FIRE PROTECTION CAREERS & JOB OPTIONS

Advance your career prospects and help save lives with the diverse range of job options in the New Zealand Fire Protection Industry.

FPA NEW ZEALAND

CONTENTS

FPANZ has been representing the fire protection industry in New Zealand since 1975 to promote the protection of people, property and the environment by advancing fire prevention and protection techniques.

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FIRE PROTECTION CAREERS & JOB OPTIONS

THE "INVISIBLE INDUSTRY"

Fire protection has been called "the invisible industry" because most of its "smarts" are hidden away from everyday view. Yet, in an emergency, all the fire protection measures in a building will work together to save people's lives and minimise damage.

Despite the occasional spectacular news headlines, hundreds of fires a month in New Zealand are successfully extinguished with minimal damage or danger to either people or property, thanks to the fire protection industry, its products, and systems.

DIVERSE CAREER OPTIONS

As you will discover from the following information, jobs in fire protection are diverse, suiting a wide range of skills. Many of these skills are transferrable to and from other trades (electrical, mechanical, plumbing, building, compliance).

Because of its specialist niche, fire protection offers good prospects for rapid career advancement to motivated individuals, either working for a company or becoming a self-employed specialist.

FIRE ALARM & SPRINKLER SYSTEMS

Fire alarm and sprinkler systems are installed in a wide range of buildings. They need to operate automatically and reliably 24/7 to protect people and property.

Also included in this category are building fire hydrant systems, water and foam deluge systems, and other specialised automatic fire extinguishing systems.

- FIRE ALARM SYSTEMS
- SPRINKLER SYSTEMS
- BUILDING FIRE HYDRANT SYSTEMS
- WATER AND FOAM DELUGE SYSTEMS
- SPECIALISED AUTOMATIC FIRE EXTINGUISHING SYSTEMS

Sprinkler and Fire Alarm System Testers and IQP Inspectors/Surveyors

Sprinkler and Fire Alarm System Testers and Surveyors carry out routine inspections of fire protection systems installed in a wide variety of buildings.

Tests are performed monthly with a more comprehensive "Independently Qualified Person (IQP)" survey conducted annually.

They involve inspection and testing of systems to the relevant standards to ensure they remain in good condition and will operate correctly when required.

These jobs require candidates to have an electrical and mechanical competency and a working knowledge of the standards applicable to fire protection systems.

These jobs are normally highly mobile and involve visiting multiple buildings and locations on a daily basis rather than having a fixed place of work.

SKILLS REQUIRED:

- Good written and spoken English
- Clean driver's license
- Interest in mechanical or electronic systems
- Attention to detail
- Ability to work unsupervised.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Fire Protection Systems Technology (Testing) (Level 3)
- New Zealand Certificate in Fire Protection Systems Technology (Inspections) (Level 4) with strands in Fire Detection and Alarms Systems, and Fixed Fire Protection Systems

Sprinkler and Fire Alarm System Installers

Sprinkler and Fire Alarm System Installers install complete new fire protection systems, or extend existing systems, in a wide variety of buildings. This involves the installation of pipework/wiring and the fitting of sprinklers, valves, pumps, detectors, manual call points, control panels, and alerting devices as shown in plans and specifications.

These jobs require candidates to have an electrical and mechanical competency, a head for heights, and a working knowledge of the standards applicable to fire protection systems. You will typically work on one building site at a time as part of a team.

SKILLS REQUIRED:

- Good spoken English
- Ability to follow plans and written instructions
- Interest in mechanical or electronic systems
- Attention to detail.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Fixed Fire Protection Systems (Level 3)
- New Zealand Certificate in Fire Detection and Alarm Systems (Level 3)

Sprinkler and Fire Alarm System Maintenance Technicians

Sprinkler and Fire Alarm System Maintenance Technicians carry out fault-finding and routine maintenance of fire protection systems installed in a wide variety of buildings. They also attend systems activations (fire calls) to ensure the system is reinstated to full operational condition. These jobs require candidates to have a sound electrical and mechanical competency, experience with specific systems, and a thorough working knowledge of the standards applicable to fire protection systems.

These jobs are normally highly mobile and involve visiting multiple buildings and locations on a daily basis (and occasionally after-hours) rather than having a fixed place of work.

