

# Fire Safety Engineering Workshop for Sichuan Fire Research Institute

May 26-27, 2015, Chengdu, China

Dr. Monideep Dey

 **Deytec, Inc.**

*Quality Fire Safety Management*

# Plan for Workshop & Discussions

- May 26, 9:00 AM – 5:00 PM: Workshop at SCFRI by Deytec, Inc.
- May 27, 9:00 AM – 12:00 PM: Workshop at SCFRI by Deytec, Inc.
- May 27, 2:00 PM – 5:00 PM: Meeting between Deytec, Inc. and SCFRI Directors:

# Plan – Cont'd

- Current and future research activities at SCFRI
- support of regulatory authorities and interaction with Chinese fire safety industry
- Comments and recommendations on research programs and support activities will be provided by Deytec, Inc.

# Plan – Cont'd

- May 28, 9:00 – 12:00 PM: Visit SCFRI laboratories
- May 28, 1:00 – 5:00 PM: Local visits or other discussions

# Workshop Schedule

- Session I: Executive Summary, May 26 (9:00 – 9:45 AM)
- Session II: Training on Methods, May 26 (9:45 AM – 12:00 PM)
- Session III: Case Studies May 26 (1:00 – 5:00 PM) and May 27 (9:00 AM – 12:00 PM)

# Fire Safety Engineering Workshop Session I: Summary of ISO Standards Use, Benefits, & Recommendations

Dr. Monideep Dey

 **Deytec, Inc.**

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Presented at the Fire Safety Engineering Workshop at Sichuan Fire  
Research Institute, May 26, 2015, Chengdu, China

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Presented at the Fire Safety  
Engineering Workshop at  
Sichuan Fire Research Institute  
May 26-27, 2015, Chengdu, China

# Goal

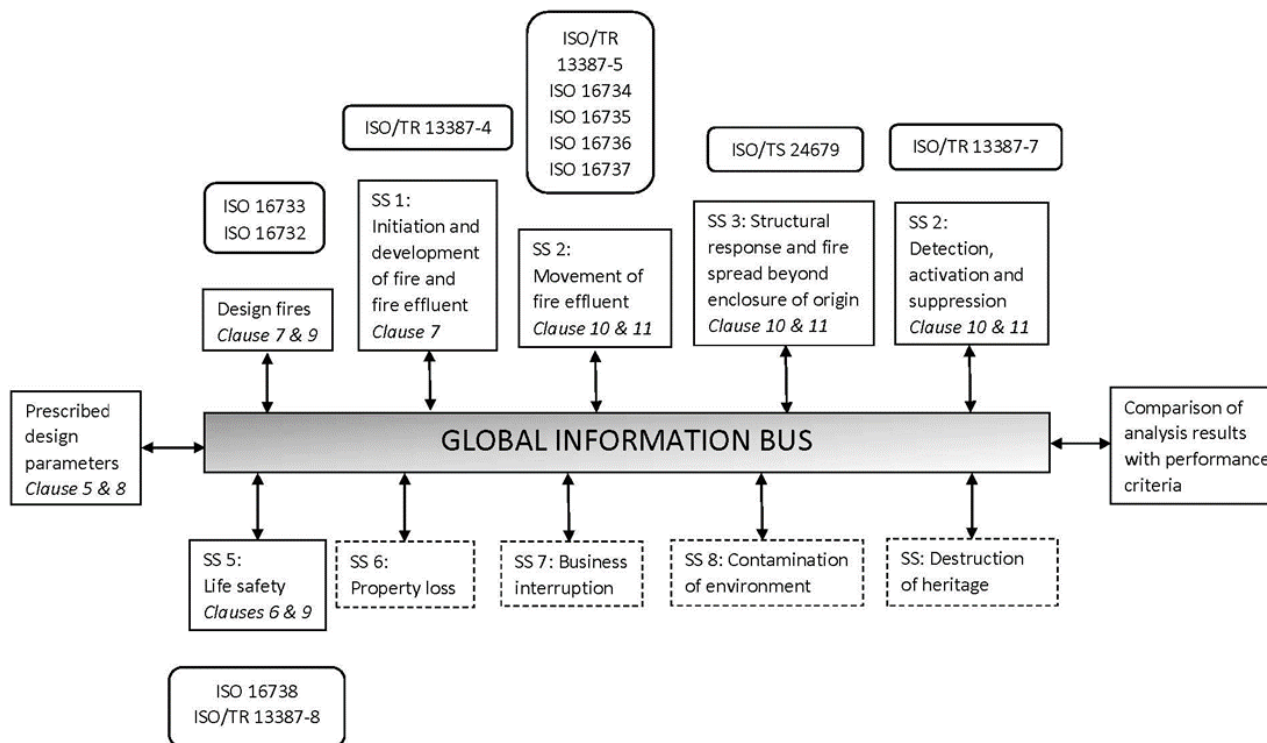
- Summarize ISO fire safety engineering (FSE) standards
- Application and use of ISO FSE standards in the international market
- Current activities to make ISO FSE standards practical & usable worldwide
- Recommendations to SCFRI



