



AFDASS OVERVIEW

AUTOMATIC FIRE DETECTION AND SUPPRESSION SYSTEM

“First Line of Protection”

WHO ARE WE?



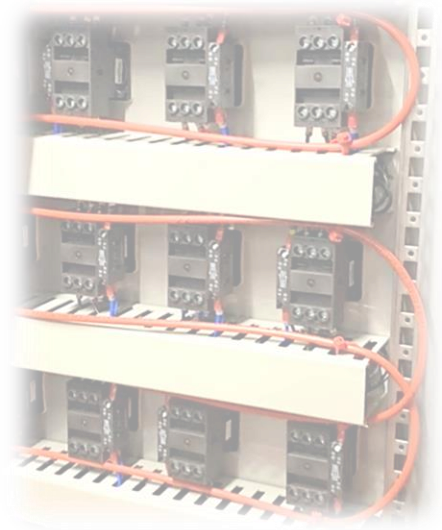
- Formed in 2008
- Established provider of Electrical Turnkey Packages:
 - Electrical Installations – LV/HV, Package Sub Stations
 - Control Panels – LV Switchgear, Motor Controls Centres, Process/HMI/PLC Control Panels
 - Services – Process Design, Software Programming, Surveys, Commissioning, Maintenance, Testing, Verification, Technical Support, System Training



INTRODUCING AFDASS

“AFDASS is an integrated fire detection and suppression system that instantaneously detects, suppresses and isolates a fire at source within an electrical enclosure”

- Primary Mitigation - Immediate intervention and shut-off fire at source
- Secondary Mitigation - Isolation of power source to enclosure
- Detection of fire to component level
- Continuously live and operational
- Patent pending system



AFDASS vs TRADITIONAL SYSTEMS

Inherently Clean System

- No superfluous or consequential damage to associated components post-discharge
- Inert extinguishant (Novec 1230) leaving no residue
- Repair/Charging system back to fully functioning system can be achieved rapidly after faulty component(s) are replaced



AFDASS OPERATION

1. Primary Mitigation = Fire Suppression

Incorporating cylinder of extinguishant and fire detection tubing

2. Secondary Mitigation = Mains Isolation

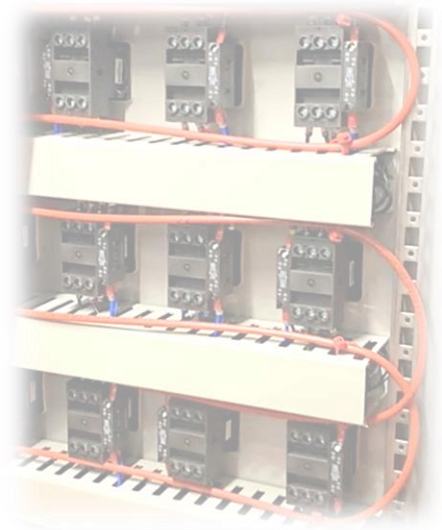
Isolation signal sent to mains once cylinder discharged

3. Event Warning = Factory Fire Alarm Integration

Pressure switches/transducer and alarm system interfaced via PLC

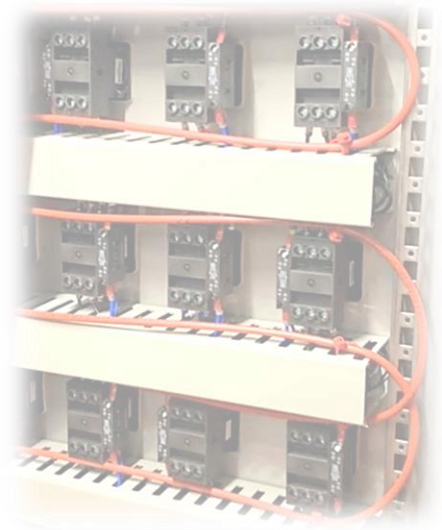
4. Human Machine Interface

Discharge log, visible zonal system and security protected



APPLICATION INTERFACE

- Remote access to HMI via password and VPN by authorised operator(s)
- Text message and e-mail sent to designated user(s) in event of cylinder discharge
- Connectivity options to factory network via:
 - Wireless network
 - Hard-wiring
 - Independent SIM card



