



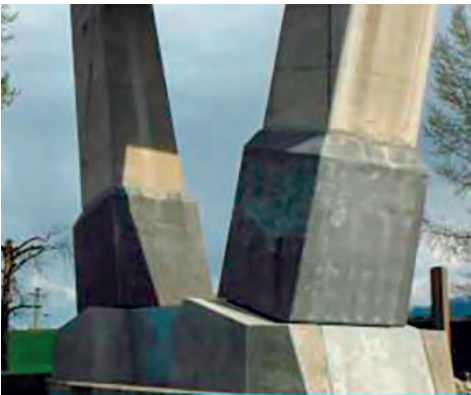
# ULTRA HIGH PERFORMANCE CONCRETE



Ultra-Thin Balconies



Interior Decor



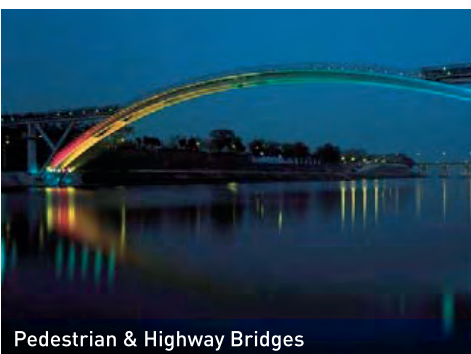
Column – Beam Strengthening

## Attractive Lightweight Concrete Shapes

- densely packed fiber reinforced matrix with optimized granular packing
- outstanding mechanical properties
- up to 400 times more durable material against corrosion, abrasion and impact than ordinary concrete
- UHPC is highly resistant against acid waters, mechanical abrasion and erosion
- extremely low permeability
- ultra high-strength, ductile material
- high resistance to deicing salt and freeze-thaw deterioration
- design flexibility, improved aesthetics
- random distribution throughout concrete mix
- longer life span of structures
- exhibit exceptional energy absorption, capacity and resistance to fragmentation. Ideal material to perform under explosive, impact or shock loads
- increased girder span with light-weight slender cross-sections
- rapid construction, increased material efficiency & lower transportation cost



Blast Resistant Anti-Ballistic Panels



Pedestrian & Highway Bridges

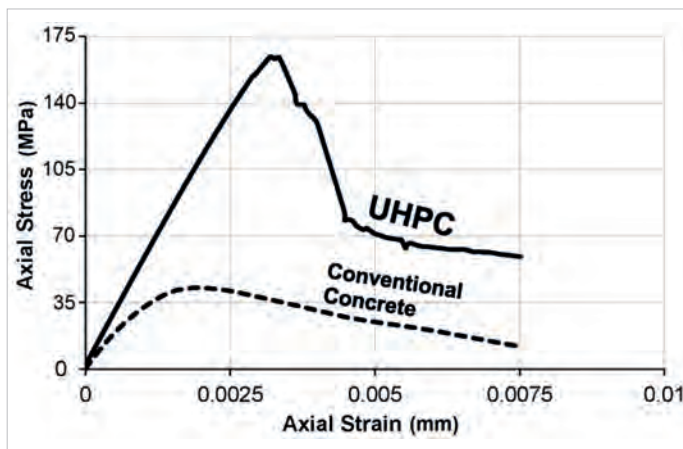


Architectural Cladding

# ULTRA HIGH PERFORMANCE CONCRETE

## Properties of UHPC

- Compressive strengths up to 200 MPa
- Flexural Strengths up to 40 MPa
- Modulus of Elasticity 50 to 55 GPa
- RCPT - 20 to 360 Coulombs
- Freeze/Thaw Resistance -RDM > 95%
- Ductile, Strong, Durable
- High bending tensile strength
- Low capillary porosity (high endurance)
- High resistance to deicing salt
- Greatly reduced permeability to moisture, chlorides and chemical attack
- Increased resistance to abrasion, erosion and corrosion
- Rapid construction



## Properties of Concrete

- Compressive Strength 25 to 55 MPa
- Modulus of Elasticity 27 to 35 GPa
- Relatively Weak
- Extremely Brittle
- Almost no tensile strength
- High thermal expansion and contraction with temperature fluctuations