SKILLS REQUIRED:

- Good written and spoken English
- Computer skills
- Clean driver's license
- Interest in mechanical or electronic systems
- Attention to detail
- Logical thinking.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Fire Detection and Alarm Systems (Level 4) with optional strand in Special Hazards
- New Zealand Certificate in Fixed Fire Protection Systems (Level 4) with optional strand in Special Hazards Fixed Fire Protection Systems

Site Supervisors and Project Managers

Site Supervisors and Project Managers have overall responsibility for the fire protection work of one or more installation teams or sites. This includes ensuring the project stays within time and budget, that all materials are available where needed, and that on-site activities are conducted correctly and efficiently.

They will interact and co-ordinate with other trades, the builder, and the system's design engineers, and will resolve any problems encountered during the project.

These jobs require candidates to have on-site experience, a thorough working knowledge of the standards applicable to fire protection systems.

These jobs are normally highly mobile and involve visiting multiple buildings and locations on a daily basis (and occasionally after-hours) rather than having a fixed place of work.

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Clean driver's license
- People management
- Attention to detail
- Logical thinking
- Ability to handle competing priorities and work to deadlines.

QUALIFICATIONS AVAILABLE:

No specific additional qualifications are required. You are likely to grow into such a role after working on-site and demonstrating the ability to shoulder responsibility and to lead others. Specific training in project management would be useful.

Product Support and Sales Engineers

Product Support and Sales Engineers provide expert product and technical advice to those designing, installing, and maintaining fire protection systems.

They are also involved with preparing quotations for customers and product training.

These jobs require candidates to have a sound electrical and mechanical competency, to develop a detailed knowledge of the operation and characteristics of specific products and systems, and to have a thorough working knowledge of the standards applicable to fire protection systems.

These jobs are mostly office based (telephone, email, internet), but will also involve some travel to meet customers, conduct training, or work with systems.

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Interest in mechanical or electronic systems
- Attention to detail, resourcefulness, logical thinking.

QUALIFICATIONS AVAILABLE:

There are no specific qualifications for these jobs, however any of the qualifications listed above (plus other mechanical/electrical qualifications and experience) will be useful. These jobs are typically career developments from fire alarm and sprinkler installation and maintenance roles, or from similar roles in other trades (electrical, mechanical).

System Designers and CAD Operators

System Designers and CAD (Computer Aided Design) Operators perform the in-depth design work for fire protection systems intended to be installed in a wide range of buildings.

They take the raw specifications for a project and turn them into a detailed design, including schedules of materials, calculations, costings, and detailed drawings.

These jobs require candidates to have a sound electrical and mechanical and graphic design competency, to develop a good working knowledge of building methods and specific products and systems, and a thorough working knowledge of the standards applicable to fire protection systems.

These jobs are mostly office based (telephone, email, internet).

SKILLS REQUIRED:

- Excellent computer skills
- Good written and spoken English,
- Interest in mechanical or electronic systems
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

Some or all of the following depending on role:

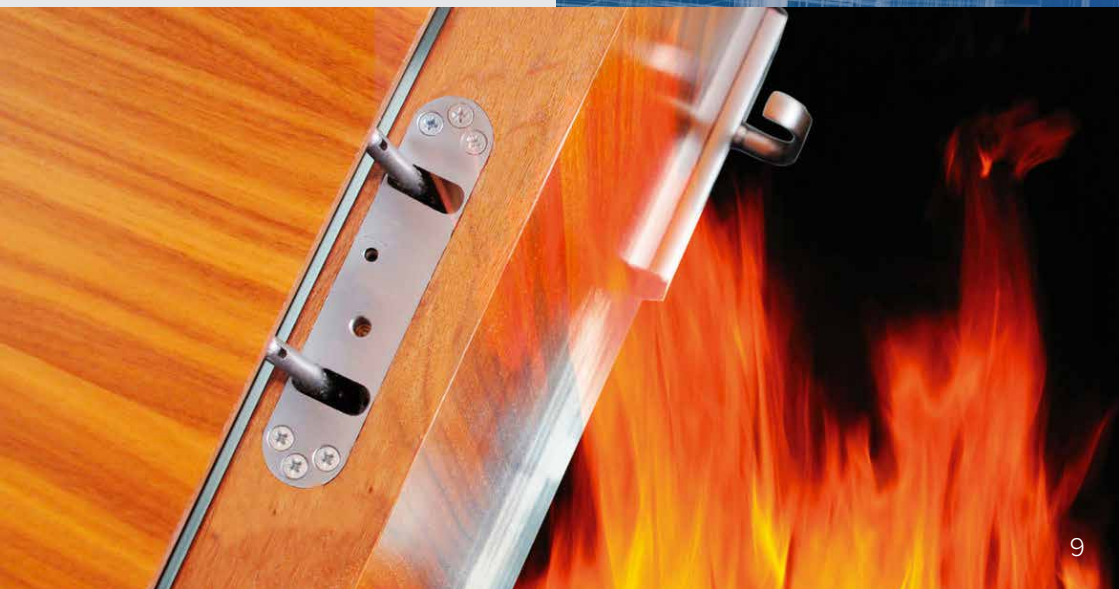
- National Certificate in Fire Protection Systems Technology (Inspection and Testing) (Level 4)
- National Diploma in Architectural Technology (Level 6)
- New Zealand Diploma in Engineering (Fire Engineering) (Level 6)