FUNCTIONALITY

	Traditional	AFDASS
Configured to Existing Install	✓	✓
Interface with Fire Alarm System		✓
PLC Condition Monitoring		✓
Instant Suppression of Fire	✓	✓
Instant Isolation at Source		✓
Secondary Mitigation		✓
Direct Protection of Control Cabinet	✓	✓
Preservation of Highest Value Assets	✓	✓
Full System Protection		✓
Live Communication via App		✓
System Performance Digitally Stored		✓
Overall Time v Cost System Benefit		✓



OVERCOMING RECURRING INDUSTRIAL RISK

In 2019 – 20, 13,766 fires occurred in UK caused by electrical faults (www.gov.uk)

Main causes:

- Substandard wiring
- Poor connections
- Tired electrical componentry
- System overloading
- Static discharge
- Limited OPEX budget
- Lack of professional maintenance



Installing AFDASS fundamentally safeguards company assets

CUSTOMER BASE



Energy



Food & Beverage



Manufacturing



Maritime



Pharmaceuticals



Technology



Telecommunications



Transportation

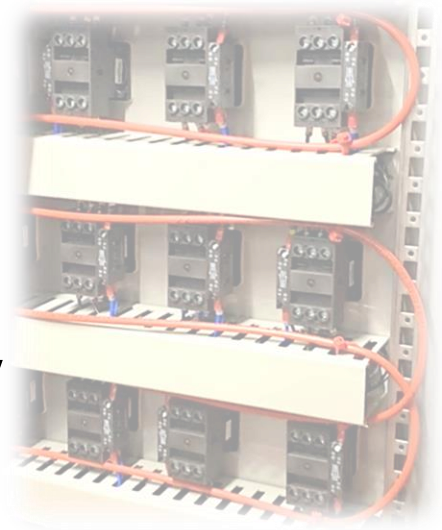


CUSTOMER BASE

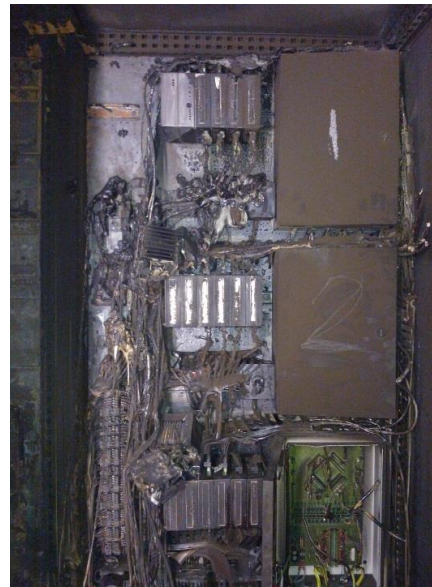


CASE STUDY

- 2010 – Fire in electrical panels controlling chiller plant at HQ production facility
- Flash over from power fuses which rapidly spread through electrical cabinets
- Fire spread not identified by control room fire detection system
- Downtime, lost production and replacement of equipment resulted in event cost of **>£1 million**



PLC

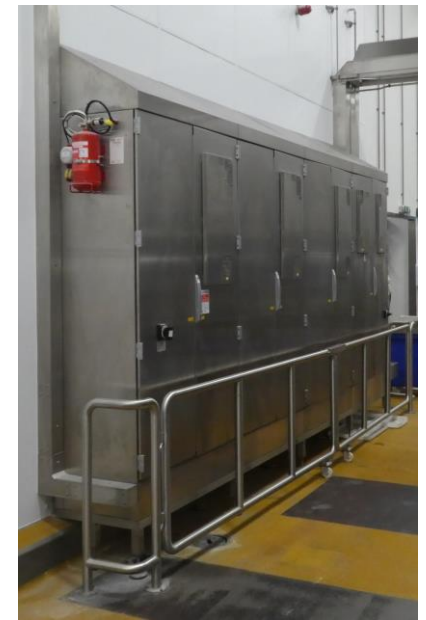
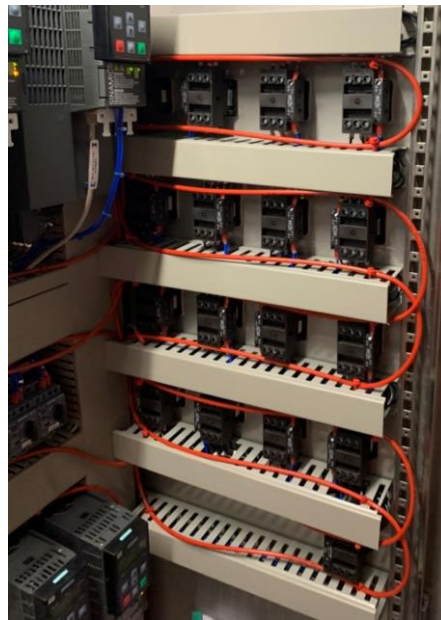


