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What's Inside:

Photo Credit: IAAI Motor Vehicle Fire Investigation, Fairfax, VA.
Left to right: Instructors George Malone and Chris Elrod.
Image Credit: Scott Stephens, IAAI Executive Director

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Michael Forbes
Jim Munday

Fire created from water

When a fire caused over $30mil (AUD) damage and destroyed two factories, fire investigators from the private and public sectors teamed up to conduct some experiments into how pallets of stored air conditioning 'Y' splitters could suddenly ignite. What they found was this was the second fire to involve these pallets and that the previous day for each incident there was rain which provided a pool of water to form on top of the clear plastic wrap the pallets had been wrapped in. This pool of water would later be shown how it could magnify the sun's ray

A NATURAL FIRE CAUSE

FIRE INCIDENT EVENTS

INCIDENT 2 – 3 Nov 2018

Fire crews observed thick black smoke enroute to the incident. On arrival the fire was located in the uncovered ... the two warehouses. Fire crews ... appliance when ... occurred ... relocated the ... complex to set up ... operations.

... collapsed inwards ... fire was ... se. Soon the ... and aerials ... ensive firefighting.

Author *Kurt Franzi, Cameron Novak, Michael Keller*

Comparison of Heat Impinged Conductors

Introduction

Fire-caused losses in human life and property are the most costly public safety problem in the United States [1]. Fire investigators are tasked with determining the origin and cause of a fire, a task essential to ensuring public safety, and to assign responsibility – criminal, civil, or both – that arises from these incidents.

Application of the scientific method in fire investigation is the most accepted technique to provide a systematic approach and analysis for fire origin and cause determination [2]. Determining the origin of a fire is one of the most important hypotheses that a fire investigator can develop during a fire scene examination. The determination of the fire's origin is essential to the methodology of identifying the cause.

Determining the origin of a fire involves collecting and analyzing data from witness statements, fire patterns, arc mapping, and fire dynamics [3]. The examination of fire patterns, especially in post-flashover scenes, presents many difficulties in determining how a fire produced a sequence of patterns from its ignition through suppression. Arc mapping is a tool that can produce data for comparison with other data collected during a fire investigation. This information can be used to test hypotheses for origin determination and the identification of competent ignition sources in relation to available fuels.

Since fire investigators are implementing arc fault mapping as a methodology to assist with determining the origin of a fire, one may raise the question about how to interpret the data generated during an arc survey involving ground fault circuit interrupters and arc fault circuit

polyvinylchloride (PVC) – insulated conductors, one bare grounding conductor (sometimes wrapped in green PVC insulation), paper insulation (sheath) surrounding the conductors, and a PVC outer sheath or jacket enclosing them. Figure 1 illustrates a typical arrangement of NM cable. The designations of 12/2 with ground and 14/2 wit ground are the most commonly used configurations for residences. They refer to the size and number of current carrying conductors inside the cable (the ground is not counted as a current carrying conductor). For example, 14/2 signifies American wire gauge (AWG) 14 with two current-carrying conductors and a grounding conductor addition, Figure 1 shows that the ungrounded or hot wi is wrapped in, and indicated by, black insulation, and th grounded or neutral wire in white.

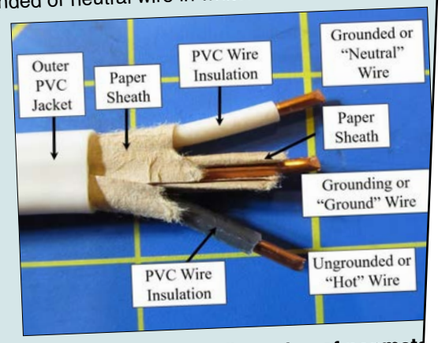

Figure 1 – Typical configuration of nonmeta sheathed (Type NM) cable.

IAAI

executive director's view

IAAI Motor Vehicle Fire Investigation
March 10-12, 2021, three-day course held in Fairfax, VA

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health & safety Committee Update

Providing the latest in fire investigator health and safety information to our men

Jeff Pauley, IAAI-CFI, CFEI, MIFireE, Chair, Health & Safety Committee

News and Updates:

Fire investigator health and safety are an evolving subject. Our specialized training stays abreast of the latest research and information regarding this critical field. The IAAI will be offering three virtual opportunities for members to receive the three-hour version of our health and safety tested training. Details are being finalized but watch for the dates on www.firearson.com.

In the first quarter of 2021, 140 members of the Oregon, Pennsylvania, and New York chapters attended virtual versions of the health and safety training. To discuss your virtual or in-person health and safety training needs, email iaai-safety@firearson.com

FYI: In most instances, respirators used for compliance with the IAAI's minimum recommendation for use in the post-fire environment are NOT suitable for meeting COVID mask requirements. The exhalation valve permits moisture droplets to be expelled into the air. For more information, see https://blogs.cdc.gov/niosh-science-blog/2021/03/01/elast-source-control/

Health & Safety In-depth: Confi

An area of potential