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Forensic Investigation and Insurance Fraud Risk Management

A Joint Presentation by
Approved Group International
(Malaysia)
and
PIAM's WEBINAR ON FORENSIC FRAUD INVESTIGATION

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Chief Executive Officer

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AGENDA

Presenter's Background

Forensic Evidence of Deliberate Fires

Forensic Evidence indicating Deliberate Fires initiated by Management

Speaker's Background

John Horswell has 46 year's working in Forensic Science and is a veteran of its application to problem solving in the Criminal and Civil Law across many forensic science disciplines. He co-ordinates and overseas complex investigations for the insurance industry and legal fraternity.

Speaker's Background

The application of forensic science to fires and explosions are John Horswell's special interests.

1. Fraudulent Fires
2. Management initiated Fire
3. Increase the value of specific claims
4. Detecting accidental fires which may become enhanced fires which cause more damage

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Differences between Forensic Science in the Criminal Law and Civil Law

The application of the Forensic Science in the Criminal Law differs from the Civil Law.

The Criminal Law uses forensic science as an intelligence tool and there is an increasing reliance on the use of data bases, such as, DNA, Firearms, Fingerprints, Footwear and Toolmark Indices, packaging and Analytical Profiling of drug imports, to identify and develop suspects

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Differences between the Criminal Law and Civil Law

The Criminal Law also looks at comparative forensic science to prove contact and place victims with suspects, and suspects with crime scenes

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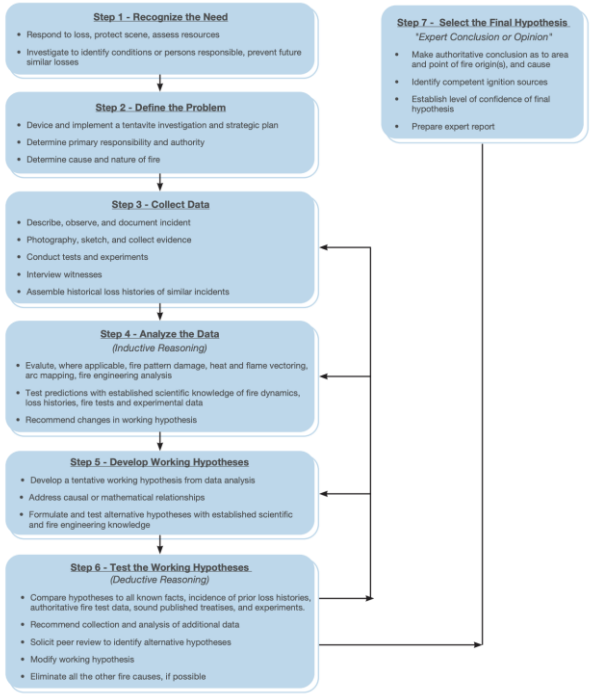
The Scientific Method



- Identify and define the problem
- Collect Data (photographs, plan Drawing, debris samples, electrical reticulation and appliances
- Research and analyse the data
- Develop an hypothesis (inductive reasoning)
- Test hypothesis (deductive reasoning)
- Final hypothesis or the conclusion is the hypothesis which withstands the test

The Scientific Method

The Scientific Method is achieved through obtaining statements from witnesses, observations and notes, recording the scene using aerial and terrestrial photography, taking measurements for sketch plans, interpretation of fire patterns and damage assessment and the collection of potential evidentiary material

Search for the Truth

Forensic Scientists search for the ‘truth’ as to what happened (CAUSE and CIRCUMSTANCES) and ways to identify ‘who’ was responsible (CULPABILITY and POSSIBLE RECOVERY).

Insurers also want to know the exact cause of the loss so they can elicit recommendations from forensic providers in an attempt to mitigate losses of a like nature in the future.

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Forensic Fire Investigators

Use the following overall methodology:

- Systematic, Methodical, and Thorough examination
- Interviewing Potential Witnesses
- Appropriate Collection of Potential Evidentiary Material using the right containers that will eliminate contamination ensuring ‘chain of custody’ in maintained by the use of appropriate labels and submission forms

The Fire Investigation

It has been debated in fire investigation circles if fire investigators are conducting an investigation and not just reporting on what they are being told.

A fire investigation must be comprehensive and must consider all potential fire causes as per the use of the scientific method to be considered an investigation. What has been stated and found must be verifiable before it can be accepted.

In addition, all accidental fire causation must be considered and eliminated before a deliberate fire is considered. This elimination process must be recorded.

