



FIRE & INVESTIGATOR

ARSON

JOURNAL OF THE INTERNATIONAL ASSOCIATION OF ARSON INVESTIGATORS, INC.

SPRING 2022 • Volume 72 • Issue 4

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In Memory



John DeHaan
1948-2022

The Fire Investigator and Explosions

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Ignition of walls

(Part I)

Abstract

In the investigation of fires, questions sometime arise concerning the potential ignition of wall surfaces. Often, the question is whether a certain fuel package, burning by itself, has the potential to ignite a given wall type. Two ancillary questions are also likely to arise: How does the distance of the fuel package from the wall affect the outcome, and how would changing the wall material affect the outcome? This paper examines the research on the topic, and the available data. The question is relevant to both interior and exterior exposures, but at the level of detail analyzed, distinctions do not need to be made. It is shown that research is surprisingly scant and incomplete. But some guidance can be taken from existing studies. Furthermore, specific experiments may be needed if the desired questions cannot be answered based on available research. Some guidance is offered on conducting needed laboratory tests and also on interpreting existing test data. The scope of the study is small or medium burning fuel packages, and the paper does not explore ignition of walls from large, remote flames, such as emanating from a nearby burning building.

Introduction

With regards to understanding the ignition of building components in a fire, walls likely rank foremost in importance. The primary components of a building can be considered to be walls, floors, ceilings, roofs, doors, and windows. Combustible floors may rarely be ignited by locally burning fuel packages sitting on the floor, but sustained, long distance flame propagation is likely unless the compartment reaches flashover conditions and a fully-developed fire ensues. If the fire in the compartment is such that flame spread is 'against the wind,' the least favorable conditions exist. A factor is likely to be low. This is because buoyancy makes flame spread on long floors was documented elsewhere. Flame spread

NFPA 921 Guide for Fire & Explosion Investigations (2021 ed.), and the IAAI-CFI® program, have evolved as standards and guidelines and automatic

ELECTRICAL SHORTS



By Cameron J. Novak, P.E., ATF – FRL
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Electrical Shorts #5: Static Electricity

We've all experienced it. You've walked across your carpeted floor and touched a doorknob, only to receive a little shock. What you've just experienced is a static electric discharge. But how and why does that happen?

Electrons, the fundamental driver of electricity, can transfer between two objects merely through contact. An object that gives up electrons becomes positively charged and an object that receives electrons becomes negatively charged. These electrons can accumulate over time, leading to a stored static charge. A static discharge is the flow of electrons between objects with different levels of charge. Generally, static electricity returns those objects back to a neutral state. When you walk across your carpeted floor, your body is accumulating a static charge. When you return to your surroundings, the static charge is discharged.

Arson in Indian Country How McGirt Changed the Oklahoma Landscape

Ashley N. Stephens, M.F.S.

In July of 2020, the Supreme Court of the United States decided *McGirt v. Oklahoma*. In essence nearly one-half of the State of Oklahoma reverted back to Indian Country. As a result the criminal jurisdiction, to include arson investigations, have drastically changed. Resources and manpower are now stressed to breaking points. Thousands of cases are now being retried due to this monumental ruling.

On July 9, 2020, the Supreme Court of the United States (SCOTUS) issued its ruling in *McGirt v. Oklahoma*, 140 S.Ct. 2452 (2020). The ruling drastically changed the criminal jurisdictional landscape of Oklahoma. It is a ruling that made very few headlines elsewhere, but the long-term ramifications will substantially affect Oklahoma as well as federal prosecutions of arson cases.

In *McGirt*, Jimcy McGirt, who is a member of the Creek Nation, had been convicted of arson in the State of Oklahoma. The United States would "grant a patent, in fee simple, to the Creek Nation of Indians for the [assigned] land" to continue "so long as they shall exist as a nation." The State of Oklahoma has a reservation in the State of Oklahoma.

Seen on Scene

By Robert K. Toth, IAAI-CFI®

I'm Seen on Scene

This edition of *Seen on Scene* is probably better said to be "Not Seen on Scene.... YET!"

We have all seen or used scene marking tools such as evidence tents, labels, paint sticks, etc., in identifying key pieces of artifacts at fire scenes. Some of you may also be familiar with (soon to be a future article) the evidence labels I carry on my smartphone and use for marking items on a fire scene.

Expanding on the ways to document evidence, IAAI member Dávid Petrétei emailed me from Budapest, Hungary, with information on "Markjector." Markjector is a contactless crime scene marking system. It is a hand-held projector tool attached to a commercial flashlight or torch. It can project a wide range of crime scene marking tools, especially arrows and evidence numbers.

Projected light as a marking tool has many advantages. The marking can be done without contact and contamination. It can be done in hard-to-reach places, at a distance, and on challenging surfaces. The tool angles or size of the marks, place them in different positions, and aid in the review of the photographs where these projections are captured. István H. Nagy

