Alarm thresholds and relays outputs configuration are programmable by operator
- Programming can be protected by password
- Has internal stabilized 13.75 Vdc 2.5A Power Supply and output for a 12V, 7.2 A/h backup battery
- CM-80 can be supplied in "Open Frame" version or installed in a "Wall mounting metal cabinet" with power supply included







# HONEYWELL Personal Equipments Honeywell



# **Personal Protective Equipment**

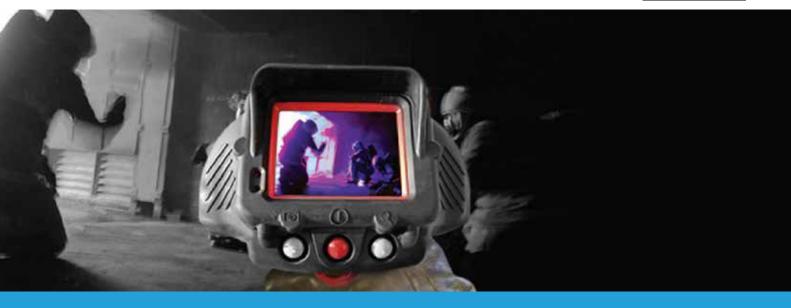
Honeywell is a leading manufacturer of safety products. We help customers build enduring safety cultures across a wide range of markets that include general safety and preparedness, first responder, electrical and consumer products. From a New York City firefighter to a construction worker in Shanghai, Honeywell Safety Products have the right solution for your specific application, government oil & gas construction welding.





# **ARGUS** Thermal Cameras





### **Thermal Cameras**

### ARGUS4 HR320

- · Offers the best image quality of any thermal imaging camera on the market
- Contains more functions than any other thermal imaging camera
- Uncooled high-resolution 320 x 240 pixel sensor
- Tri-Mode Sensitivity (huge dynamic range)
- Direct Temperature Measurement (DTM)
- SceneSave Digital Image Capture (100 image capacity)
- Large LCD screen
- x2 and x4 digital zoom
- Robust and lightweight (withstands a drop from a height of 2 metres onto concrete)
- Super-fast start up time
- Simple to use 3 button system for ultimate functionality

### ARGUS 320 MI-TIC 1 BUTTON

- NFPA 1801:2013 compliant
- · Offers the highest quality image of any personal style infrared camera
- 1 button operation for ultimate simplicity and ease of use
- · Extremely lightweight and rugged
- Advanced 320 x 240 uncooled sensor
- Direct Temperature Measurement (DTM)
- Super-fast start up time
- Tri-mode sensitivity
- · Non-hazardous advanced battery technology
- Multiple wear options. High fatigue resistance







# **FIRE DOOR**

Production facilities are located at Dubai Free Zone occupied with all latest equipment's, the production process is under the thorough monitoring & supervision of high experienced engineering technical team.

With its futuristic and contemporary designs, the Steel door is to be used for high specification architectural environment such as health care, chemical plants, sanitation water treatment, airport hotel and hospitals.



Our goal is to provide our clients with a high quality services, characterized by a timely response, accuracy, integrity and professionalism.











# 1. Honey Comb Infill Doors

- · Economical.
- · Impact resistant.
- · Interior or exterior usage.
- · 44mm standard, also available in 63mm
- 25mm hexcells for maximum strength, rigidity and flatness.
- 1.0mm, 1.2mm gauge steel standard.
- Rust inhibitive prime coat.
- 1.5mm gauge top and bottom inverted channels spotwelded to face sheets.
- · Continuously welded vertical edges (seamless) optional.
- 25mm Honey Comb cells permanently bonded to both face sheets.



### 2. Rock Wood Infill Doors

- Moderate to high frequency usage.
- · Building security.
- 44 mm standard, also available in 63 mm.
- 1.0 mm, 1.2 mm guage steel standard.
- 1.0 mm guage stiffeners spot welded at 150 mm or centre with rockwool insulation.
- Rust inhibitive prime coat.
- 1.5 mm guage top and bottom inverted channels spot welded to face sheets
- Continuously welded vertical edges (seamless) optional.



### 3. Fully Glazed Doors

- Decorative doors.
- Durable in construction.
- Applications include lift lobby, main entrance doors, corridor doors, airports and banks.
- · Attractive modern look.



