



European Union
European Regional
Development Fund

Lenzi Egisto – FF: Aegis

Roberto Fenzi

Research and Development new and innovative textile solutions

lenziegisto@ui.prato.it

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and new applications – Huddersfield (UK)”



LENZI – Innovative Textile since 1898

LENZI :
Innovative Textiles to solve users needs



Lenzi for the Italian Army

In cooperation with Col. Lupini and the Folgore parachutists Brigade, in 2002 at Lenzi we developed the innovative NYCO fabric for combat suits, nowadays used not only by the Italian Army, but by many States both in Europe and Extra Europe .



Col. Luigi Lupini

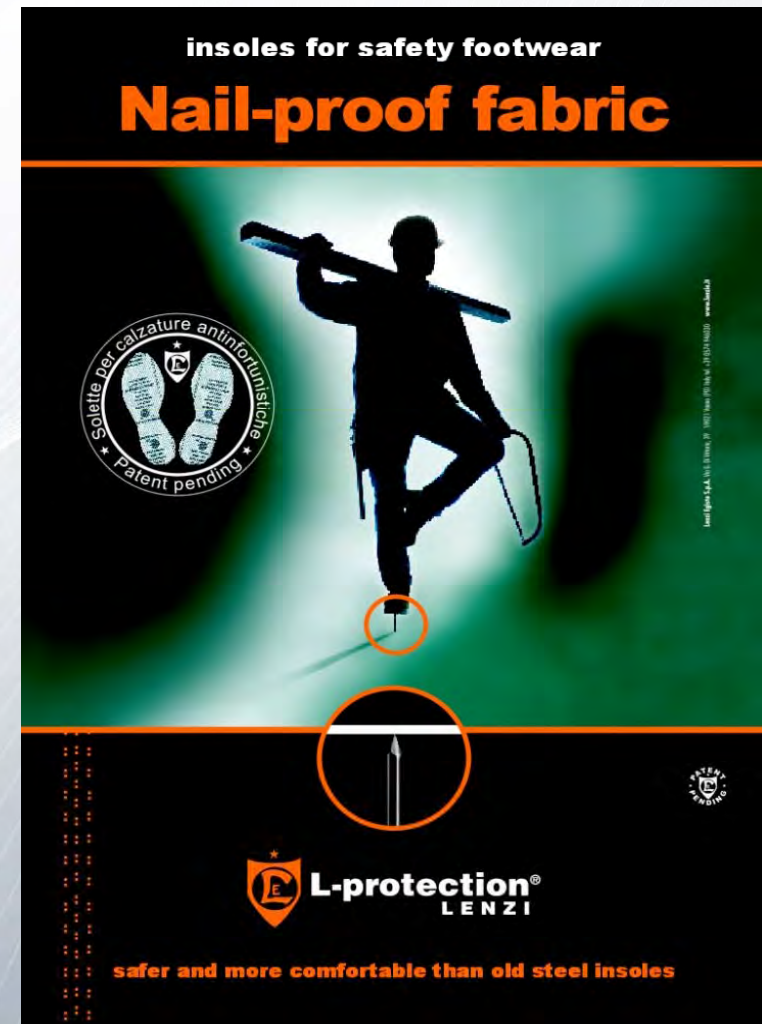




LENZI – Protective Textile Barriers

Any of yours operating in a construction yard, or in a production mill, you are probably using one of our innovative materials: perforation resistant textile insert for safety boots.

Elastic, flexible and lightweight, since 2003 L-Protection has revolutioned PPE market Worldwide





LENZI – few of our innovative solutions



Flexibility, elasticity and lightweight to contain and absorb impacts, fractures and structural failures

**Out of these observations
has been conceived**

AEGIS

**A textile barrier to contain
components of secondary
construction**



Safe construction for our
future



FIBER REINFORCED SYSTEMS ON THE MARKET

- CARBON FIBERS
- GLASS FIBERS
- ARAMIDIC FIBERS
- BASALT FIBERS



- Minimum extension for maximum solidarity with the structural elements;
- Raising of the breaking point of the structural building elements;
- RIGID elements, which collapse in a FRAGILE way with consequent sudden failure.

AEGIS SYSTEM: FLEXIBILITY, ELASTICITY AND LIGHT WEIGHT

Even if the appearance of AEGIS products can make them visually similar to other fiber reinforcements, they behave in a totally different way

FIBERGLASS
REINFORCED



AEGIS
REINFORCED



ELASTICITY AND FLEXIBILITY TO ABSORBE ENERGY

The tensions accumulated before the fracture of the non-structural parts (pots and slabs of the ceiling, walls, partitions, etc.) are discharged at the time of their failure.

It is after this failure that the AEGIS textiles, due to their characteristics of high tenacity, elasticity and flexibility, ensure that the various fragments are contained, reducing physical damage to people.



Partition wall with force on the side with Aegis in cement plaster.

