FM APPROVALS

FCIA educational seminar

UAE

October 2011
Outline

- FM Global
- FM Approvals Overview
- Strategy
  - Global Presence
- Technical Solutions for Loss Prevention
FM Global History

1835
1878
1897
1940s

Manufacturers Mutual
FM Inspection Department
First Approval
Approvals Division
FM Global

Largest *industrial and commercial* insurance company in the world!
Revenue – FM Global

2006: 4,502.7
2007: 4,692.2
2008: 4,460.3
2009: 4,709.5
2010: 4,792.3
Apr-2011: 4,909.2
2010 Industrial and Commercial Property Insurance

- FM Global: 28%
- Chartis: 18%
- Zurich: 14%
- Allianz: 12%
- ACE: 8%
- XL Capital: 4%
- AXA: 4%
- Travelers: 4%
- Royal Sun Alliance: 3%
- Chubb: 2%
- C.N.A: 2%
- Liberty Mutual: 1%

Total Global Market: $16.3 Billion
What makes FM Global unique?

Engineering
What do FM Global Engineers do?

Perform audits of FM Global client locations to identify opportunities to reduce the risk of property loss and business interruption.

Always recommend the use of FM Approved products.
FM Global

- 1428 Engineers
- 62,746 Inspected Locations
- 102,531 Facilities
- 132 Countries
FM Global Offers Clients:

- Financial risk transfer vehicles
- Loss prevention engineering solutions
• Practical
• Proven
• Cost Effective
• Global

Loss Prevention Engineering Solutions

Research

FM Approved Products

Engineering
FM Global Wind Losses from Hurricane Katrina

- 476 Locations

Losses per $100 of value

$2.30

Unimproved Locations

Improved Locations
FM Global Wind Losses from Hurricane Katrina

- 476 Locations

Losses per $100 of value

Unimproved Locations: $2.30

Improved Locations: $0.37
Prescriptive Fire Resistance

- **Stable Fire-resistive Building Frame**
- **Fire-resistive coatings on steel frames**
  - Uniform application of fire-resistive coatings
  - Rigorous inspection program
**Exterior, Vertical:**

- Combustible interior finish materials
- Combustible exterior wall insulation

**Recommendations:**
- Use Non-combustible, fire-resistant or FM Approved products for roofs, walls, and insulation materials
Loss Analysis

Rapid fire spread due to:

- Lack of automatic sprinklers
- Delayed reporting of the fire
- Lack of compartmentalization within each floor
- Lack of vertical isolation between floors
- Inadequate sealing of floor openings and steel coating
Recommendation against **Internal Vertical Fire Spread**: Effective **sealing of service penetrations** through walls & floors.
Outline

- FM Global
- FM Approvals Overview
- Strategy
  - Global Presence
- Technical Innovation
1897 - Approved Electrical Fittings published by Inspection Department of the Associated Factory Mutual Fire Insurance Companies
FM Approvals’ Certification Mark is recognized and accepted in markets throughout the world.
FM Approvals approves and certifies products and services with unique focus on:

• Objectively testing property loss prevention products and services and certifying those that meet rigorous loss prevention standards;

• Encouraging the development and use of Approved products and services that improve and advance property loss prevention practices.
DBKB Principle?

- Drop them
- Bang them
- Kick them
- Burn them
Write Product Testing Standard

- Over 250 standards
- Based on Research
- Publicly Available for free through [www.fmapprovals.com](http://www.fmapprovals.com)

- ANSI, OSHA, ASTM, BSI, EN, GB Recognized
Research and Testing Campus

- **Improved Water Treatment Capacity**
- **Natural Hazards Lab**
  - 70,000 ft²
  - EQ Lab
- **Large Burn Lab Improvements**
  - Movable Ceiling
  - Humidity Control
- **Multimedia Center**
- **Fire Technology Lab**
- **Hydraulics Lab**
- **Training Lab**
- **Electrical Lab**
- **Test Staging Building**
- **Materials Lab**
2. Test Products
Getting Started

Welcome to the Approval Guide, your source for the most up to date information about FM Approved products and services. The Approval Guide provides many ways to perform your searches:

- Hierarchical searching in the content tree for each division of the Guide
- Parametric searching within folders of the content tree
- Keyword searching within Company and Product names
- Text-based keyword searches
- Searching by country
- Searching by certification type

