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Nota di contenuto	Title Page; Foreword; Sponsors, Support & Partners; Contents; Keynote papers; Light in the Public Realm; Emotion; Fusing Design, Innovation and Light; Engineering Invention in Glass Architecture; Case Study 1 World Trade Center - Podium Wall Design Development; Projects & Case studies; The Glass Screens of the Japan Post Tower; The Glass Sphinx: A Massive Stacked Glass Sculpture; The Apple Glass Cube: Version 2.0; Future Application of Structural Use of Glass; A Laminated Glass Wall Will Protect Warnemunde From High Water; Lincoln Center Canopies - Performance in Glass Project for the Eiffel Tower: Constructive GeometryChallenges in the Design, Fabrication and Installation of Glass Structures Comprising of Super Jumbo Glass Sheets; Glass Walls Carrying the Roof and Withstanding the Wind Load on the Facade: Conservatory of the Museum in Dordrecht and Raaks Glass Cube in Haarlem; Inclined Glass Fins for the King Abdulaziz Center for World Culture; Design of Suspended Glass Ceiling Structure in High Sesimic Hazard Zones; Designing a Glass Pavillion to Protect an Ancient Greek Temple; A True All-Glass Staircase

Two Lines - Arup with David Chipperfield Architects Torre Iberdrola, Bilbao, Spain; Joints, Fixings & Adhesives; Experimental Investigation of Unconventional Canopy Prototypes, Suspended by Adhesive Bonds; Connecting Through Reinforcement - Experimental Analysis of a Glass Connection Using Perforated Steel Plates; Determination of Adhesives Properties for Non-linear Numerical Simulation of Structural Steel-Glass Connections; Shear Capacity in Adhesive Glass Joints; Experimental and Numerical Analysis of Edge Seal Spacers of Insulated Glass Units for Structural Sealant Glazing Applications

Tensile Loading of Silicone Point Supports - Revisited Investigation of Stress-Whitening in Transparent Structural Silicone Adhesive; Designing a Glass Bearing Connection with a Probability to EN1990 CC2; Influence of Various Factors on Mechanical Properties of Adhesive Joint in Glass Structures; Seismic Behaviour of Point Supported Glass Panels; The Mechanical Performance of Adhesives for a Steel-Glass Composite Facade System; Load Carrying Behaviour of Metal Inserts Embedded in Laminated Glass; Direct Glass Fabrication - New Applications of Glass with Additive Processes

Analytical Solutions for Detail Problems in Structural Glazing Glazing with Countersunk Point Fittings; Reduction of Edge Effect in Adhesive Joints of Glass Details; Strength, Stability & Safety; Improvement of Quality of Tempered Glass with Numerical Modeling; Analytical Approaches for Buckling Verification of In-plane Loaded Laminated Glass Columns and Panels; Contact Damage Near the Supporting Pillars in Vacuum Glazing Units; Towards a European Structural Glass Network: COST Action TU0905

How to Model Failure in Load-Bearing Glass Elements? A Discussion Based on Analytical, Numerical and Experimental Considerations

Sommario/riassunto

There are two things everybody knows about glass: it is transparent, and it breaks! These are also the properties that constitute the challenge of glass as an architectural and structural material. This book presents papers from the third Challenging Glass Conference (CGC3), held at the Technical University (TU) Delft, the Netherlands, in June 2012. The conference brings together glass engineering, research and design specialists. Papers are grouped under seven topic headings: project and case studies; joints, fixings and adhesives; strength, stability and safety (a category which includes a quarter of all the papers presented at the conference); laminates and composite design; curved and bended glass; architectural design and lighting and finally, glass in facades. Glass remains one of the most exciting materials available to designers and architects today. This book will be of interest to all those involved in working with glass in an architectural and structural context.
