


SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 1





IFIW 2015
Brussels – September, 13th – 19th 2015


*Survival of the Victims in Structural Fires:
The Firefighter Misconception ...*

IFIW Brussels – September, 18th 2015

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Sargento Cuerpo de Bomberos Ayto. Madrid



SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 2





SPAIN



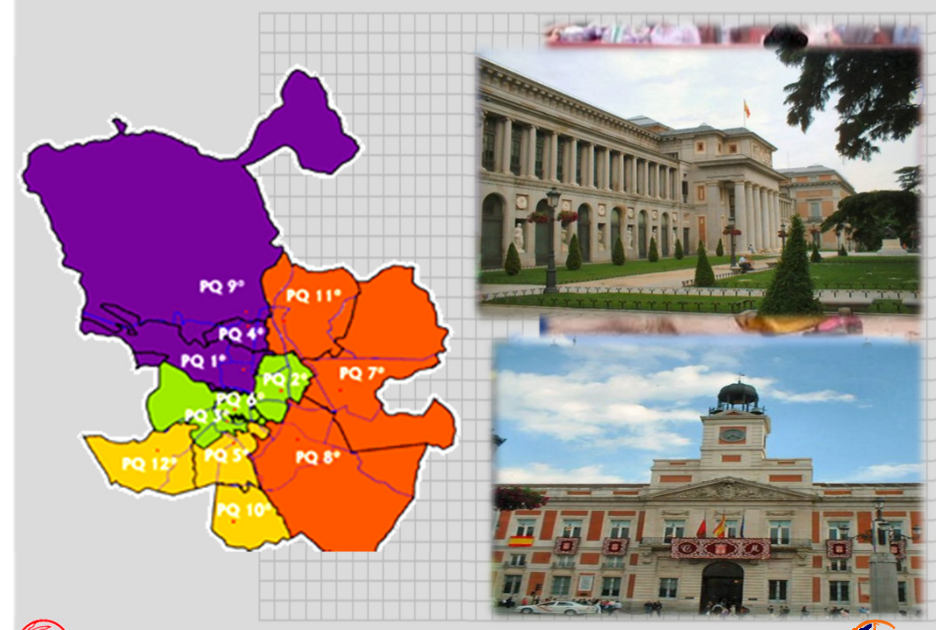
España

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 3



The slide features a map of Madrid divided into 12 fire districts (PQ 1° to PQ 12°) on a grid background. The districts are color-coded: PQ 9° (purple), PQ 11° (orange), PQ 4° (orange), PQ 1° (purple), PQ 2° (green), PQ 7° (orange), PQ 3° (green), PQ 6° (green), PQ 8° (orange), PQ 12° (yellow), PQ 5° (yellow), PQ 10° (yellow). To the right, there are two photographs of large, classical-style buildings. The top photo shows a building with a colonnade, and the bottom photo shows a building with a central dome and a clock tower.

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 4



This slide uses the same map of Madrid fire districts as slide 3. The PQ 1° district is circled in red. To the right of the map, there is a photograph of a fire station building with red doors and a firefighter in full gear holding a hose. Below the firefighter is the official logo of the 'Cuerpo de Bomberos Madrid', which includes a shield with a crown on top and the text 'cuerpo de bomberos' and 'madrid'.

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 6

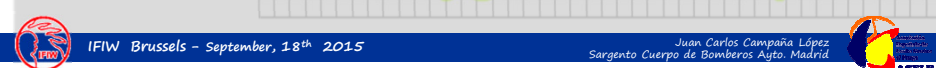


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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 7

...You arrive at the scene...



... MY WIFE AND MY KIDS ARE STILL INSIDE !!!!!

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 8

Tradition



“On arriving at the scene of the fire, the fireman has to **search the building** as much as in his judgment seems right or necessary.....