PASSIVE FIRE SYSTEMS

Passive fire systems are specialised (but often invisible) elements of building construction that prevent or slow the spread of smoke or fire from one part of a building to another, or which prevent a building from collapsing during a fire.

Passive systems include such things as fire resistant walls and floors, fire-stopping of wall and floor penetrations (pipes, drains, cables), smoke and fire doors, smoke seals, fire-resistant glazing, coatings for structural steel, shutters, smoke curtains, baffles, and vents.

- FIRE RESISTANT WALLS & FLOORS
- FIRE STOPPING – WALL & FLOOR PENETRATIONS
- SMOKE & FIRE DOORS
- SMOKE SEALS
- FIRE-RESISTANT GLAZING
- COATINGS FOR STRUCTURAL STEEL
- SHUTTERS
- SMOKE CURTAINS
- BAFFLES
- VENTS



Passive Fire System Installers

Passive Fire System Installers install the different types of passive fire protection elements in a wide variety of both new and existing buildings.

Some will already work in other trades – builders, painters, glaziers, or mechanical services and then undertake specific training. Others may specialise, for example in fire stopping.

These jobs require candidates to be methodical and systematic, to have a head for heights, and to develop a good working knowledge of the various products and the procedures for installing them. You will typically work on one building site at a time, sometimes as part of a team.

SKILLS REQUIRED:

- Good spoken English
- Ability to follow plans and written instructions
- Interest in life safety systems
- Attention to detail.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Passive Fire Protection Installation (Level 3)

Site Supervisors and Project Managers (Passive fire protection)

Site Supervisors and Project Managers have overall responsibility for the passive fire protection work of one or more installation teams or sites.

This includes ensuring the project stays within time and budget, that all materials are available where needed, and that on-site activities are conducted correctly and efficiently. They will interact and co-ordinate with other trades, the builder, and the system's design engineers, and will resolve any problems encountered during the project.

These jobs require candidates to have on-site experience, and a sound working knowledge of the standards applicable to passive fire protection systems. These jobs are normally highly mobile and involve visiting multiple buildings and locations on a daily basis (and occasionally after-hours) rather than having a fixed place of work.

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Clean driver's license
- People management
- Attention to detail
- Logical thinking
- Ability to handle competing priorities and work to deadlines.

QUALIFICATIONS AVAILABLE:

No specific additional qualifications are required. You are likely to grow into such a role after working on-site and demonstrating the ability to shoulder responsibility and to lead others. Specific training in project management would be useful.

Intumescent Paint Specialist Applicator (Passive fire protection)

Intumescent Paint applicators provide specialist application of paints and sprays that protect various building elements from collapse during a fire.

These jobs require candidates to be methodical and systematic, to have a head for heights, and to develop a good working knowledge of the various products and the procedures for applying/installing them.

You will typically work on one building site at a time, sometimes as part of a team.

SKILLS REQUIRED:

- Good written and spoken English
- Clean driver's license
- Interest in mechanical systems and building construction
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Passive Fire Protection Installation (Level 3)
- Trade qualified Painter/ Industrial coater

IQP Building and Systems Inspectors (Passive fire protection)

Passive Fire Protection IQP Building and Systems Inspectors have responsibility for annual "Independently Qualified Person" inspections of the passive fire protection systems installed in a building.

This involves inspection and testing of passive systems to the relevant standards to ensure they remain in good condition and will operate correctly when required.