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Fire Investigation

There has also been debate where laboratory chemists and not fire investigators are involved in fire investigation and consider that a fire is or is not a deliberate fire based on the presence and/or absence of Ignitable Liquid Residues (ILRs). This is dangerous in the extreme if this is the only issue considered as it maybe that the fire debris sample taken was taken from an area where there was no ILRs or the ILR had be consumed in the fire because of the extent of damage or the minute amount of ILR used which has subsequently been consumed. Remember ILRs can be on site innocently and must be considered

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Fire Investigation

Fire Investigators in addition to any results of fire debris analysis consider the following:

- Signs of break-in by others , other than the fire service
- Multiple fires which are independent of each other
- Trailers
- Presence of weathered ignitable liquids residues at one or more fire sites independent of each other

Fire Investigation

- Interpretation of GC/MS ion chromatograms – weathered ignitable liquid residues versus un-weathered
- Finding un-weathered ignitable liquid residues may indicate the accidental or intentional contamination of the fire scene
- Pour patterns
- Use petrol in circumstances where petrol should not normally be on the premises as petrol is only used to propel motor vehicles, in small motors attached to pumps and generator sets

Fire Investigation

- CCTV footage of the intentional pouring and ignition of an ignitable liquid
- The person initiating the fire is caught up and injured in the resulting flash fire

Fire Causation

We consider and eliminate:

- Electrical Failure/s
- Lightning
- Static Electricity
- Cooking Equipment
- Hot Works – Welding, Friction, Cutting and Grinding
- Careless Use of Smoking Materials
- Praying altars / Candles /
- Animal Activity – Insects, Birds, Rodents and Reptiles
- Spontaneous Combustion and Auto Ignition
- Human Involvement - Accidental or Negligence
- Human Involvement - Intentional

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Reporting

Reporting Conclusions

- Conclusive – at this level of confidence, all reasonable alternative hypotheses have been considered and eliminated – **What has occurred has occurred**
- Probable – at this level of confidence, the chance that the hypothesis is true is more than 50% - **Opinion**
- Possible - at this level of confidence, the hypothesis can be said to be feasible but cannot be declared probable in cases where two or more hypotheses are equally alike **– Report two possible fire causes**
- Suspected – at this level of confidence, corresponds to a perception that the hypothesis may be true, but there is insufficient data to draw a conclusion to the exclusion of any other reasonable conclusion **– Report as an unknown fire cause**

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Fire Investigation Red Flags which may Indicate a Management Initiated Fire

Once an incendiary fire has been determined then the insurance provider will want to know if the fire was initiated by management or the owner, or was this the result of an outsider, as normal fire policies will be paid if the fire was initiated by a person or person other than the owner or management.

Management Initiated Fires – Indicators or Red Flags

- Disconnection of water pipes in the fire fighting system prior to the fire
- Disconnection of phone lines from the intruder alarm prior to the fire
- Unauthorised duplication of keys
- Locks not forced but opened with a key
- Fire scenes ‘seeded’ with material to give the impression of a greater quantity of stock pre-fire


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Management Initiated Fires – Indicators or Red Flags

- Business not viable
- Insurance cover increased prior to the fire
- Management have alibis for the time of the fire - away on business or touring
- Low quantities of stock
- Stock removed prior to the fire
- Stock replaced with valueless stock before the fire

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Management Initiated Fires – Indicators or Red Flags

- Property/Machines of significant value have been removed prior to the fire
- CCTV switched off or inoperable at the time of the fire
- Intruder alarm switched off or inoperable at the time of the fire
- Office is damaged destroying all records
- Security Guards stood down for the shift when the fire occurred
- Restricted key holders