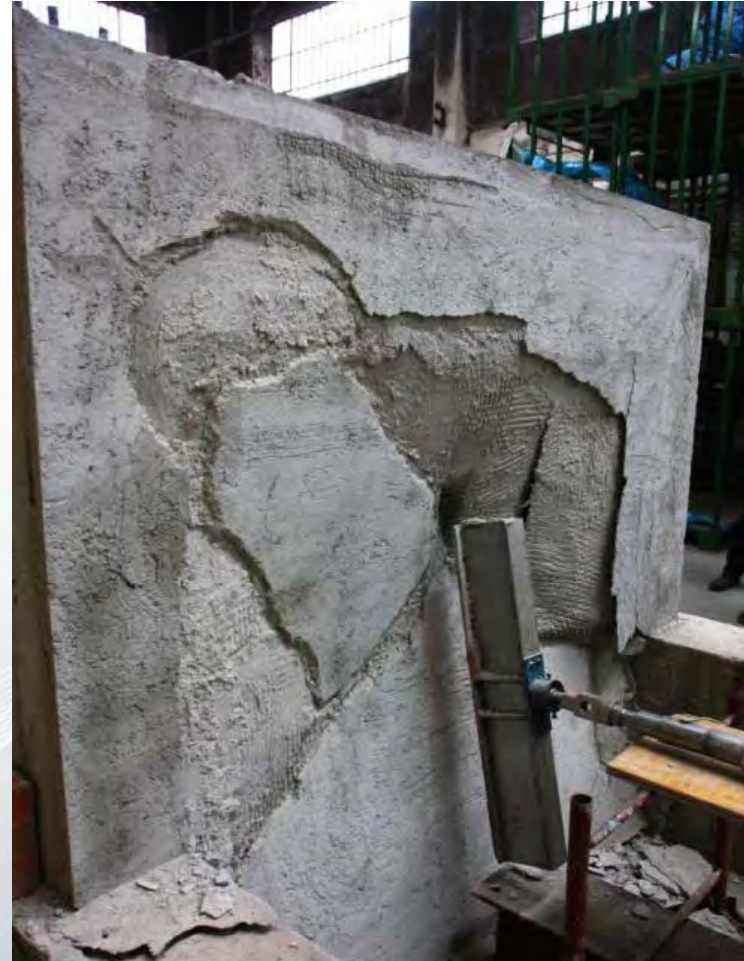
Antisfondment Glass effect



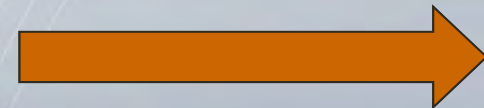
Side opposite to Aegis, no contact with columns or beams. Breakage but no falling of wall parts

AEGIS A SAFETY BARRIER

The "AEGIS" fabrics are applied to the partition walls and fixed to the structure at the same time: the panels thus secured to the structure are prevented from tipping and rolling out and, in the event of their breakage, any projection of their parts and fragments into the surrounding space is blocked and they are held back by the coating fabric itself.



“AEGIS” materials are available in two main forms:



AEGIS MATERIALS

AEGIS textile reinforcements are available in two main types:

High Tenacity Polyester WITH Stainless steel threads

- **HERMES** , Leno weave structure 2 cm x 2 cm
- **ATHENA** , a one by one weave of 1 cm x 1 cm

High Tenacity Polyester WITHOUT steel.

- **EFESTO** , a closer weave of 0,4 x 0,4 cm

Materials are supplied in a roll form of 25 linear meters in width cm 100+10 - (27.5 mq)

Application of AEGIS materials

VERSIONS WITH STEEL WIRE HAVE PREFERENTIAL USE INSIDE PLASTER IN CEMENTITIZED MORTAR, SINCE THE STEEL, BONDING TO THE CEMENT, SHAPES AN EFFECTIVE ARMED PLASTER.



APPLICATION OF AEGIS FABRICS

THE VERSIONS WITHOUT STEEL WIRE HAVE A PREFERENTIAL USE FOR THE APPLICATION ON THE OUTER OF PLASTER, AS IN THE CASE OF USE OUTSIDE CEILINGS (in this case with flame retardant treatment)



MAIN AEGIS USES

- Lightweight and elastic containment of external infill panels and solution to avoid falling (both on existing Buildings as well as for New Buildings);
- Effective protection against Ceiling falls and sinking;
- Containing walls, and cornices.
- Construction of external lanes and cycle paths
- Elastic reinforcement of plasters



AEGIS TO CONTAIN CURTAIN WALLS



Fixing Industrial walls in a seismic area



Safe Wall and Ceiling in existing School Building in seismic areas



Repairing damaged house after earthquake

AEGIS FOR THE PROTECTION FROM CEILING FALLS



AEGIS TO PREVENT FALLS FROM CEILING IN CASE OF FINISHING WITH PLASTER



AEGIS TO PREVENT FALLS FROM CEILING

Dry application on ceiling in case of suspended ceiling



AEGIS TO PREVENT FALLS FROM CEILING DIRECT COATING ON THE OUTSIDE OF CEILINGS



AEGIS TO SUPPORT PLASTERS TO PREVENT CRACKINGS



A SIMPLE WAY TO CREATE FOOTPATH WITH SMALL IMPACT AND LONG LIFE BY AEGIS



USAGE OF AEGIS

ADVANTAGES

- **MAXIMUM SIMPLICITY OF APPLICATION AND INTERVENTION;**
- **GREAT SAFETY OF THE MANUFACTURER;**
- **IT ALLOWS WALLS AND CEILING TO BREATHE ;**
- **FAST AND EASY APPLICATION;**
- **CHEAP TO APPLY;**
- **MINIMUM PLASTER USAGE,**
- **NO SIGNIFICANT INCREASE OF WEIGHT ON STRUCTURES;**
- **IT DOES NOT NEED USAGE OF HIGHLY SPECIALIZED LABOR;**
- **IT CAN BE USED WITH ANY BASIC PLASTERS AND MORTARS, EITHER CEMENT OR LIME BASED;**
- **NO ALTERATION OF STRUCTURAL BEHAVIOURS;**
- **GREAT VERSATILITY OF USE FOR ALL NON STRUCTURAL PARTS.**



AEGIS, A LIGHTWEIGHT AND FLEXIBLE SHIELD FOR CONSTRUCTION

IT IS FLEXIBILITY WHICH MAKES DIFFERENCE

- **THANKS FOR YOUR ATTENTION**





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Thank you!

Questions welcome



Project smedia