Panel (Fire Source)



CASE STUDY

AFDASS subsequently specified into all new electrical panels and retro-fitted to all existing panels throughout production facility. Investment and upkeep for following 11 years circa **£180,000.**



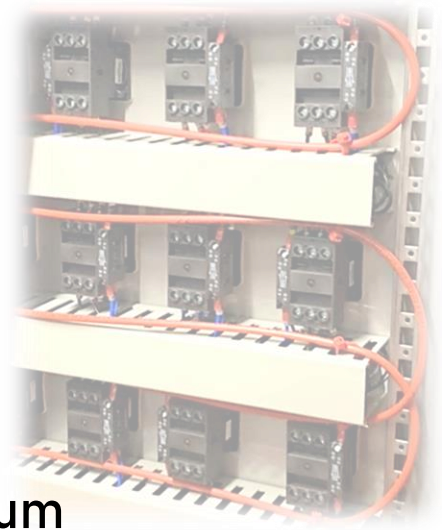
CASE STUDY

January 2021 – The same company experienced a cylinder discharge triggered by overheating in cold store control panel once again



CASE STUDY

- Fitting of tubing both above and below electrical components ensured immediate suppression whilst keeping any residual damage to absolute minimum
- Despite igniting in the same manner as the initial catastrophic event in 2010, the total cost of remedying this incident was **£5,000**



AFDASS BENEFITS

Safety

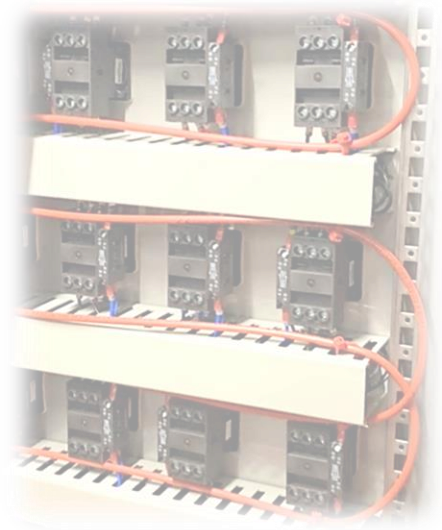
- High profile for duty of care and wellbeing of personnel
- Safeguarding of capex assets and facilities
- Multi-barrier protection for peace of mind
- Direct detection of failed component prevents total system failure
- Multiple alert protocol and system hierarchy control
- Protection of aging/bespoke control enclosures/systems



AFDASS BENEFITS

Cost & Continuity

- Reduced damage and need to replace installed high value system hardware
- Savings on insurance premiums
- Substantial risk mitigation to indirect cost of production downtime
- Rapid re-instatement of system after an event incidence



AFDASS BENEFITS

Responsiveness

- Immediate detection and suppression of fire ignition at source
- Damage limitation of surrounding infrastructure
- Identification of root cause of hazard
- No clean up necessary for released agent post-event



AFDASS BENEFITS

Support

- Ongoing technical advice
- Round the clock service support
- Holistic product and process knowledge from OEM
- Preventative maintenance through routine servicing
- Standardisation of component parts to stock and replace without significant downtime



CONTACT US

Gavin Coleman

AFDASS Sales Director

gavin.coleman@bms-electrical.co.uk

+44 (0) 7809 306 441

Neil Thompson

Director

neil.thompson@bms-electrical.co.uk

+44 (0) 7879 353 566