These jobs require candidates to have a good eye for detail and a thorough working knowledge of the standards applicable to passive fire protection systems.

These jobs are normally highly mobile and involve visiting different buildings and locations on a daily basis rather than having a fixed place of work

SKILLS REQUIRED:

- Good written and spoken English
- Computer skills
- Clean driver's license
- Interest in mechanical or electronic systems
- Attention to detail
- Ability to work unsupervised.

QUALIFICATIONS AVAILABLE:

- National Certificate in Passive Fire Protection (Building Consent Inspections) (Level 4)

System Designers and CAD Operators (Passive fire protection)

System Designers and CAD (Computer Aided Design) Operators perform the in-depth design work for passive fire protection systems intended to be installed in a wide range of buildings.

They take the raw specifications for a project and turn them into a detailed design, including schedules of materials, calculations, costings, and detailed drawings. These jobs require candidates to have a sound mechanical and graphic design competency, to develop a thorough working knowledge of building methods and specific products, and a thorough working knowledge of the standards applicable to passive fire protection systems. These jobs are mostly office based (telephone, email, internet).

SKILLS REQUIRED:

- Excellent computer skills
- Good written and spoken English
- Interest in mechanical systems and construction methods
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

Some or all of the following depending on role:

- National Certificate in Passive Fire Protection (Building Consent Inspections) (Level 4)
- National Diploma in Architectural Technology (Level 6)
- New Zealand Diploma in Engineering (Fire Engineering) (Level 6)

Product Support and Sales Engineers (Passive fire protection)

Product Support and Sales Engineers provide expert product and technical advice to those designing, installing, and maintaining passive fire protection systems. They are also involved with preparing quotations for customers and conducting product training. These jobs require candidates to have a sound mechanical competency, to develop a detailed knowledge of the operation and characteristics of specific products and systems, and to have a thorough working knowledge of building construction methods and the standards applicable to fire protection systems.

These jobs are partly office based (telephone, email, internet), but will also involve travel to meet customers, conduct training, and provide advice about specific buildings and systems..

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Clean driver's license
- Interest in mechanical systems and building construction
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

There are no specific qualifications for these jobs, however any of the qualifications listed above (plus other mechanical/building trade qualifications and experience) will be useful. These jobs are typically career developments from other entry-level roles, or from similar roles in other building trades.

ENGINEERING & COMPLIANCE

Fire safety has mandatory legal requirements for both building construction and day-to-day management. Compliance with the various rules, codes, and regulations is essential at every step: design, construction, commissioning, and ongoing throughout a building's lifetime.

While the building codes, standards, and regulations cover a wide variety of situations, every building is different. Some buildings have unique requirements (for example hospitals, prisons, stadiums, factories, power stations). Fire Engineers and Evacuation consultants ensure that the general legal requirements are applied correctly to each specific situation.

- DESIGN
- CONSTRUCTION
- COMMISSIONING
- ONGOING COMPLIANCE
- FIRE-RESISTANT GLAZING
- FIRE ENGINEERING
- EVACUATION CONSULTANTS

Evacuation Consultants

Evacuation Consultants are the experts in procedures for evacuating people from buildings during an emergency.

They provide assistance and advice to building owners and managers to develop, document, and manage evacuation schemes and plans, to get these approved by the authorities, and to conduct training and drills for building occupants (with particular attention to safety and people with disabilities) in order to satisfy legal requirements.

These jobs require candidates to have excellent interpersonal skills, an understanding of human behaviour, and a good working knowledge of the relevant rules and regulations for building safety.

These jobs involve a good deal of travel to customer premises to devise procedures, organise signage, conduct training, organise drills, and provide advice about specific buildings. For more information see http://www.fireprotection.org.nz/information-on/evacuation/certified-evac-consultant

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Clean driver's license
- Relate well to people
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

There are no qualifications specific to this role. It would be useful for candidates to have completed the following Health and Safety unit standards:

- Suppress fire with hand extinguishers and fixed hose reels (NZQA 3271)
- Explain Principles of Fire Science (NZQA 4647)
- Demonstrate knowledge of fire and emergency warden duties in the workplace (NZQA 18408)
- Demonstrate basic knowledge of New Zealand's Coordinated Incident Management System (NZQA 32158)

Fire Engineers

Fire engineers perform in-depth design work and reporting for the overall fire protection requirements of a wide range of buildings, especially the more complex ones.

