

Fire Protection Systems and Equipment
Marine Safety Service Solution

INTRODUCTION

"THE SAFETY: Your Exclusive Partner for Maritime Services within the NK Group

As a trusted affiliate of NK Group, THE SAFETY holds the unique distinction of being the sole business partner responsible for managing NK Group's global sales and aftersales service network. We operate as the single point of contact, working tirelessly around the clock to address and resolve all customer requirements. Our comprehensive services cover a wide spectrum, including aftersales support for NK-equipped FFS systems, direct supply of NK genuine parts, FFA/LSA inspection services at key ports worldwide, and the design and implementation of FFS systems for retrofit and new build projects.

With the majority of vessels worldwide equipped with NK fire fighting systems, we highly value each customer relationship and are committed to delivering the highest level of service and customer satisfaction. Our pricing remains competitive in the market, ensuring affordability without compromising quality.

At THE SAFETY, we relentlessly pursue excellence in 'FFE/LSA' inspection services across all operational vessels, guaranteeing customer satisfaction.

While our headquarters are situated in South Korea, our global network spans across the world. You can reach us at ts@thesafety.com to access NK genuine parts and receive top-quality service from anywhere in the world.



THE WORLD BEST MARINE SAFETY SERVICE SOLUTION

WHAT WE DO

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FIRE FIGHTING SYSTEM



- Fast, cost effective turnkey solution
- Unparalleled in-house expertise to consult & implement full suite of FFS systems
- Professional services available for retrofitting of FFS systems



FIRE FIGHTING SYSTEM



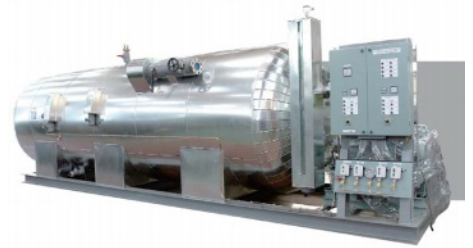
Main FFS system

- High Pressure CO2 System
- Low Pressure CO2 System
- Fire Extinguishing System for Onshore
- Deck Foam System
- High Expansion Foam System
- Dry Chemical Powder System
- Fixed Water Based Local Application
- Heli Deck Foam System
- Retrofit System
- Smoke Detection system
- Loose Fire Fighting