### 4. Stainless Steel Doors

- Available in futuristic and contemporary designs.
- · Excellent performance.
- Designed for excellent service life and corrosion resistance in moderate to severe environments.
- Ideal for high specifications architectural environments such as healthcare, chemical plants, sanitation, water treatment, airports, hotels and hospitals.



### 5. Wood Finished Doors

- Doors offer the elegance of wood with the strength of steel.
- Representation of natural beautry of wood in durable, fire rated steel door.
- Ideal for commercial, residential and hotel buildings particularly for main entrance doors, office doors.
- Very economical compared to fire rated wooden doors while maintaining the natural finish of the solid wood.



### 6. Fire Cabinets

- · Available in Single Door & Double Door
- Dimension as per customer request
- Material: 1.5 mm carbon steel / stainless steel
- Thickness: 1.5 mm up to 2.0 mm
- · Installation: Self standing
- Capacity: As customer request for storing the fire hoses, water nozzles, foam accessories, etc
- Paint Finish: Epoxy powder red or white, 70 micron min







# **WELDED STEEL PIPES**

### Jinan Mech Piping technology - MECH PIPING





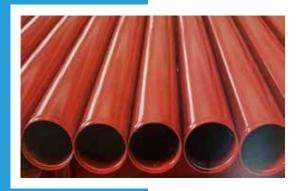
Quality is checked and monitored in the whole process from incoming inspection to finished product inspection. Each step of the manufacturing process is carefully documented, regularly reviewed for revision control and updating standard. Quality procedures are constantly monitored and updated to assure that only the highest and most consistent quality products are supplied to our valued customers. Inspection facilities include Spectral Analysis Machine, Metallographic Testing Machine, Universal Material Testing Machine, Eddy Current Testing Machine, Hydraulic Testing Machine, Impact Testing Machine, etc.



High precision equipment is quality assurance. Jinan Mech Piping Technology Co. Ltd is equipped with the most advanced facilities and equipment in the industry. The main equipment includes automatic welding line, hot-dip galvanizing line, painting line, epoxy coating line, grooved machine, threaded machine and so on.



# **WELDED STEEL PIPES**



### **Painted Steel Pipe**

Coating Material: Anti-rust Paint. Primer Paint, Epoxy Paint

Coating Color: Red. Black, Gray, Varnish

Coating Thickness: 30um

Coating Method: Painted Outside

Size: 1" --- 8"

Temperature: -30°C-- 80°C Normal Pressure: 0.1 Mpa--8Mpa Connection: Grooved. Threaded, Plain Application: Sprinkler System, Gas system

Product Advantages:

Paint is high quality and environmental, meet the requirement of

usage Coating is uniformity and smooth. Coating with good adhesion and hardness

Coating with good anticorrosion, prolong the pipe life span,



# **Welded Steel Pipe**

Raw Material: Hot Rolled Coil Forming Method: F-F-X

Welding Method: High-frequency Resistance Welding

Size: 1/2" --- 8" Temperature: -30°C-- 80°C

Normal Pressure: 0.1 Mpa--8Mpa

Connection: Grooved, Threaded, Beveled, Plain

Application: Water System, Sprinkler System, Gas system, Oil and

**HAVC System** 

Product Advantages:

Advanced F-F-X forming technics, enhance the controllability. Thermatool solid state high frequency welding Machine, make sure the welding stability.

On line Heat Treatment, make sure the seam hardness 100% on line Eddy Current Testing and Hydrostatic Testing, make sure the welding quality.



# **Galvanized Steel Pipe**

Galv.: Hot-dip Galvanizing

Size: 1/2" --- 8" Temperature: -30°C-- 80°C

Normal Pressure: 0.1 Mpa--8Mpa

Connection: Grooved, Threaded, Beveled, Plain

Application: Water System, Sprinkler System, Gas system, Oil and

HAVC System

Product Advantages:

Galv. coating is uniformity, clean and bright.

Using 08 zinc ingot, with good anti-corrosion ability.