They work with architects, developers, building owners, and building designers to ensure the complete fire protection strategy will meet the safety needs of the occupants and comply with all legal requirements. This will often involve the use of computer-based modelling tools and engineering calculations. These jobs require candidates to have an expert knowledge of building methods, fire growth and dynamics, fire protection systems, human behaviour, and a thorough working knowledge of the standards and legal requirements applicable to fire protection systems.

These jobs are a mix of office and on-site work.

SKILLS REQUIRED:

- Excellent written and spoken English
- Excellent computer skills
- Clean driver's license
- Relate well to people
- Analytical strength
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

Fire engineers will typically have a diploma or university degree in engineering with additional postgraduate study in specific areas of fire engineering. This is also a career path from other jobs in the fire protection industry.

Systems Engineers – Mechanical and Electrical

Systems engineers undertake the detailed design, configuration, and commissioning for specific (usually complex) fire protection systems installed in buildings.

They ensure the systems meet all their design objectives and that they are installed, programmed, and configured correctly. These jobs require candidates to have excellent electrical & mechanical competency, experience with specific systems, and a thorough working knowledge of the standards applicable to fire protection systems. These jobs typically involve work both in the office and on-site for periods (sometimes after-hours).

SKILLS REQUIRED:

- Excellent written and spoken English
- Computer skills
- Clean driver's license
- Experience in mechanical or electronic systems
- Attention to detail
- Logical thinking.

QUALIFICATIONS AVAILABLE:

Candidates will typically have one or more of the qualifications below, with additional on-job experience.

- NZ Certificate in Fire Detection and Alarm Systems (Level 4) with strand in Special Hazards
- NZ Certificate in Fixed Fire Protection Systems (Level 4) with strand in Special Hazards Fixed Fire Protection Systems
- National Certificate in Passive Fire Protection (Building Consent Inspections) (Level 4)
- Diploma or degree in engineering

HAND OPERATED FIRE FIGHTING EQUIPMENT (HOFFE)

Hand-Operated Fire Fighting Equipment (HOFFE) includes fire extinguishers (all sizes from portable to large wheeled), fixed fire hose reels, and fire blankets.

- FIRE EXTINGUISHERS
- FIXED FIRE HOSE REELS
- FIRE BLANKETS

Maintenance Technicians and IQP Inspectors (HOFFE)

Hand-operated fire fighting equipment Maintenance Technicians and IQP inspectors carry out routine "Independently Qualified Person" inspections and maintenance of HOFFE equipment installed in a wide variety of buildings.

These jobs require candidates to have mechanical competency, experience with specific products, and a thorough working knowledge of the standards applicable to hand-held fire protection equipment. These jobs are normally highly mobile and involve visiting multiple buildings and locations on a daily basis rather than having a fixed place of work.

SKILLS REQUIRED:

- Good written and spoken English
- Relate well to people
- Clean driver's license
- Interest in mechanical equipment
- Attention to detail
- Logical thinking
- Ability to work unsupervised.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Hand Operated Fire Fighting Equipment (Level 3)

Product Support and Sales Engineers (HOFFE)

Product Support and Sales Engineers provide expert product and technical advice related to the installation of HOFFE equipment in buildings and on vehicles/vessels.

They are also involved with preparing quotations for customers and may also conduct product training. These jobs require candidates to have a sound mechanical competency, to develop a detailed knowledge of the operation and characteristics of specific fire-fighting products, and to have a thorough working knowledge of the standards applicable to hand-operated fire fighting equipment. These jobs are partly office based (telephone, email, internet), but will also involve travel to meet customers, conduct training, and provide advice about specific installations.

SKILLS REQUIRED:

- Excellent written and spoken English
- Relate well to people
- Computer skills
- Clean driver's license
- Interest in mechanical systems
- Attention to detail
- Resourcefulness
- Logical thinking.