*NK Authorized FFS system
Certification training available*



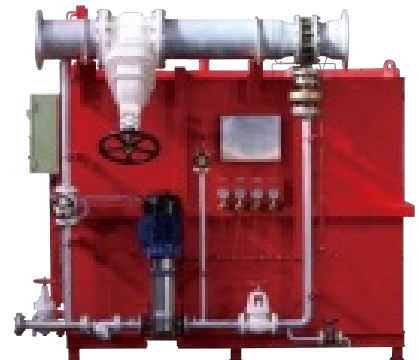
High Pressure CO2 System



Low Pressure CO2 System



Dry Powder System



Deck Foam System



Water Mist System



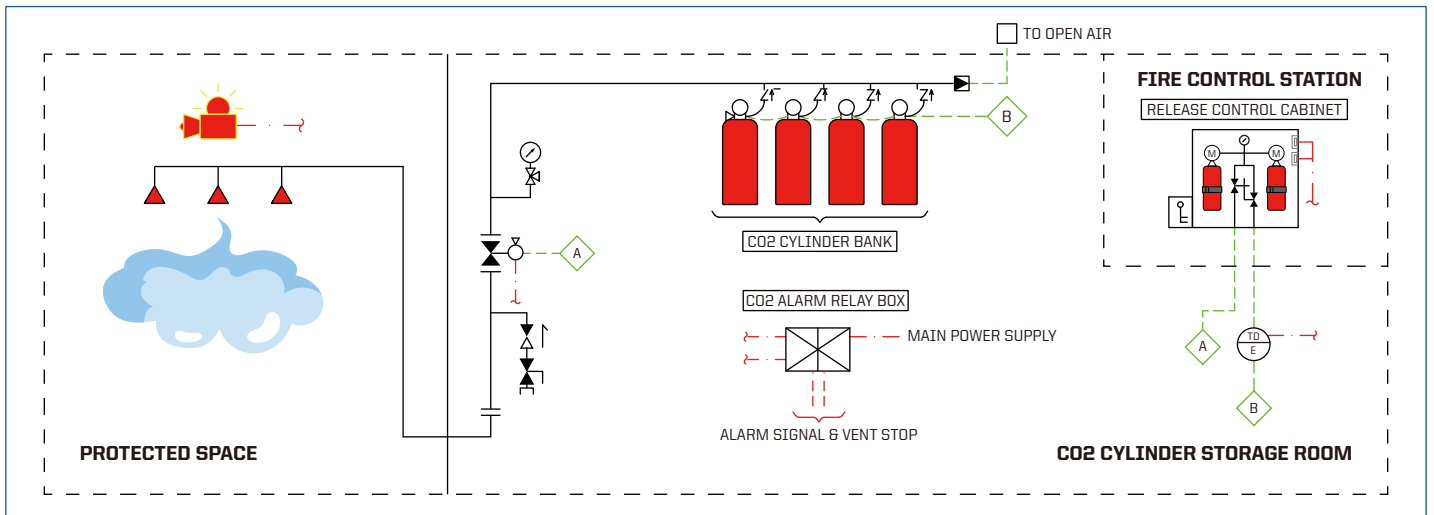
Smoke Detection System

High Pressure - CO2 System









High Pressure CO2 System is a highly adaptive, cost-beneficial extinguishing system designed with reliable expertise. THE SAFETY supplies High Pressure CO2 systems for the fire protection of machinery spaces, pump room, cargo holds, paint stores and galley exhaust ventilation ducts. The systems are designed according to the SOLAS requirements and are type approved by the major classification societies.

Standard Configuration



Main Equipment

CO2 CYLINDER		MAIN VALVE		RELEASE CONTROL CABINET	
68 Liters	82.5 Liters	1-1/2" ~ 2"	3" ~ 6"	INDOOR TYPE	OUTDOOR TYPE
					



Features

- All Class Type Approval
- Suitable for extinguishing in closed spaces
- Installed as a total flooding central bank system inclusive of a number of distributions

Application

- Small/Mid - Size Ship
- The High Pressure CO2 System has been in service on every type of marine application on container vessels, tankers of all sizes, bulk carriers, car carriers, RoRo and general cargo vessels.



Crew Boat



Fishery Inspection Boat



Fishing Vessels



Tug Boat

- General Cargo Vessels
- Oil Chemical Vessels
- Container Vessels
- Bulk Vessels

New Building Reference

Applied CO2 Quantity (in 45kg Cylinder)	Ship Type	Protected Area	Class
1 ~ 10 BTLS	54m Fast Support Vessel	Engine Room / Generator Room	BV
	27m Fishery Research Vessel	Engine Room	ABS + CR
	G/T 90 Ton Class Marine Environment Purification Vessel	Engine Room	KOMSA
	G/T 167 Ton Class Car Ferry	Engine Room	KOMSA
	G/T 247 Ton Class Car Ferry	Engine Room	KR
11 ~ 20 BTLS	G/T 900 Ton Class Fishery Inspection Boat	Engine Room / Battery Room	KR
	G/T 740 Ton Class Research Vessel	Engine Room	KR
	G/T 35,000 Ton Class Lifting Capacity Floating Dock	Engine Room Emergency Generator Room	BV
40 ~ 50 BTLS	G/T 3,900 Ton Class Fishery Inspection Boat	Engine Room Fuel Preparation Room	KR
60 ~ 80 BTLS	D/W 17,000 Ton Class Bulk Carrier	Engine Room / FGSS Room	KR
200 ~ 210 BTLS	1,023 TEU Class Container Carrier	Engine Room Cargo Hold No.1 ~ No.5	ABS
	D/W 65,000 Ton Class Bulk Carrier	Engine Room / Purifier Room Cargo Hold No.1 ~ No.5	NK

