



# FIRE SUPPRESSION SYSTEM



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## ***introduction***

Fire hazard is one of the most dangerous threats to happen anywhere. Due to the nature of their extreme working condition, mining equipment is very prone to fire hazard. Hundreds large mining equipment were burnt in the last decade, resulting in injuries, loss of equipment, and to the worst, fatalities.

To overcome this problem, FoamGuard comes with FoamGuard Spray System, a real world proven AFFF automatic fire suppression solution.

AFFF foam is the most effective fire extinguishing medium to be used on equipment consuming fossil fuel. AFFF foam prevents the contact between fuel and oxygen, resulting in suppression of fire.

In addition, it also help cools the burnt area and neutralize the chemical constituent of the fuel to prevent re-ignition.

The Pre Engineered FOAM GUARD spray System has been designed to allow various levels of protection from fully automatic detection and suppression systems with full engine shut down, Fault control detection and cab monitoring to simple suppression only systems with manual actuation.

Customers can decide for themselves what level of protection they wish to install on their equipment to meet the expectations



## Installation

### **Difficult to reach areas.**

FoamGuard Spray System is ideal solution to extinguish fire on areas where space is limited, access is difficult, and portable extinguisher cannot be installed. Spraying nozzles are installed to cover the hazard areas, ready to work all the time

### **The need for quick reaction.**

Large fires that are difficult to extinguish always started by small fires, which are easy to handle. FoamGuard Spray System is engineered to take advantage of this fact. The system will work in 6 second or less after flame touched the of this fact.

### **Limitation of manpower, training, and knowledge of fire handling.**

FoamGuard Spray System is an automated pre-engineered system, so it is suitable to protect fire area where manpower is limited and not properly trained on fire handling.

### **Existiance of potential fire hazard.**

FoamGuard Spray System is designed to protect equipment which components are potential to be burnt such as engine, turbo charger, pumps, hydraulic lines, etc.



## Installation Type

The innovations from Pre Engineered FOAM GUARD spray System are available in complete models.

- Loss of pressure with Red Nylon detection tube (LOP)
- Rise of pressure with Pyro-wick detection tube (ROP)
- Rise of pressure, with loss of pressure actuation (RLOP)
- Rise of pressure, with Electric device actuation (ROPE)
- Loss of pressure, with Electric device actuation (LOPE)
- Dual agent, a combination Ansul A-101 dry chemical and wet chemical (DAFS)
- Custom design as request (CDFS)



## Application



### **MINING EQUIPMENT**

Haul Trucks, Excavators, Bulldozers, Motor Graders, Loaders, Wheel Loaders, Service Units, etc.



### **FORESTRY & CONSTRUCTION EQUIPMENT**

Loggers, Skidders, Graders, Trucks, Excavators, Bulldozers, Graders, Wheel Loaders, etc.

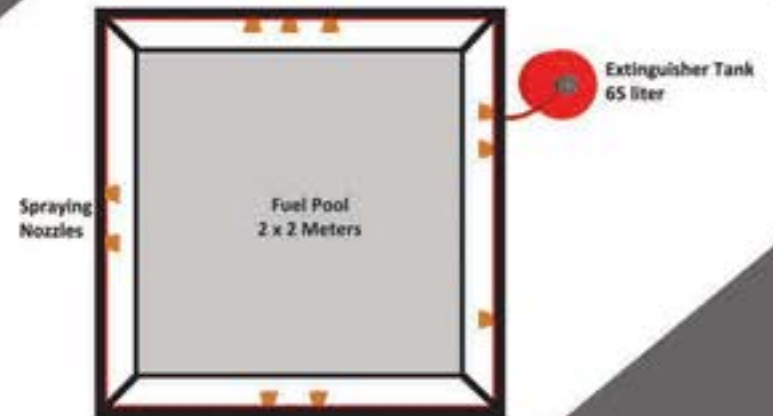
### **INDUSTRIAL ROAD TRANSPORT**

Trucks, Prime Movers, Fuel & Lube Stores, Generator Rooms, Forklift, etc.

### **TRANSPORTATION**

Bus, Train, Ship, etc.





# PENGUJIAN FOAM FIRE SUPPRESSION

di UPT Laboratorium Dinas Pemadam Kebakaran  
PROVINSI DKI JAKARTA  
Tanggal : 14 Februari 2012



**Merk** : FOAM GUARD  
**Materi Pemadam** : FOAM AFFF  
**Isi Tanki** : 50 Liter / 90 Liter  
**Type** : LOP / ROP  
**Bak Uji** : 2 x 2 meter  
**Bahan Bakar** : Campuran Bensin dan Solar



## LABORATORY TESTING RESULT

### 50 Liter Cylinder

Fuel : 120 Liters  
 Activation Method : Automatic  
 Detection Time : 6 Second  
 Discharge Duration : 1 Minute, 15 Second  
 Extinguishing Time : 9.37 Second (time required to stop fire completely)

### 90 Liter Cylinder

Fuel : 208 Liters  
 Activation Method : Manual  
 Pre Fire Duration : 15 Second  
 Discharge Duration : 2 Minute, 12 Second  
 Extinguishing Time : 45.12 Second (time required to stop fire completely)

# THE SUPPRESSION TIMING

Test Report – Released by UPT Laboratorium Dinas Pemadam  
(Jakarta Official Fire Fighter Department’s Laboratory)



**15' FIRE IS EXTINGUISHED  
77' FOAM HAS BEEN EXHAUSTED**



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## **FOAM GUARD FIRE SUPPRESSION SYSTEM**