# **Plastic-lining Steel Pipe**

Raw Material: PE, Hot-dip Galv, Pipe

Size: 1" --- 8"

Temperature: -30"C-- 80°C

Normal Pressure: 0.1 Mpa--5Mpa

Connection: Grooved, Threaded, Welded

Application: Water System, Sprinkler System, Gas System, Oil and

**HVAC System** 

Product Advantage:

Outside is Galv. pipe, with good anti-corrosion, and not easy to

distortion.

Inside is PE pipe, environmental and health, inside surface is smooth.

Ensure the quality of inside fluid, Improve transport efficiency.



# **Epoxy Steel Pipe**

Coating Material: Epoxy Resin Powder

Coating Color: Red, Blue

Coating Thickness: 40um-300um

Size: 1/2" --- 8"

Temperature: -30°C-- 80°C

Normal Pressure: 0.1 Mpa--5Mpa Connection: Grooved, Threaded, Plain Application: Water System, HVAC System

Product Advantages:

Epoxy powder is high-quality and environmental

Coating with good anti-corrosion Coating with good hygienism

Small resistance







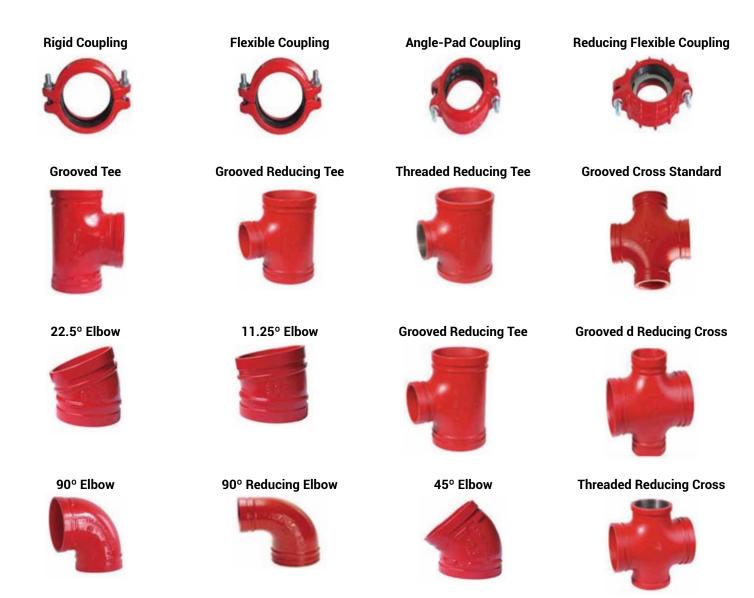
# **FITTINGS**



# SHANDONG DINGLIANG FIRE TECHNOLOGY CO., LTD.

Shandong Dingliang Fire Technology Co.,Ltd. (formerly known as Shandong Dingliang Casting Co.,Ltd.) is a large-scale company, with capacity of research and development, production, processing and sales in the field of Pipe Fittings and Couplings, Valves, Fire Fighting Equipments, and is one of the 5 branch companies of Dingliang Group.

The company is ISO certified, and has got FM approved and UL listed. All kinds of advanced testing equipments are introduced to control the production process. All of these can guarantee the high quality of products.









# **FITTINGS**



# SHANDONG DINGLIANG FIRE TECHNOLOGY CO., LTD.

**U-Bolt Mechanical Tee** 



Grooved **Mechanical Tee** 



**Threaded Mechanical Tee** 



FM, whenever applicable.

**Grooved Eccentric** Reducer



**Adaptor Flange** 



Split Flange





and grooved-end fittings are basically designed to comply with the requirements of ANSI/AWWA C606 (last edition), which provides the water industry the minimum requirements of grooved and shouldered joints, including materials, groove dimensions, and of ASTM F1476-01, which specifies performance of gasketed mechanical couplings, including hydrostatic proof testing, bending moment proof testing. The DL products also satisfy the testing requirements and carry the approvals by cULus,

The DL products including rubber gasketed couplings

Cap



**Grooved Concentric** 

Reducer

**Cap with Eccentric** 



Hole





**Threaded Concentric** 







# **OUR SERVICE**Fire Fighting System





A specialised design and installation is required to protect your investment and keep your commercial premises as best as possible. All the types of fire and security systems operating can be kept at their best possible efficiency 24 hours a day by implementing a variety of packages and through proper design and installation by our trained engineers and technicians.