Retrofit Reference

Ship Type	Retrofit Description	Class
125K LNGC FSRU	Existing HP CO2 System modification due to LNGC FSRU Conversion	BV
5,800 TEU Class Container Carrier	Existing HP CO2 System modification due to EGCS installation	BV
D/W 159,000 Ton Class Crude Oil Carrier	Existing HP CO2 System modification due to EGCS installation	ABS
D/W 113,000 Ton Class Crude/Product Tanker	Existing HP CO2 System modification due to EGCS installation	LR
4,050 TEU Class Container Carrier	Existing HP CO2 System modification due to EGCS installation	DNV
4,800 TEU Class Container Carrier	Existing HP CO2 System modification due to EGCS installation	NK
D/W 300,000 Ton Class Ore Carrier	Existing HP CO2 System modification due to EGCS installation	CCS
5,100 TEU Class Container Carrier	Existing HP CO2 System modification due to EGCS installation	RINA
D/W 180,000 Ton Class Bulk Carrier	Existing HP CO2 System modification due to EGCS installation	KR

Dry Powder System

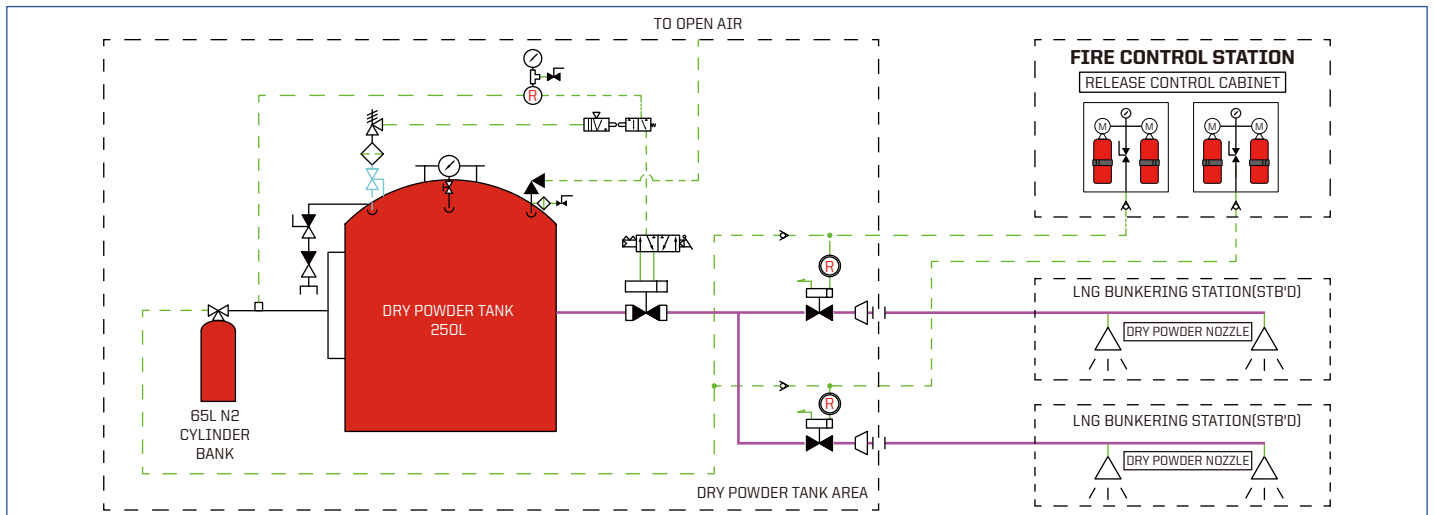


Fixed Dry Chemical Fire Extinguishing System for Gas Fuel Bunkering Station, with a capacity of at least 3.5 kg/s for a minimum of 45 s discharge.


The permanently installed dry chemical powder extinguishing system shall cover all possible leak points in the Gas Fuel bunkering station area.


The system shall be arranged for easy manual release from a safe location outside the protected area.

Standard Configuration



Main Equipment (Nozzle / Powder Tank)

	Type	NKDPN - 11.5
	Normal Size (Orifice Size)	NPT 3/4" (diameter 11.5mm)
	Material	Stainless Steel

	Type	DP TANK, 250L
	Capacity	250L
	Dry Chemical Powder Capacity	225KG



Features

- Independent system: Activated by nitrogen gas pressure without external power sources.
- Pre-engineered modular skid
- Easy to install and operate
- Save time and costs for installation and maintenance
- Comprehensive range of sizes to suit many application
- Comprehensive range of installation to be suitable for deck mount by Housing modular type

Application

- Small/Mid-size
- Bunkering station area to cover all possible leak points.