The **death of a fireman** is, for the most part, a simple record of live well lost in the faithful and rigorous **discharge of duty.**”

Captain Sir Eyre Massay Shaw
Fires and Fire Brigades, 1889

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Sense of Duty



“Duty-to-die Syndrome”

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The hero



“The hero mentality is the most dangerous mental illness of firefighters.”

© GALLEG0 & REY Dado 16

MAN □ FIREMAN □

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Procedures

Revised Structural Fire Tactical Goals
S.L.I.C.E.R.S.

Sequential Actions

- Size Up
- Locate the Fire
- Identify and Control Flow Path
- Cool the Space from Safest Location
- Extinguish the Fire

Actions of Opportunity

- Rescue
- Salvage

O - Overhaul

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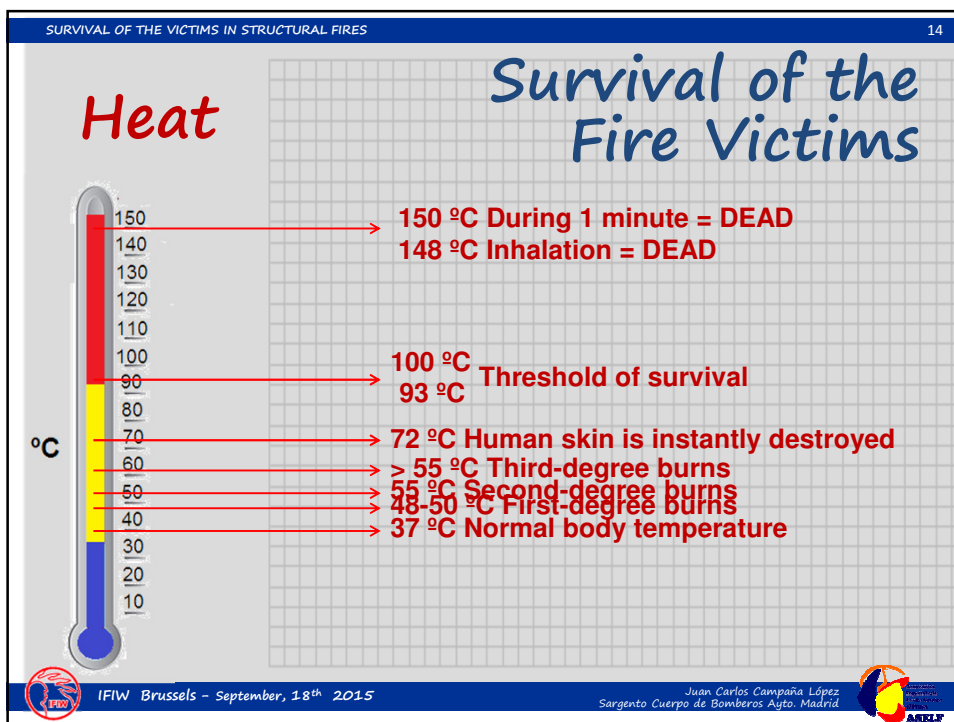
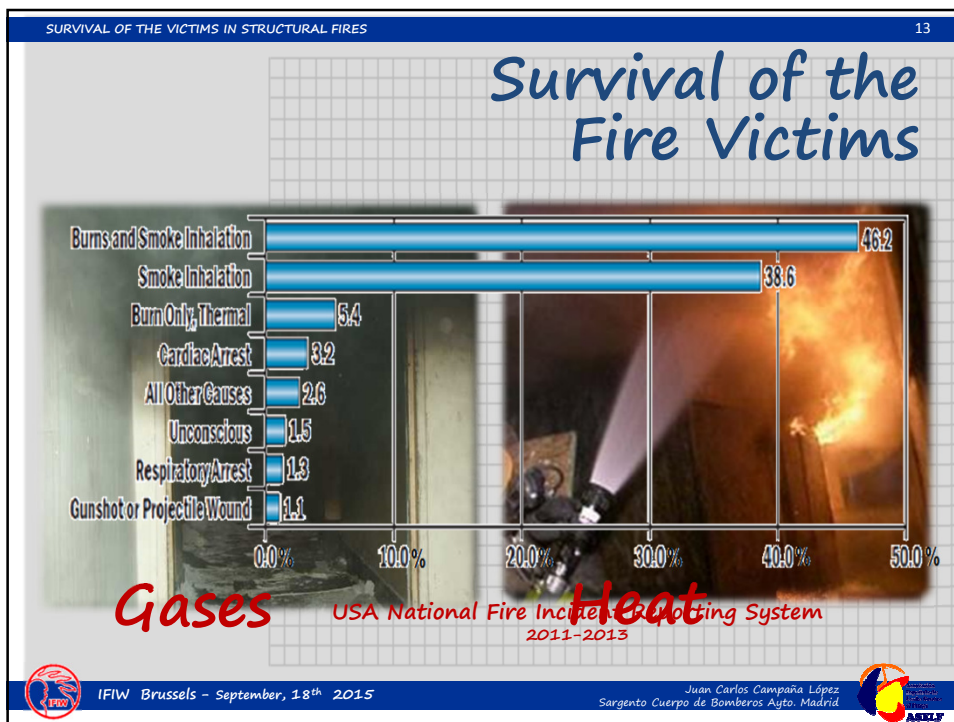
...You arrive at the scene...