The highly skilled Engineers at NFK with excellent design background in Mechanical, Production and Fire & Gas Engineering System. Till a job spectrum is complete, our engineers who truly combines good technical ability with solid job site experience will be available to provide their service. Design, installation and testing commissioning of above equipment in both residential, commercial, industrial and other facilities. Inspection is carried out as per standards of NFPA and local authority requirements.









# 1. Upright Sprinkler

- Product range: Std Response-Std. Coverage /Quick Response-Std Coverage.
- Decorative 5 mm / 3 mm glass bulb type.
- Designed for use in light, ordinary or extra hazard, commercial ocupancies such as banks, hotels, shopping malls, factories, refineries, chemical plants, etc.
- Approvals: UL Listed
- Discharge Coefficient: K = 5.6 GPM/psi 1/2 (80, 6LPM/bar 1/2)
- Max. Working Pressure: 250 PSI (17.2 BAR)
- Temperature Ratings (bulb liquid color):155°F/68°C(Red),175°F/79°C (Yellow), 200°F/93°C (Green)
- Physical Characteristics: Frame: Bronze / Bulb: Glass / Deflector: Copper



### 2. Pendant Sprinkler

- Product range: Std3 se-Std. Coverage / Quick Response-Std Coverage.
- Decorative 5 mm / 3 mm glass bulb type.
- Designed for use in light, ordinary or extra hazard, commercial occupancies such as banks, hotels, shopping malls, factories, refineries, chemical plants, etc.
- Approvals, UL Listed
- Discharge Coefficient, K = 5.6 GPM/psi 1/2 (80, 6LPM/bar 1/2)
- Max. Working Pressure: 250 PSI (17.2 BAR)
- Temperature Ratings (bulb liquid color), 155°F/68°C(Red), 175°F/79°C (Yellow), 200°F/93°C (Green).
- Physical Characteristics: Frame, Bronze / Bulb, Glass / Deflector, Copper.



# 3. Sidewall Sprinkler

- Product range: Std Response-Std. Coverage / Quick Response-Std. Coverage. Decorative 5 mm / 3 mm glass bulb type
- Designed for use in light & ordinary hazard, commercial occupancies such as banks, hotels, shopping malls etc.
- Approvals, UL Listed
- Discharge Coefficient, K = 5.6 GPM/psi 1/2 (80, 6LPM/bar 1/2)
- Max. Working Pressure, 250 PSI (17.2 BAR
- Temperature Ratings (bulb liquid color), 155°F/68°C(Red), 175°F/79°C (Yellow), 200°F/93°C (Green)
- Physical Characteristics: Frame, Bronze / Bulb, Glass / Deflector, Copper











### 1. OS & Y Gate Valves

- Used in fire protection systems for ON/OFF operation
- Incorporate high strength stainless steel stems, dezincification resistant copper alloy components, high grade elastomers & quality coating systems
- Lightweight ductile iron body and bonnet
- Lower operating torque, designed for a higher life cycle
- UL/FM Approved
- Size ranges from 2" to 8"
- Available end connections include flange-by-flange, flange-by-groove & groove-by-groove
- Maximum operating pressure of UL-300 psi (20.87 bar) & FM 232 psi (16 bar)



### 2. Check Valves

- Used to allow flow in one direction only & close automatically when the flow reverses
- UL/FM Approved
- Can be installed in horizontal & vertical distances
- Ductile Iron body
- Epoxy coated interior & exterior to fire engine red
- Maximum operating pressure 175 / 300 psi
- Valve size ranging from 2" to 8"
- Applications include coldwater, firewater etc



# 3. Butterfly Valves

- Designed for bubble tight shut off
- UL/FM Approved
- Rated for outdoor & indoor use
- Ductile iron body, grooved ends
- · Coated with corrosion resistant Nylon
- · Stainless steel stem
- Maximum operating pressure 175 / 300 psi
- Size ranges from 21/2" to 8"











### **Progress Rubber Covered fire hose**

- Tough, durable and very abrasion resistant
- · Resistance to oil, fuel and a wide range of chemicals
- Resistance to heat, UV and ozone
- Excellent adhesion between rubber and textile
- No cleaning and drying required
- Fasy to repair