Container Vessels



Bulk Vessels



Deck Cargo Vessels



Oil Chemical Vessels



General Cargo Vessels

New Building Reference

Ship Type	Protected Area	Class
17k Bulk Carrier	Bunkering Station	RINA
G/T 3,900 Ton Class Fishery Inspection Boat	Bunkering Station	KR
G/T 800 Ton Class Oil Spill Response Vessel	Bunkering Station	KR
G/T 280 Ton Class Fuel-clearing Vessel	Bunkering Station	ABS
G/T 466 Ton Class Marine Fisheries Research Ship	Bunkering Station	KR

Retrofit Reference

Ship Type	Retrofit Description	Class
125k LNG Carrier	FSRU CONVERSION	BV
260k LNG FSRU	FSRU CONVERSION	BV

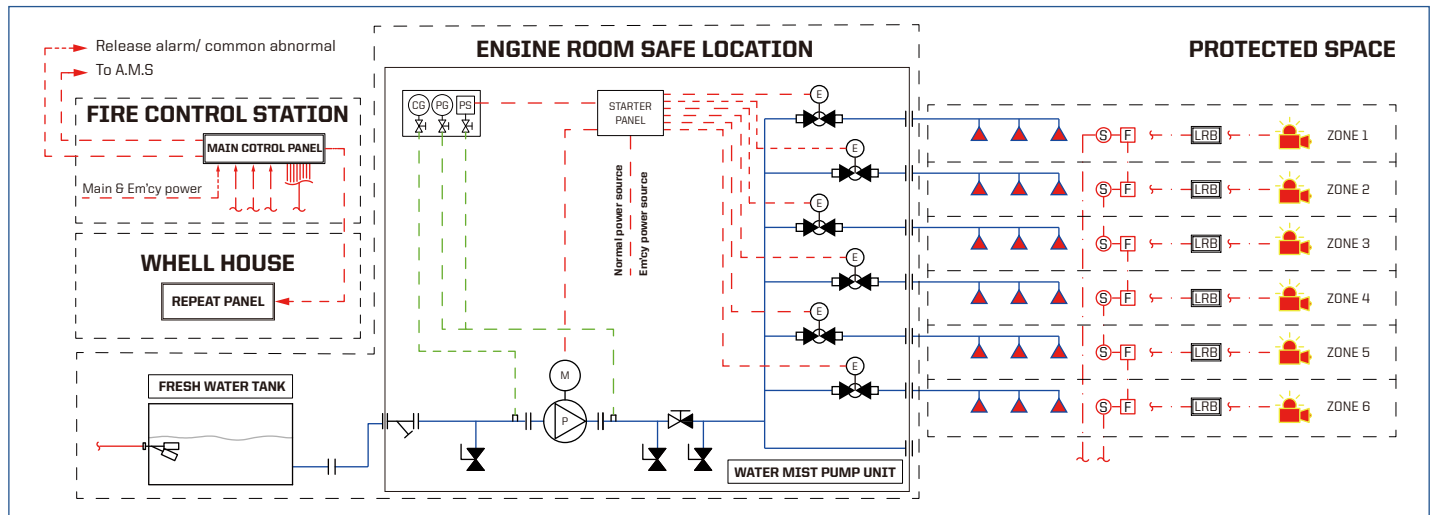
Water Mist System




Fixed local application fire-extinguishing systems are to protect areas such as the following without the necessity of engine shutdown, personnel evacuation, or sealing of the spaces:

- (1) the fire hazard portions of internal combustion machinery used for the ship's main propulsion and power generation
- (2) boiler fronts;
- (3) the fire hazard portions of incinerators;
- (4) heated fuel oil separators;
- (5) oil fired inert gas generators;
- and (6) oil heaters

Standard Configuration



Main Equipment (Nozzle Data)

	Type of Nozzle	Max, horizontal spacing	Min, horizontal distance from protected object	Max, horizontal distance from protected object	Operating pressure	Standard flow
	NKT LKD 4.33	4.0m	0.5m	14.5m	12bar	15.0 l/min (at 12bar)



Features

- Alternative to gas suppression system
- Environmentally friendly
- Installation space saving
- Low water consumption
- High cooling effect
- Minimal water damage

Application

- Small/Mid - Size Ship
- The Water Mist system has been in service on almost any type of marine application on container vessels, tankers of all sizes, bulk carriers, car carriers, RoRo and general cargo vessels.



