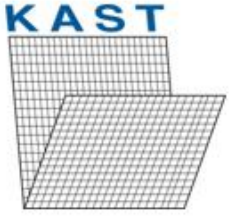


DENKMALPFLEGE IN PORTUGAL | 07.-11.04.2025

KAST STRUCTURAL REINFORCEMENTS





KAST-GROUP

1961

FOUNDATION OF THE COMPANY BY DR. GÜNTHER KAST

1995

ACQUISITION OF THE COMPANY TOLNATEXT, TOLNA/HUNGARY

KAST-GROUP

330 EMPLOYEES

PRODUCTION OF 60 MILLION M2 PER YEAR

5 PRODUCTION AND LOGISTICS SITES

- 2 IN GERMANY, 2 IN HUNGARY, 1 IN THE USA

WITH CUSTOMERS WORLDWIDE.

STRUCTURAL REINFORCEMENTS

EXTERNALLY APPLIED FIBER REINFORCEMENTS

- **FRCM** (FABRIC REINFORCED CEMENTITIOUS MATRIX)
- **CRM** (COMPOSITE REINFORCED MORTAR)
- **FRP** (FIBRE REINFORCED POLYMER)
 - PRE-CURED SYSTEMS – Manufactured in various shapes by pultrusion or lamination
 - WET LAY-UP SYSTEMS – Manufactured with fibers lying in one or more directions as FRP sheets or fabrics and impregnated with resin at the job site to the support
 - PREPREG SYSTEMS – Manufactured with unidirectional or multidirectional fiber sheets or fabrics pre-impregnated at the manufacturing plant with partially polymerized resin

STRUCTURAL REINFORCEMENTS

FRCM (FABRIC REINFORCED CEMENTITIOUS MATRIX)

- LOW SYSTEM WEIGHT + THICKNESS 0.8 - 1.5 cm
- MINIMALLY INVASIVE + REVERSIBLE (WITH NHL MORTAR)
- FIBER MATERIALS AR-GLASS, BASALT, CARBON
- MESH TYPES BIAXIAL + MULTIAXIAL
- WEIGHT 100 - 600 g/m²
- OPEN MESH SIZE 10 - 30 mm
- TENSILE STRENGTH 30 - 150 kN/m
- ELASTIC MODULUS 25 - 200 GPa



STRUCTURAL REINFORCEMENTS

CRM (COMPOSITE REINFORCED MORTAR)

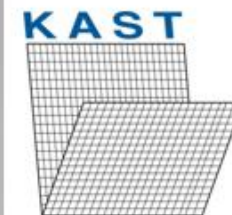
- SYSTEM THICKNESS 3 - 5 cm
- HIGH STIFFNESS
- EASY APPLICATION

MATERIALS AR-GLASS, BASALT, CARBON

- WEIGHT 300 – 1.000 g/m²
- OPEN MESH SIZE 30 - 99 mm
- TENSILE STRENGTH 50 - 200 kN/m
- ELASTIC MODULUS 25 - 200 GPa



CE



STRUCTURAL REINFORCEMENTS

CRM (COMPOSITE REINFORCED MORTAR)

GFRP (HARD VERSION)

CERTIFIED AND CE-MARKED

GRIDS

CORNERS

L-CONNECTORS



CE



STRUCTURAL REINFORCEMENTS

CRM (COMPOSITE REINFORCED MORTAR)

AR GLASS MESH (SOFT VERSION)

CERTIFIED AND CE-MARKED

ACCORDING TO EAD FOR CRM SYSTEMS

GRIDS - KAST CRM-300, 450, 600 AR

CORNERS

L-CONNECTORS



STRUCTURAL REINFORCEMENTS

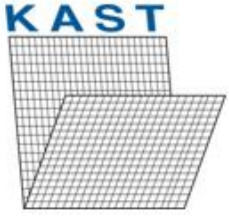
FRP (FIBRE REINFORCED POLYMER)

- HIGH IMPACT STRENGTH
- HIGH STIFFNESS
- CORROSION-FREE

UNIDIRECTIONALS AND REBARS

- | | |
|--------------------|--------------------------|
| • FIBER MATERIAL | AR-GLASS, BASALT, CARBON |
| • TENSILE STRENGTH | 50 - 200 kN/m |
| • ELASTIC MODULUS | 40 - 240 GPa |





STRUCTURAL REINFORCEMENTS

STRENGTHENING SYSTEMS FOR LOAD-BEARING WALLS AND SECONDARY ELEMENTS

KAST COLLABORATES WITH NATIONAL AND INTERNATIONAL RESEARCH INSTITUTES. SEVERAL PRODUCTS HAVE BEEN DEVELOPED IN COLLABORATION WITH KIT UNIVERSITY (KARLSRUHER INSTITUT FÜR TECHNOLOGIE) IN GERMANY SUCH AS:

- **EQ-GRID-SYSTEM** HYBRID MULTIAXIAL MESH
- **EQ-TOP-SYSTEM** GLASS FIBER FABRIC IN COMBINATION WITH PU-COATING
- **CP-GRID** FIBRE MESH WITH A SPECIAL COATING FOR HIGHER BONDING