# History & Background of ISO TC 92 SC4

- Initiated activities in mid-90s culminating in publication of ISO/TR 13387 8-part series in 1999
  - Global approach
  - Covered entire process of fire safety engineering
- Since 1999, SC4 has improved each standard with latest methods available

# Global Information Bus



Global Fire Safety Engineering Analysis and Information System

# Experience & Evolution of Fire Safety Engineering

- New Zealand, C/VM2, Verification Method: Framework for Fire Safety Design
- Nordic Countries, prINSTA TS 950, Fire Safety Engineering — Verification of fire safety design in buildings
- Australian verification method
- CEN initiatives

# Activities at ISO TC 92 SC 4

- WG 1 work to link SC 4 documents:
  - Global information bus
  - Figure 1 in ISO 23932
  - Work in progress
- Deytec, Inc. document on ISO standards
- Strategic plan developed
- Stress standards be simple, usable & practical for in international market

# Other International Standards

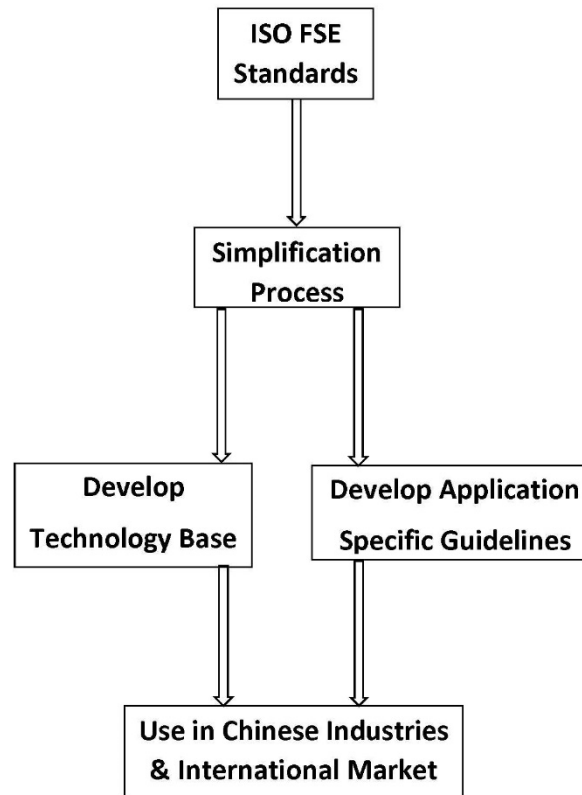
- Society of Fire Protection Engineering (SFPE)
  - Performance-based guidelines
- American Society of Testing & Materials (ASTM)
  - National adoption of ISO FSE standards
  - ASTM-Architectural Inst. Of Japan (AIJ) collaboration on "*Quick Calculation Methods*"

# Benefits of ISO Standards

- Developed by national standards bodies of member countries
- Recognized by World Trade Organization as the international standards
- Provides competition to other standards claimed as international, e.g. SFPE, BSI, NFPA in international market

# Recommendations to SCFRI

- Simplify ISO standards for application in China
- Develop technology base for applying ISO FSE standards



**Recommended Strategic Approach to SCFRI**



# Recommendations to SCFRI

- Develop specific safety objectives, functional requirements & performance criteria for specific types of buildings, facilities, e.g. tall buildings, warehouses, etc.

# Recommendations – Cont'd

- Areas for emphasis in research:
  - Development of data for:
    - Design fires
    - Performance criteria
  - Verification & Validation of Fire Models for specific applications
  - Derive safety objectives, functional requirements & performance criteria for prescriptive requirements

# Recommendations – Cont'd

- Develop guideline for use of different fire models for variety of applications
- Implement projects in private sector for testing the technology base
- Support phased implementation of ISO standards in China by developing its own technology base

# Questions

- Comments and discussion
- Thank you
  
- Contact Information:
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