Container Vessels



Bulk Vessels



Deck Cargo Vessels



Oil Chemical Vessels



General Cargo Vessels



Tug Boat

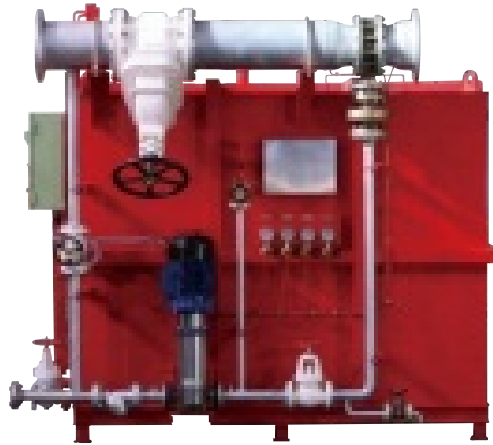
New Building Reference

Ship Type	Protected Zone Q'ty	Class
6.5k Product Tanker	5	RINA
17k Bulk Carrier	6	KR
63M Oil Spill Recovery Vessel	7	BV
Accommodation Platfoam	2	ABS
G/T 3,900 Ton Class Fishery Inspection Boat	7	KR
G/T 900 Ton Class Fishery Inspection Boat	6	KR

Retrofit Reference

Ship Type	Protected Zone Q'ty	Class
7.3k Oil/Chemical Tanker	7	NK
75.6M Multi Purpose Offshore Vessel	10	DNV
126.327m3 LNG Carrier	6	ABS

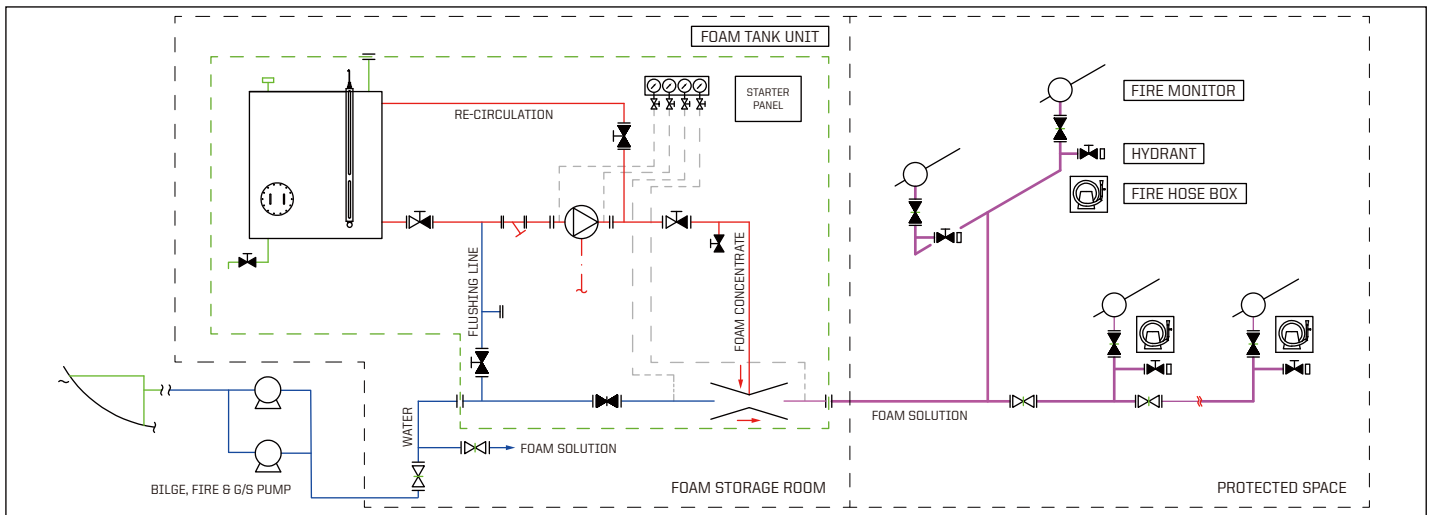
Deck Foam System



Foam system for the protection of chemical and oil tank decks or heli-decks in accordance with class requirements and IBC code. Calculated and designed in accordance with international regulations.

