# **Fire Damage Investigation**

CTLGroup has over 100 years' experience regarding concrete and fire forensics. Our engineers, architects, and material scientists are available anytime, anywhere. With a fully staffed physical, chemical, and microscopy laboratory, we are equipped to evaluate fire damage to concrete and masonry structures.

### Fire exposure can:

- Decrease compressive strength of concrete
- · Decrease modulus of elasticity of steel reinforcing
- Reduce fire resistivity
- Change the physical properties of concrete and aggregates
- Damage concrete cover through spalling and cracking

With 60,000 square feet of laboratory and global consulting reach, CTLGroup is uniquely qualified to provide solutions to complex construction related events.

#### Areas of Expertise:

- Buildings
- · Industrial facilities & equipment
- Pipelines, pressure vessels & tanks
- Tunnels & subsurface construction
- Bridges
- · Foundations & retaining structures

## **CTLGroup Solutions Include:**

- · On-site structural evaluation and forensics
- · Structural monitoring and sustainability
- Failure investigation
- · Non-destructive testing
- · Structural health monitoring
- Structural engineering: repair & rehabilitation design
- Static and dynamic structural testing
- · Mass concrete consulting
- Expert litigation and insurance support

# **CTLGroup Material Science Laboratories:**

- Analytical chemical and materials testing
- Fatigue testing
- Mortar/Cement/Concrete testing
- Petrography/Microscopy (scanning electron microscopy)
- Materials analysis and characterization
- Performance assessment
- · Failure and forensic analysis
- Service life prediction and modeling







