SUP DET 2016
New Technology for High-Challenge Warehouses
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"life of a fire from birth until its death is a most important one to be applied to industrial fire control. Very simple, what it does is to take a complex problem and break it into smaller, more definable units which can be independently attacked to reduce the threat of fire."

(Moore/Davis "IFCC")
Figure 4-1. The Life of a Fire
Control vs Suppression

Fire control

\[ \dot{Q} \]

Time

Fire suppression

\[ \dot{Q} \]

Time

The Procter & Gamble Company
2 oz. Hand Sanitizer Gel Hazard Index Test
0.31 gpm/ft² Applied Water Density

Time (sec)
Relation of Life of a Fire & Combat Time

Figure 4-7. Combat Time

Growth?
Peak?
Decline?
Burnout?
Control or suppression?

Figure 4-1. The Life of a Fire
TODAY....
How do we determine size of fire at arrival time?

- Location of incident
- Smoke/steam
- Visual indication of flame remaining
- Infrared technology
- Main fire alarm panel data
- Brigade understanding of the area
- Familiarity of the location/hazard
- Send fire hose teams to area
- Guess-timate
TOMORROW.....
How will we help determine?

WATERFLOW

Use real-time data to determine the size of the fire....
Fire Test Example
Total Sprinkler head activation
What's happening in the warehouse?

Procter & Gamble Company
Sprinkler Operations vs. Flow and Steel Temperature

- Spk.035
- Spk.036
- Spk.044
- Spk.046
- Spk.047
- Spk.054
- Spk.056
- Spk.065

Steel Temp.
Flow

Time (Min)

Flow (GPM)

Temperature (Deg. C)
Viewing Supply #: North

Current Pump Flow Rate
1,911 GPM

8:30
Minutes of current flow rate

Riser Activity

Water Storage Tank Capacity
73,000 gallons Design

38,220 gallons left

20:35
Minutes: Seconds

Water Remaining in Tank @Current Flow
THANK YOU to the TEAM....

FireConnect™

The Montembeault Group

GRUNDFOS
OUR FIRE PUMPS ARE PEERLESS!

PeERLeSS PUMP

PG Fire Protection
Fire Pump House 1
Questions?

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