For new users of the Approval Guide, we recommend you read our quick Start Guide which is available here. This guide provides a quick overview of each of the search methods listed above. Once you have read the guide, or if you'd rather get started right now, just click on one of the pictures below to enter that division of the Guide and begin your search.
Sprinkler System Equipment, General
Deluge Sprinkler Systems
Pre-Action Sprinkler Systems
Refrigerated Area Sprinklers
Limited Water Supply Deluge Sprinkler Systems
Temporary Automatic Sprinkler Systems
Automatic On-Off Multiple Sprinkler Systems
Automatic Water Control Systems
Dry Pipe Valves
Hose Valves
Chemical Control Valves
Accelerators with Built-in Anti-Flooding Device

Accelerators & Exhausters
Air Pressure Maintenance Devices
Anti-Flooding Device
Air Drums for Refrigerated Area and Dry Pipe Systems
Excess Pressure Shut-Offs
Waterflow Detector & Excess Pressure Maintenance Device
Alarm Check Valves
Waterflow Detectors (Various Types)
Testers for Vane Type Waterflow Indicators
Fire Service Meters
Waterflow Detector Check Valves
Fire Pump Flowmeters
Automatic Drift Valves
Water Motor Sinks
Gantry Valves
Skirt Drains
Indicator Posts
Indicator Post Valve Assembly
Indicating Valves
RIMO-Remote Indicating, Manually Operated Sprinkler Control Valves
CSSY and NRS Gate Valves
Valves, General and Specifications
Valves (Quick Open Type), Ball Valves
NOVAD-Normally Open Constant Energy to Close Valve Assembly
Single Check Valves
All Bronze Check Valves
Backflow Preventers - Reduced Pressure Principle Type
Anti-Water Hammer Check Valves
1/8 to 1/4 in. Trim Check Valves
Centrifugal Fire Pumps, Horizontal Split-Case
Centrifugal Fire Pumps, Vertical Split-Turbine Type
Positive Displacement Fire Pumps (Rotary Gear Type)
Limited Service Fire Pumps
Fire Pump Units - Gasoline Engine Driven
Fire Pump Units - Portable
Jockey Pumps
Centrifugal Fire Pumps, End Suction Type
Control Panels For Fire Pumps
Fire Pump Controllers for Electric Motor Drive
Fire Pump Controller Circuit Breakers
Fire Pump Controllers for Diesel Engine Drive
Battery Chargers for Fire Pump Service
Batteries for Internal Combustion Engines
Diesel Engines for Fire Pump Drive
Gasoline Engines
Gas Turbine Engines for Fire Pump Drive
Pump Drive Couplings
Right Angle Gear Drives
Replacement Rubber Discs for Steel Fire Pumps
Air Release Valves
Trim Water Pressure Relief Valves 1/8 inch through 2 1/2 inch Nominal Size
Water Pressure Relief Valves
Water Pressure Reducing Valves
Water Pressure Regulating Valves
Surge Dampers (Fire Pumps)
Vortex Inhibitors for Fire Pump Suction Lines
Centrifugal Fire Pump, Vertical Turbine Barrel Type
Centrifugal Fire Pumps, In-Line
Underwater Playpots
Short Playpots
Monitor Nozzles
Nozzles (Barrel Type) for Private Fire Service
Fire Hydrants (Wet Barrel Type) for Private Fire Service
House Manifolds
House Valves
Angle Valve
Straightway Hose Valve
Hydrant Valves, Bolted Type
Hose Station Control Valves
Fire Department Connections
Wall Hydrants
Pipe & Fittings & Couplings, Underground, Ductile Iron
Pipe & Fittings, Underground, Asbestos-Cement (AC)
Pipe & Fittings, Underground, Polyvinyl Chloride (PVC)
Pipe & Fittings, Underground, Polyethylene (PE)
Pipe & Fittings, Underground, Fiber-Reinforced Composite (FRP)

Industries of Interest
Chemical Foam, Portable
Chemical Foam Generators

Sprinklers
Fire Pump Assemblies
Sprinklers
Indoor Sprinklers
Sprinklers
RIM-Remote Indicating, Manually Operated Sprinkler Control Valve Assembly

Fire Pump Assemblies

Pipe & Fittings, Underground, Fiber-Reinforced Composite (FRP)

Water Mist Systems

Hazardous Locations Equipment

Pallets and Totes

Detection and Alarms

Cleanroom Materials

Gaseous Extinguishment Systems

Fire Extinguishment Systems

Caging for Division 1

Fire Pump Assemblies

Sprinklers
Fire Protection Customers

- Shanghai Jindun
- Nanjing Fire
- Shanghai Karon Valve
Electrical Customers
Thank You!

www.fmglobal.com
www.fmapprovals.com
www.approvalguide.com