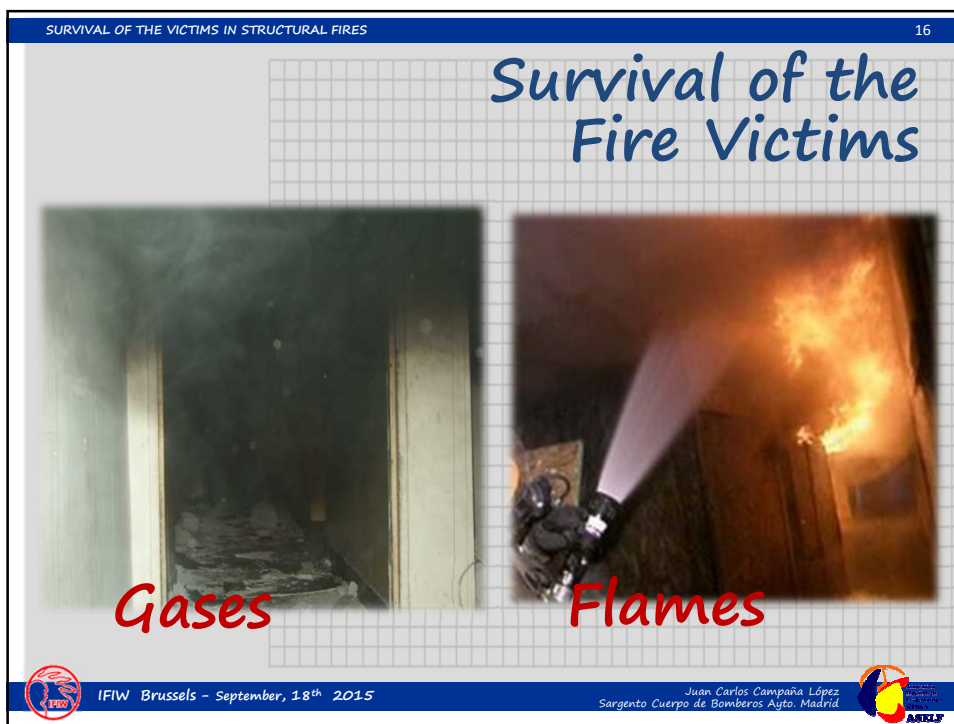
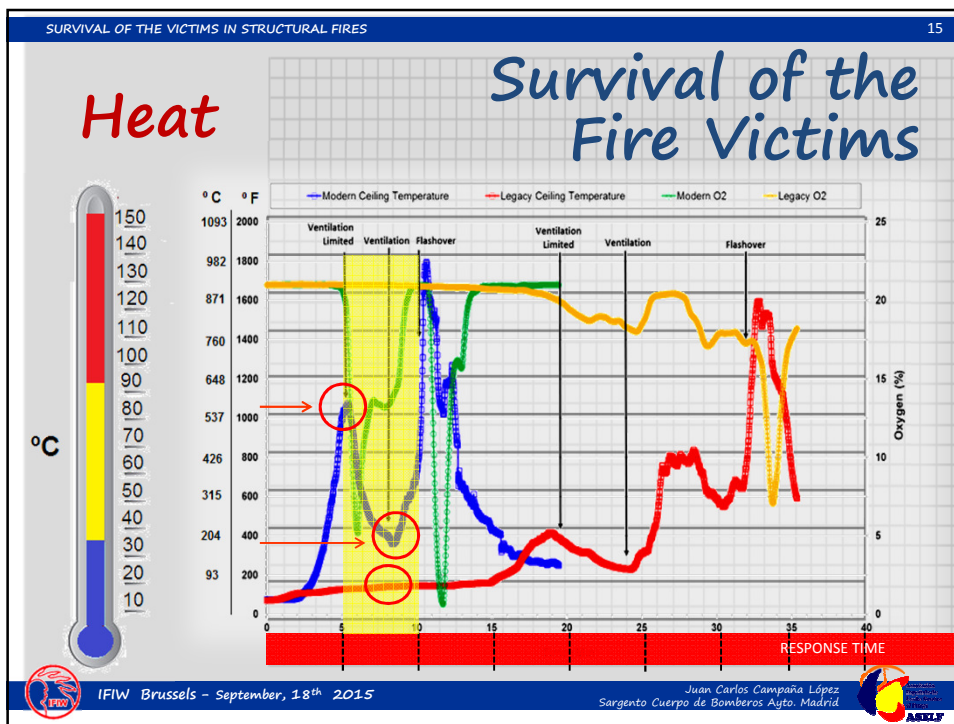
- ✓ Prevailing Fire Conditions...
- ✓ Fire Behavior...
- ✓ The odds of Survival...
- ✓ Risk vs Benefit...
- ✓ Controlling Fire Environment...
- ✓ Risk control Measures...