QUALIFICATIONS AVAILABLE:

- New Zealand Certificate in Hand Operated Fire Fighting Equipment (Level 3)
- Additional on-job experience

FIRE EQUIPMENT MANUFACTURERS

Fire equipment manufacturers design and build fire protection equipment. They typically have a variety of jobs available:

- DESIGN ENGINEERS (electrical, mechanical, computer software)
- PROJECT MANAGERS
- PRODUCT SUPPORT AND SALES ENGINEERS
- SYSTEM DESIGNERS AND CAD OPERATORS
- TEST TECHNICIANS

SKILLS REQUIRED:

- As for the equivalent positions in the various categories above

QUALIFICATIONS AVAILABLE:

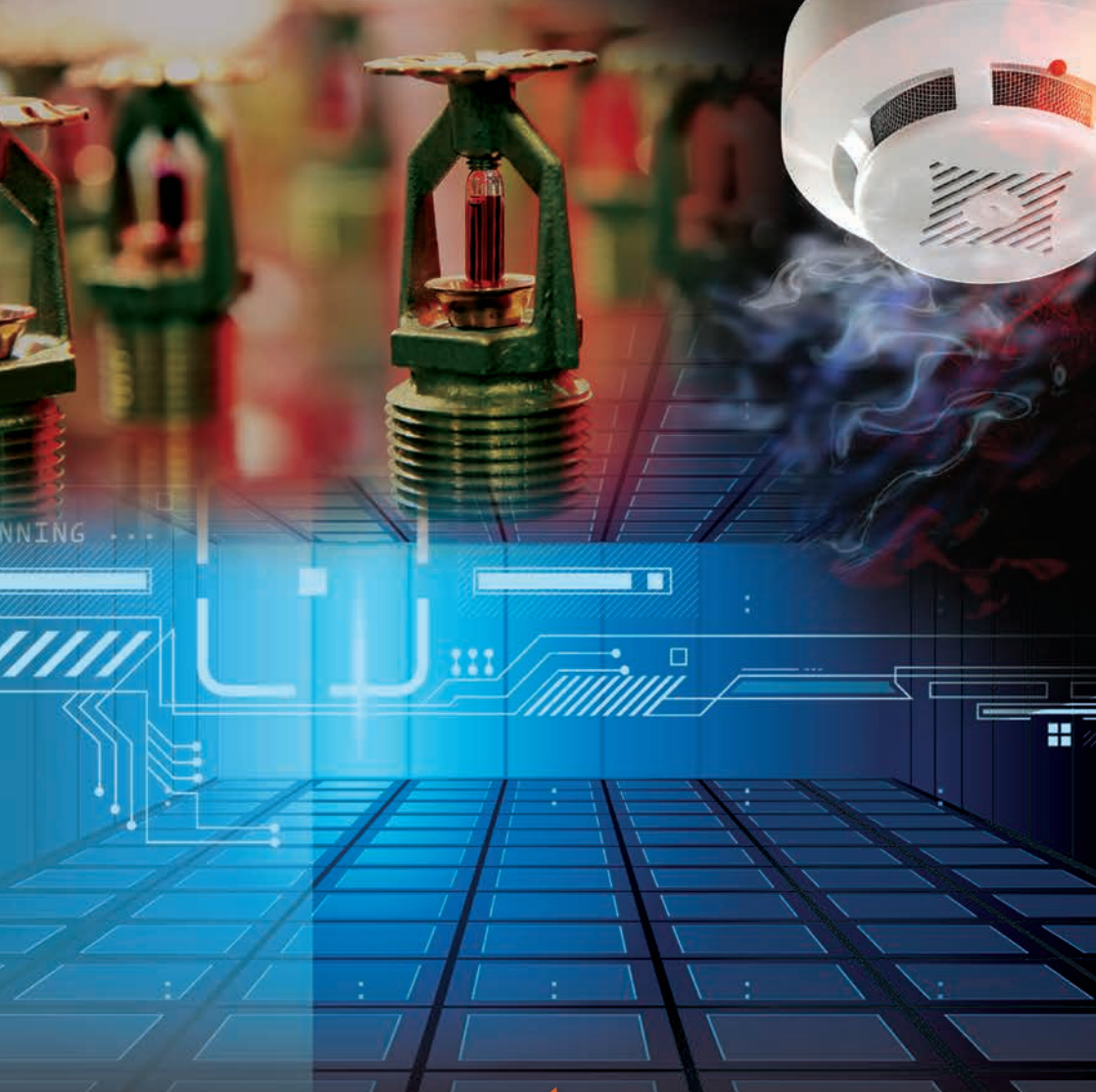
As for the equivalent positions in the various categories above. Engineers will usually have an engineering diploma or university degree

YOUR FUTURE IS HERE

Why not join us in the fire protection industry today, talk to us to kick start your career.

For more information on any of the careers mentioned in this booklet, visit

www.fpanz.org/careers



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