# **Herkules Coated Single jacket fire hose**

- Very lightweight and highly flexible (even at low temperature)
- · Excellent resistance to heat, weathering and ozone
- Inner lining excellent resistant to sea water and a wide range of chemicals.
- Very good resistance to seawater and a wide range of chemicals
- Hardwearing for long service life
- Easy to repair



# Titan Uncoated single jacket fire hose

- Very lightweight and highly flexible (even at low temperature)
- Small coil diameter
- Excellent resistance to weathering and ozone
- Inner lining excellent resistant to seawater and a wide range of chemicals
- · Mildew and rot proof
- · Easy to repair







# **PETROYAS** Foam System



# **Foam Deluge System**

- · Foam system consists of Deluge value and AFFF foam
- System shall be installed in accordance with NFPA 16, NFPA 11 & NFPA 3

# **System Devices:**

### 1. Deluge Valve:

- 90° pattern or straight through type of valve
- Inlet & Outlet connections: threaded by threaded, flanged by flanged, flanged by grooved or grooved by grooved resp.
- UL Listed & FM approved
- · Working pressure of 250 psi

### 2. Deluge Release System:

- UL listed/FM approved
- · Release system methods may be:
- a. Hydraulic release which employs a rate-of-rise release detector, fixed temperature release or fire sprinkler in the release line piping
- b. Pneumatic pilot release system
- c. Electric release systems with a release control panel & solenoid valve

### 3. Concentrated Controller "Proportioner"

- · Utilizing balanced-pressure injection
- UL Listed /FM approved
- · Brass, wafer or threaded type



# **PETROYAS** Foam System

### 4. Foam Bladder Tank

- Meets ASME pressure vessel requirements
- UL Listed/FM approved

### 5. Concentrate Control Valve

- · UL Listed/FM approved
- Operating pressure 250 psi (17 bar)

### 6. Foam Concentrate piping

- · Compatible with foam concentrates
- Designed for the least equivalent pipe run from bladder tank discharge outlet to proportionating device & water supply to the water tank

### 7. Foam Concentrate

- Utilizes AFFF (Synthetic Aqueous Film Forming Foam) or AR-AFFF (Alchohol resistant AFFF)
- UL listed/FM approved

# **Discharge Devices:**

- · Open head sprinklers
- Tested for min densities or minimum pressures as foam/water solution discharge outlets
- UL Listed/FM approved

### 1. Alarm Pressure Switch

- · Facilitate transmission of alarm during water flow conditions
- · Operates at a pressure increase of 5-7 psi
- · cULus Listed/FM approved

### 2. System Overhead Piping

Acceptable by NFPA 13 and NFPA 16

# 3. System Control Valve

- Indicating type
- UL Listed





# **PETROYAS** Deluge System



# **Deluge Valve Water System**

Control & suppress the fire by cooling & separating the fuel from the air (oxygen)

# Any water system shall comprise the following sections as a minimum:

- · Reliable water reservoir or network to comply requirement of system for appropriate duration
- Pump station (if used from water reservoir) to provide required pressure head for proper operation of the system
- · Automatic control valve like deluge valve, alarm check valve, dry alarm valve to control the system's actuation
- · Interconnecting Piping: valves, pipes, fittings, supports

# **Application of Water systems:**

- Protection of residential buildings specially high rise towers
- Protection of hotels & museum
- Protection of commercial complexes
- Protection of automobile parking
- Protection of transformers
- Protection of fuel storage tanks & process vessels
- Protection of chemical import/export jetties





# **ZIGGIOTTO** Fire Hydrants





### **FIRE HYDRANTS**

# **Wet Fire Water Hydrant**

- Material: Cast Iron Carbon steel.
- Available size: 6" just for cast iron 6", 4" for carbon steel.
- Inlet connection: Flange ANSI #150 R.F. / F.F.

### **Outlet Connections:**

- 2 x 2 1/2" BS 336 Female Instantaneous Complete with Globe or Gate valve, Valve's Material, Gunmetal.
- 1 x 4" or 5" or 5 1/2" Pumper connection in BS round thread, Material: Gunmetal
- Painted in epoxy red RAL 3000 or RAL 3020.
- · Working pressure: 18 bar.