Deck Foam fire extinguishing system is a fixed, low expansion foam system that uses foam concentrate, water and air to effectively extinguish fires in open areas. The system provides safe and effective protection which is harmless to people.

Standard configuration



Main Equipment

Foam Tank Unit	Foam Monitor	Foam Proportioner	Fire Hose Box
			



Features

- The low expansion foam quickly blankets the fire and prevents further outbreak
- A balanced pressure proportioner guarantees reliable foam mixing 3% ratio
- Foam monitors and portable applicators can be used individually or in conjunction
- Fixed foam monitors are used to fight fire from a predetermined safe distance, while portable applicators and nozzles
- Cover shadow areas not reachable by the monitor
- Extensive independent testing according to IMO MSC/Circ.1165 and Circ.1271
- Compliance with SOLAS requirements and approval by major class societies-LR, DNV, ABS, BV, NK and KR.

Application

- Deck Foam system have been in service on almost any type of marine application on tankers of all sizes.



Oil Chemical Vessel

New Building Reference

FOAM TANK CAPACITY	Ship Type	Protected Area	Class
2,000 Liters	D/W 1,800 Ton Class Oil/Chemical Tanker	Cargo Deck Area	KR
2,000 Liters	D/W 6,500 Ton Class Product Tanker	Cargo Deck Area	RINA
1,500 Liters	Oil Tanker	Cargo Deck Area	KR

ANNUAL INSPECTION



- Comprehensive, total FFA & LSA Inspections at key ports around the globe
- Highly trained and certified in house technicians, coupled with a word wide network for unparalleled and competitive service offerings
- 365 days of service readiness for the customer's time critical needs
- Acquired the annual inspection qualification of each class for various FFA equipment

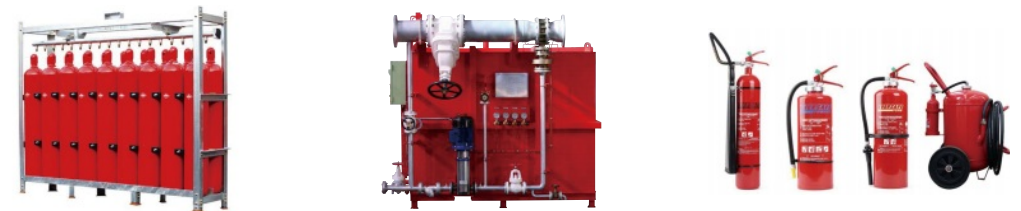


ANNUAL INSPECTION



FFA & LSA

- High Pressure CO2 System
- Low Pressure CO2 System
- Deck Foam System
- High Expansion Foam System
- Dry Chemical Powder System
- Fixed Water Based Local Application
- Loose Fire Extinguisher
- Fire & Smoke Detection System
- Analysis of foam sample
- Hydro test & Refilling
- Replacement (New Supply)
- Life Boat & Davit
- Life Raft
- Protection Suit
- Immersion Suit
- Inflatable Life Jacket
- Self-Contained Breathing Apparatus (SCBA)
- Emergency Escape Breathing Device (EEBD)
- Medical Oxygen System
- Gas Detector Calibration
- Air Compressor (Air Quality Test)
- Rental Service for Life Raft - SG



THESAFETY OUR SERVICES

1. Fire Fighting Equipment



2. Life Saving Appliance



3. Rental for Life Raft



4. Total Safety Management



5. Calibration Service



6. System Training Service



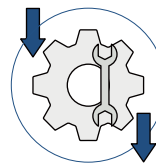
THESAFETY 'TOTAL SAFETY MANAGEMENT SERVICE'