... MY WIFE AND MY KIDS ARE STILL INSIDE !!!!!

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES

Survival of the Fire Victims


Gases


Oxygen Percentage Available	Symptoms
21	Normal conditions, no effect.
19.5	OSHA oxygen-deficient atmosphere.
17	Muscular impairment, rapid breaths.
12	Dizziness, headache, rapid fatigue.
9	Unconsciousness.
7 to 6	Death within a few minutes.

Carbon Monoxide (CO) in Air	Human Response
0.2 %	Headache after 10 minutes, collapse after 20 minutes, and death after 45 minutes.
0.3 %	Maximum "safe" exposure for five minutes and danger of collapse in 10 minutes.
0.6 %	Headache and dizziness in 1 to 2 minutes and danger of death in 10 to 15 minutes.
1.28 %	Immediate effect, unconsciousness after 2 to 3 breaths and danger of death in 1 to 3 minutes.


LETHAL CONCENTRATION IN 10 '

- Carbon Dioxide CO₂ 12%
- Hydrochloric acid 0,05%
- Sulphidric acid 0,05%
- Hydrogen cyanide 0,035%






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Survival of the Fire Victims

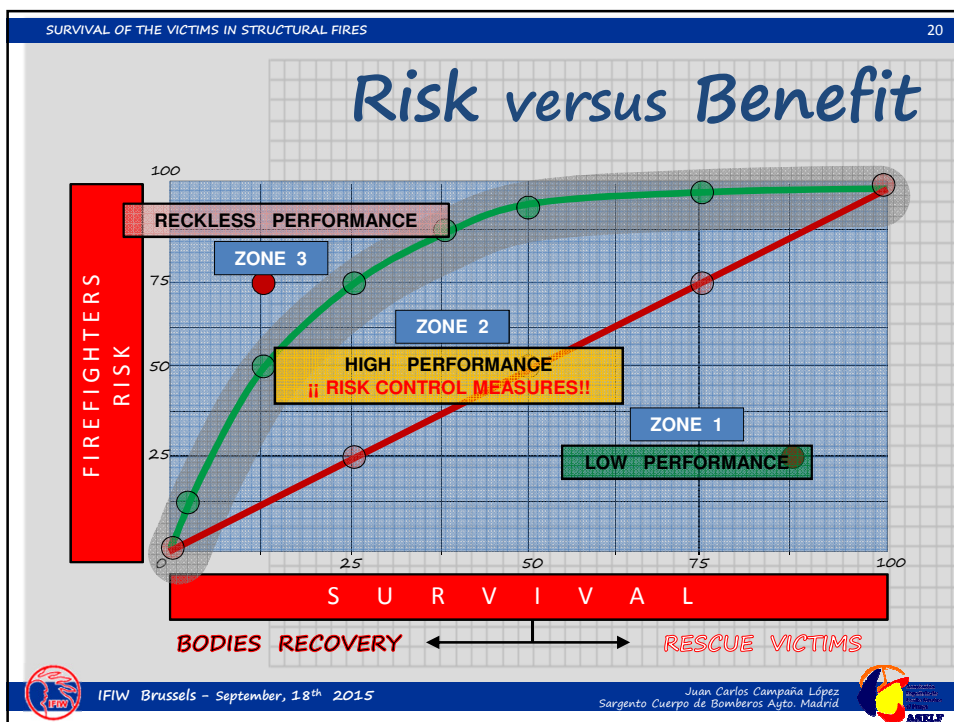
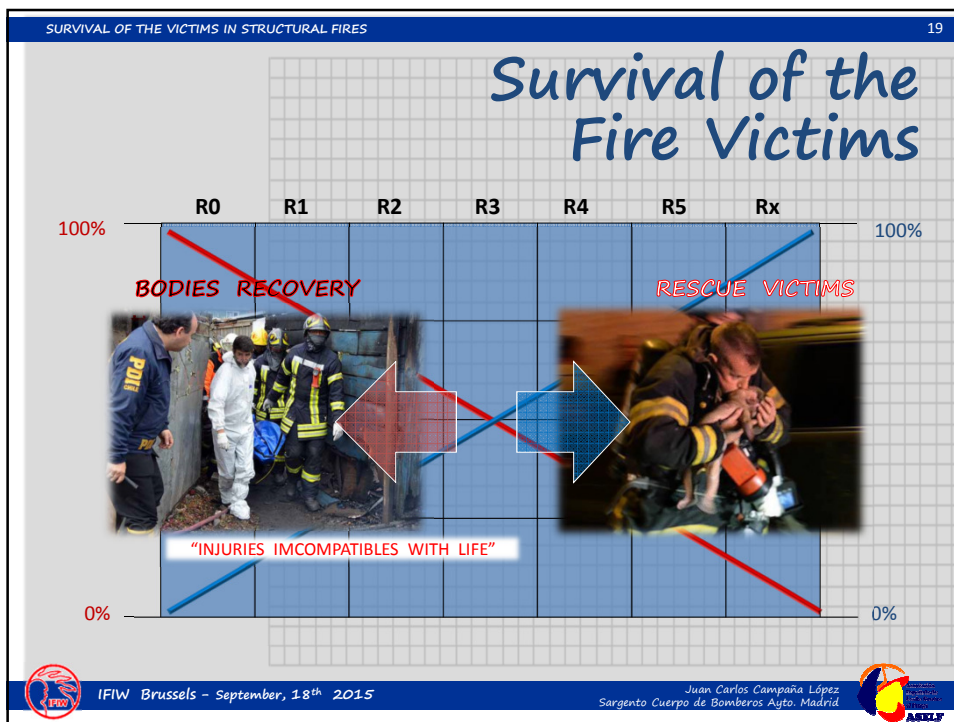


1. Fire conditions ...
2. Distance to the fire origin...
3. Slow down fire spread...



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“The Corn Field Philosophy”



Remove the hazard of the initial attack away from the victims makes the greatest impact on the fire scene...