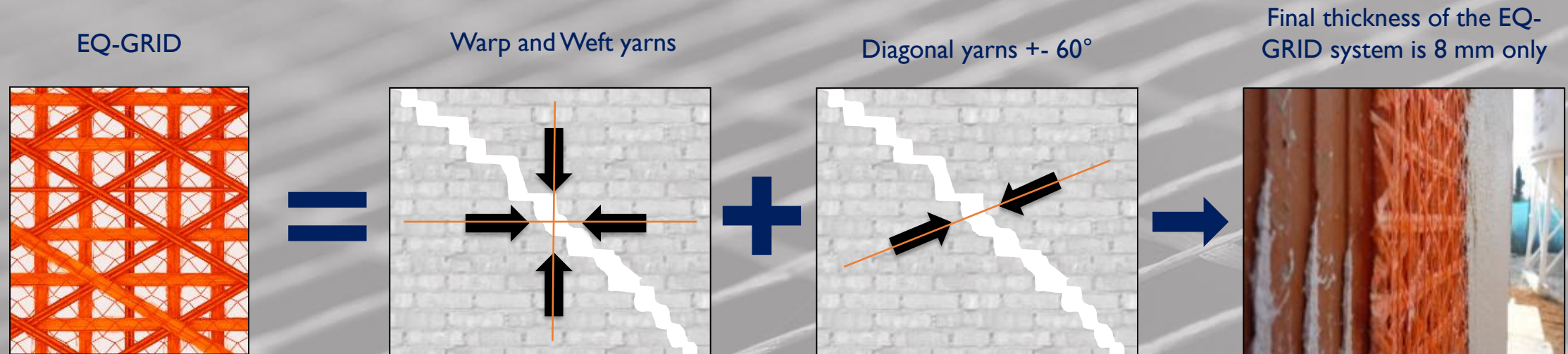
STRUCTURAL REINFORCEMENTS

EQ-GRID-SYSTEM - EARTHQUAKE PROTECTION

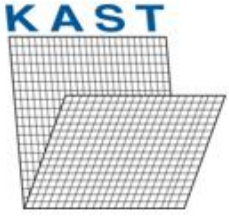
EQ-GRID = HYBRID MULTIAXIAL MESH + MORTAR – DEVELOPPED WITH KIT UNIVERSITY.

APPLIED WITH NHL MORTAR SPECIFICALLY DEVELOPED FOR THIS FRCM-SYSTEM

FOR IMPROVEMENT OF LOAD-BEARING MASONRY AND SEISMIC



PROJECTS IN GERMANY, ITALY, TURKEY, NETHERLANDS, ... – AND WORLDWIDE



STRUCTURAL REINFORCEMENTS

EQ TOP-SYSTEM – EARTHQUAKE PROTECTION SYSTEM

GLASS FIBER FABRIC DEVELOPED TO REINFORCE NON-BEARING INTERNAL MASONRY WALLS

EASY APPLICATION LIKE WALLPAPER WITH A SPECIFIED POLYURETHANE GLUE

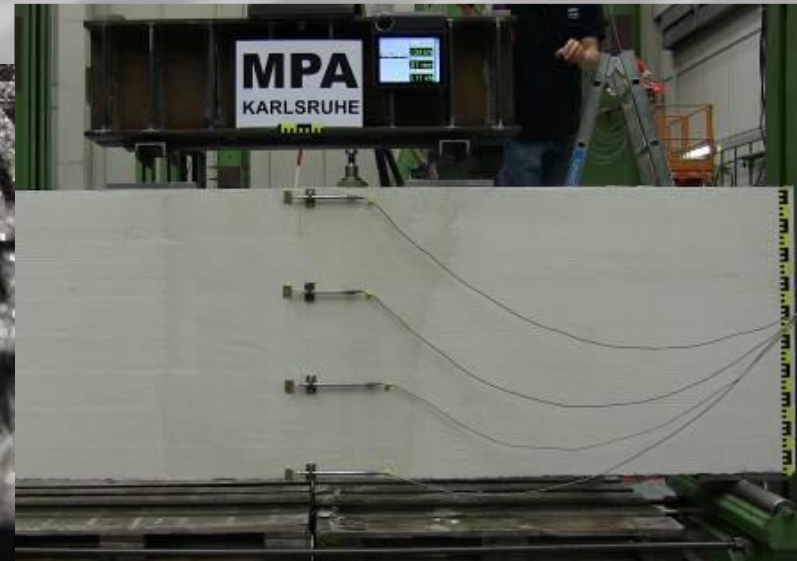
AGAINST OUT-OF-PLANE FAILURE



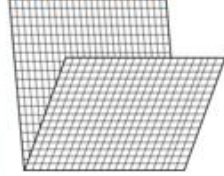
STRUCTURAL REINFORCEMENTS

CP GRID STRENGTHENING SYSTEM

- MESH WITH SPECIAL COATING FOR **EXCELLENT BONDING** TO MORTAR MATRIX
- CONTAINS CRACKING DUE TO DISPLACEMENTS UNDER CONSTANT LOAD, SUCH AS BUILDING SETTLEMENTS
- EXPERIMENTS PERFORMED AT **KIT UNIVERSITY**, GERMANY



KAST



LOOKING FORWARD TO NEW PROJECTS

Dr. Günther Kast GmbH & Co.

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