# **Dry Fire Water Hydrant**

- Material: Cast Iron.
- Available size: 4", 6"
- Inlet connection: Flange ANSI #150 R.F. / F.F.

### **Outlet Connections:**

- 2 x 2 1/2" BS 336 Female Instantaneous Complete with Globe or Gate valve, Valve's Material: Gunmetal.
- 1 x 4" or 5" or 5 1/2" Pumper connection in BS round thread,
  Material: Gunmetal
- It is equipped with an anti-freeze automatic drain that enables the hydrant to be emptied when the valve is fully closed.
- Working pressure: 16bar.
- Painted in epoxy red RAL 3000 or RAL 3020.





# **PETROYAS** Inert Gas System



# FM200/ Inert Gas System

- FM 200 quick extinguishment using chemical agents
- Suitable for electronic and electrical risks which leave no residues
- When reaching the extinguishing concentration, they absorb sufficient heat to extinguish the fire and cause less harm to peoples health with maximum design flexibility
- Non-toxic, non-flammable & non-explosive
- Inert gases such as Nitrogen, Argon and maybe a mix of them used as fire suppression systems
- Extinguishment by reducing the O2 concentration inside the protected area
- Inert Gases are colorless, odorless, chemically inert and electrically non-conductive agents
- Inert gases are stored in high pressure cylinders at an internal pressure of 2900 PSIG (200 bar) or 4350 PSIG(300 Bar) with cylinder capacities 80/140 Ltr

#### Features:

- An inexpensive and easy-to-access agent when the refill is necessary
- Compatible with various detection and control systems
- · Wide ranges of proven safe, hazard protection. Protection of chemical import/export jetties

### **Limitations of Use:**

- Chemicals like cellulose nitrate (old movie film) and gunpowder, which are capable of rapid oxidation in the absence of air
- · Reactive metals such as Lithium, Sodium, Potassium, Magnesium, Titanium, Uranium
- Spaces with low endurance against positive pressure



# **PETROYAS** Monitors & Nozzles





### 1. FIX TYPE MONITOR

- Flow rate: 3700 lpm @ 7 bars
- Horizontal range: full 360°
- Vertical range: from +90° to -70°
- Water way: 3" with anti turbulence ribbing
- Inlet connection: 4" flange Class 150 Acc, to ANSI
- Outlet connection: 2 1/2" thread
- Finish: Red Epoxy
- Body material: primarily of anodized aluminum heat-treated against corrosion, marine environment and foam



### **Water Handle Nozzle**

- Type: Various Type (i.e. Selectable gallonage, fix gallonage with Fog, jet, stop).
- Material: aluminum, gunmetal.
- Inlet size: from 1" to 2 1/2".
- Connection type: thread, BS, Storz.
- Flow rate: As per customer request.







# **WORTHINGTON** High Pressure





# **High Pressure Steel/ Aluminium/ Composite Cylinder.**

- · Well-known for their industry-leading light weight and large standing base
- Applications include welding, medicine, laboratories, food and beverage technology, fire protection equipment & water treatment
- · Our Longlife Powercoat coating is unique in the industry for its special pre-treatment
- Highest corrosion resistance, superior adhesion and high impact resistance
- Produced according to a variety of international specifications based on regional and country specific requirements
- Available in standards like EN 1964-1, EN 1964-2, ISO 4705, IS7285, DOT 3AA, TC 3AAM,BS5045, ISO 9809-1, ISO 9809-2 and ISO 9809-3
- Manufactured to DOT, TC .KHK and EN standards.

### **Product Features:**

- · Lightweight, high-strength 6061-T6 alloy
- Corrosion-resistant interior and exterior
- Stringent internal cleaning process ensures compliances with customer specifications
- Available with straight or tapered threads
- Uses Industrial CGA540, 580 or comparable valve (sold separately)
- Many colors & with more than 100 different models available
- · Durable, brushed exterior finish
- Constructed of carbon, fiberglass or hybrid (KEVLAR/Fiberglass) composite, with high-strength Aluminium liners & Optimised structural efficency
- Wound-in metal-to-composite structural joints
- High fatigue resistance
- Wide operating temperature ranges with resistance to environmental effects
- · One-piece construction of low-part-count structures in co-cured assemblies
- Lower vibration susceptibility







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