1. Integrated Safety Equipment Management for Shipowner & Fleet
2. General Fire Fighting Management Service for Shipowner & Fleet
3. Operation Services of External Affairs Cooperation Department
4. Enhance Service Quality



Effect of TOTAL SAFETY MANAGEMENT SERVICE

1. Low Management Cost than 1 Time Service
2. High Work Efficiency from the Ship-Owner & Customers
3. Provide Customized Services as Long Time Term Service



THESAFETY also launching the Rental Service of Life Raft as 'TOTAL SAFETY MANAGEMENT SERVICE'



REMINDER: CO2 System 20 Yearly Inspection Regulation Change



From 2021, IMO (International Maritime Organization) revised fixed CO₂ fire-extinguishing system inspection regulation (MSC.1/CIRC.1318) Vessel should proceed with cylinders pressure tested before 20-year anniversary.



We assure you that as the sole authorized partner for the marine services of the NK Group, THE SAFETY Co., Ltd. is the best solution if you have the plan to proceed with CO₂ 20 Yearly inspection.

SPARE PARTS



- Genuine parts supply guaranteed
- Worldwide delivery
- Network of regional parts distribution hubs for the fastest parts availability



Co2 System Parts



Co2 System Parts

- Cylinder
- Main Valve
- Cylinder Valve
- Valve Actuator
- Release Control Cabinet
- Flexible Hose
- Pilot Loop
- Time Delay

Co2 N2 Cylinder / Pilot Cylinder



Cylinder Valve



Main Valve Ass'y



Flexible Hose Ass'y



Pilot Loop Ass'y



Main Valve Ass'y



Valve Actuator



Release Control Cabinet Ass'y



Time Delay Pneumatic / Electric



Smoke Detection System Parts



Smoke Detection System Parts

Optical Smoke Detector EX

Optical Smoke Detector

Prefilter

Airflow Detector with Plug and Cable

Universal Drain Box

3-Way Valve

Universal Drain U-bolt Type

Universal Drain PT

Optical Smoke Detector EX



Optical Smoke Detector



Prefilter



Airflow Detector with Plug and Cable



Universal Drain Box



3-Way Valve



Universal Drain U-bolt Type



Universal Drain PT



Deck Foam System Parts



Deck Foam System Parts

- Foam Monitor
- Bearing for Foam Monitor
- Foam Proportioner
- Mechanical Seal
- Diaphragm

Foam Monitor



Bearing for Foam Monitor SFHD 150



Foam Proportioner



Mechanical Seal For KSB Pump



Diaphragm of the Foam Proportioner 80/200



Diaphragm of the Foam Proportioner 50/150



Water Mist Parts / Dry Powder System Parts



Water Mist Parts

- Water mist Nozzle
- Mechanical Seal For KSB Pump
- Mist SOL. & Manual Valve
- Press Gauge

Dry Powder System Parts

- Dry Chemicals
- Nozzle Pistol

Low Water mist Nozzle



Mechanical Seal For KSB Pump



Mist SOL. & Manual Valve 20A



Mist SOL. & Manual Valve 25A



Press Gauge



Press Gauge, With Cock



Dry Chemicals



Nozzle Pistol





Loose Fire Fighting Parts



Loose Fire Fighting Parts

- Jet Spray Nozzle
- Coupling JIS type
- Fire Hose
- Fire Hose Box
- Dry Powder Fire Extinguisher
- Foam Fire Extinguisher
- CO2 Fire Extinguisher
- CO2 Spare Cartridge

Jet Spray Nozzle



Coupling JIS type



Fire Hose



Fire Hose Box Ass'y



Dry Powder Fire Extinguisher



Foam Fire Extinguisher



CO2 Fire Extinguisher Ass'y



CO2 Spare Cartridge



 **THESAFETY**
To Bring Family Home Safely

THE SAFETY CO., LTD

87, Heowanghu-gil, Gangseo-gu, Busan, Republic of Korea 46749

Tel. +82-51-468-0119

Fax. +82-51-469-8116

E-mail. ts@thesafety.com

www.thesafety.com