... even if there are people inside !!

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 22

...a Cultural Change...



- ✓ Rescue is always first...
- ✓ Take any level of risk...
- ✓ Thoughtless and reckless...
- ✓ Traditional in our culture...

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 23




...a Cultural Change...

- ✓ Thinking before acting ...
- ✓ Rescue is not always the first...
- ✓ Asses the odds of survival...
- ✓ Recognize, Anticipate & Control FE...
- ✓ Applying Risk vs Benefict analysis ...
- ✓ Assessing the risk we can assume ...
- ✓ Having the right Situation Awareness.

.... even if there are people inside !!

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...a Cultural Change...



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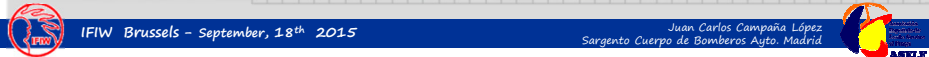


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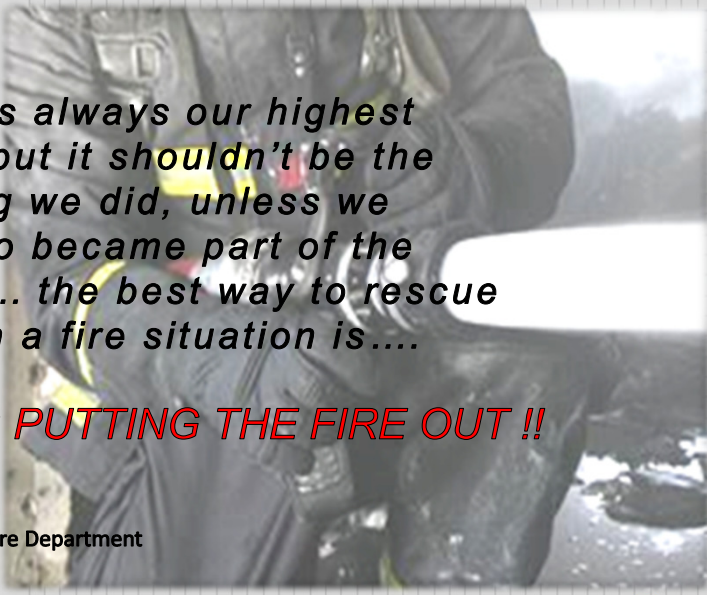


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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 27




Rescue is always our highest priority, but it shouldn't be the first thing we did, unless we wanted to become part of the problem... the best way to rescue people in a fire situation is....

..... ¡¡ PUTTING THE FIRE OUT !!

Frank Shaper,
Chief St. Charles Fire Department

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SURVIVAL OF THE VICTIMS IN STRUCTURAL FIRES 28



Tradition

*"In order to carry on your business properly, it is necessary for those who practice it, to understand, not only **what** they have to do, but **why** they have to do it... "*

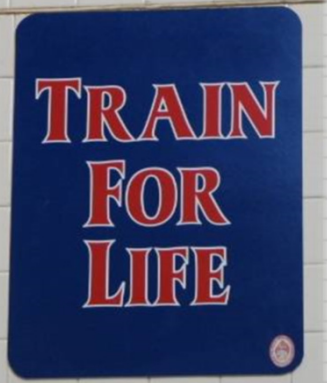
Captain Sir Eyre Massay Shaw
Fire Protection 1876

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*“...Not only
WHAT and HOW,
but also , WHY ..”*

Ed Hartin

THANKS FOR YOUR ATTENTION

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