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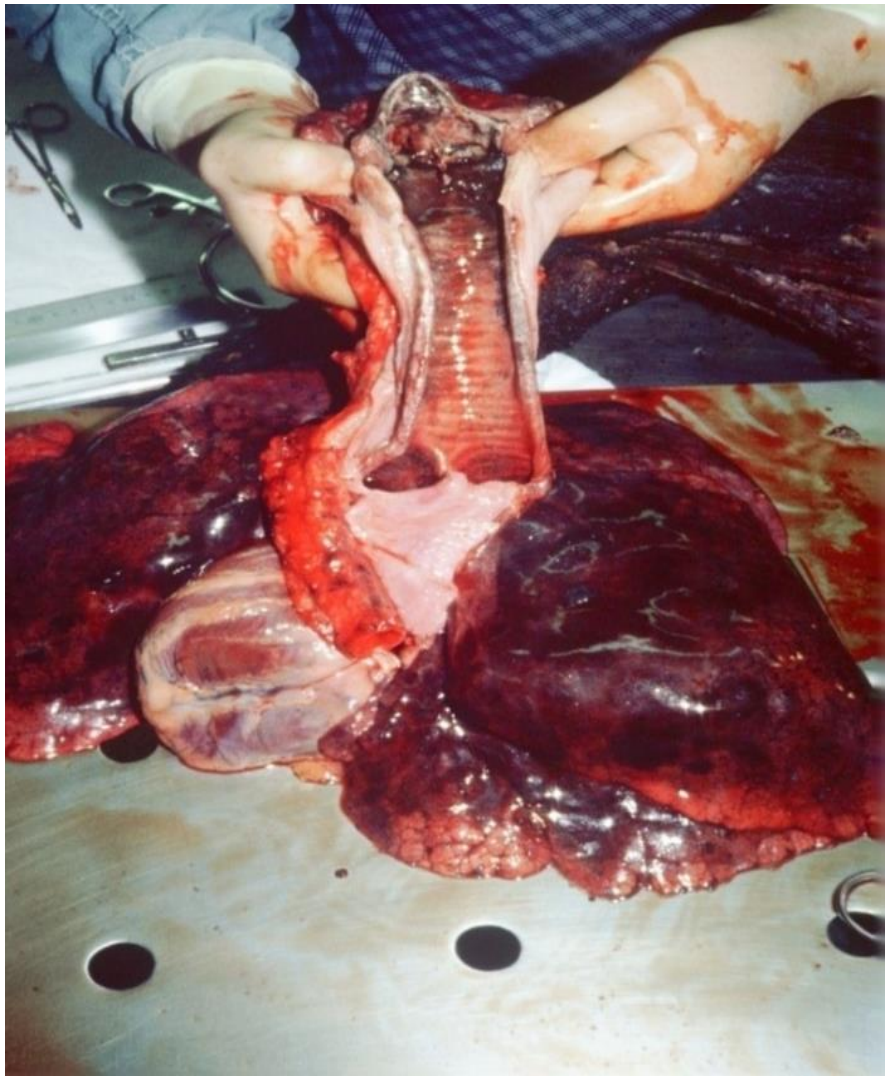
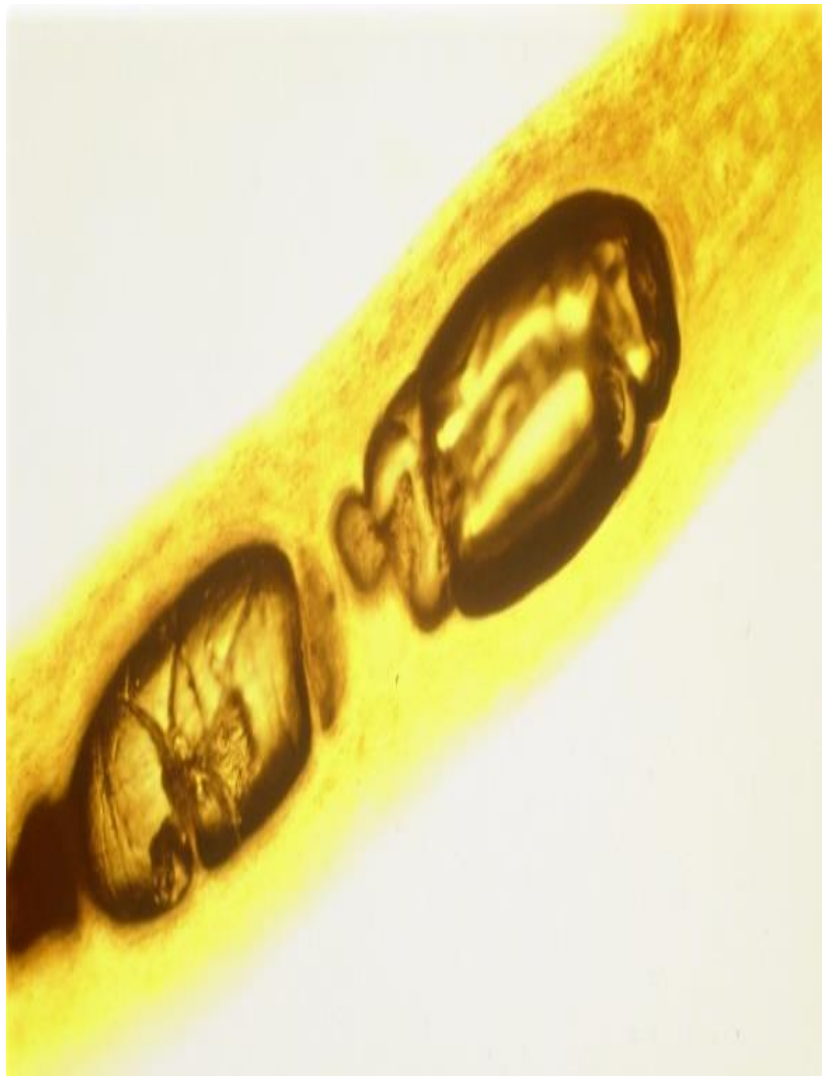
Management Initiated Fires – Indicators or Red Flags

- Secured premises whereby fire fighters had to break in to fight the fire
- Relatives/friends/members of management are burnt during the fire
- Fire fighting equipment disabled prior to the fire (sprinklers, hose reels, hydrants)
- Company witness provides erroneous statement where s/he first saw the fire

Management Initiated Fires – Indicators or Red Flags

- Mobile phone records do not support statements
- Suspects have burns that are typical of deliberately lit fires
- Suspects have ignitable liquid residues on their clothing
- Suspects who are found to be deceased at the scene exhibit soot in the trachea indicating they were alive at the time of the fire





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Fire, Explosion / Implosion Investigation
Vehicle Accident Reconstruction
Mechanical, Electrical and Electronic Failures Investigation
Complex Engineering Losses
Metallurgical Analysis
Questioned Documents & Handwriting Examination
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Covid-19: Steramist Sterilisation

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