



INGLAS Produktions GmbH

Glass lamination with vacuum bags why and when?

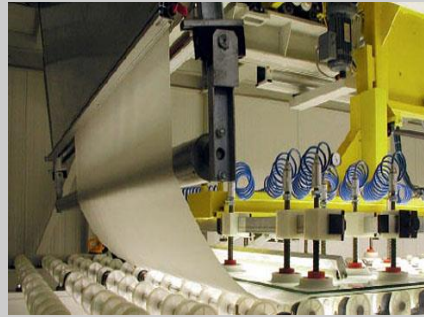
façade glazing with functional inlays

Standard processing glass lamination

pre-treatment
and washing



sandwich
folding



pre-lamination
by roller pressing



lamination
by autoclaving



de-airing
peripheral sealing

high temperature
high pressure

Façade glazing with laminated safety glass



glass production: BGT Bischoff Glastechnik Bretten

Lord Norman Foster London / 1998

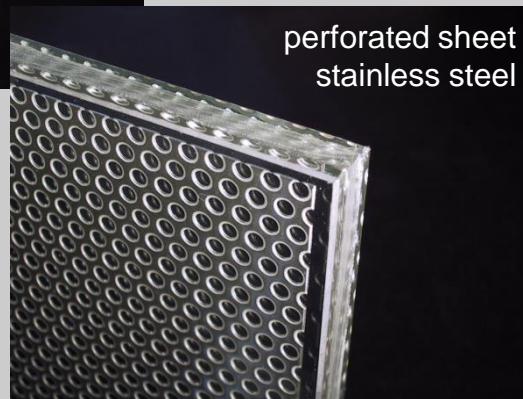
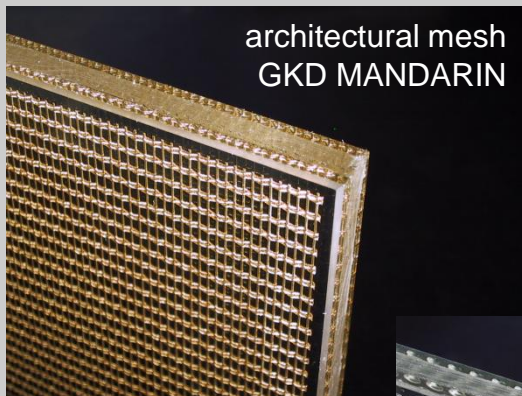
Glass dome of Reichstag Berlin

3.000 m² scale like glazing

24 mm laminated glass with
step at long sides

glass size: 5.100 mm x 1.700 mm

Why and when vacuum bag lamination?



Laminated glass with structured inlay

in standard pre-lamination
insufficient de-airing



bubbles and delamination inside
the laminate after autoclaving



active de-airing
by vacuum exhausting

Glass lamination with vacuum bag

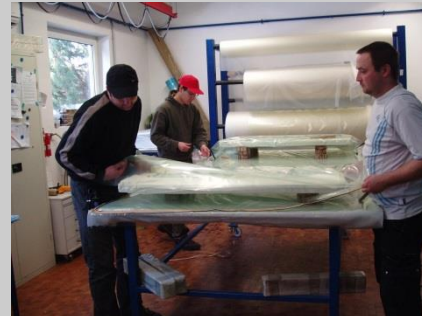
pre-treatment
and washing



sandwich
folding



vacuum
bagging



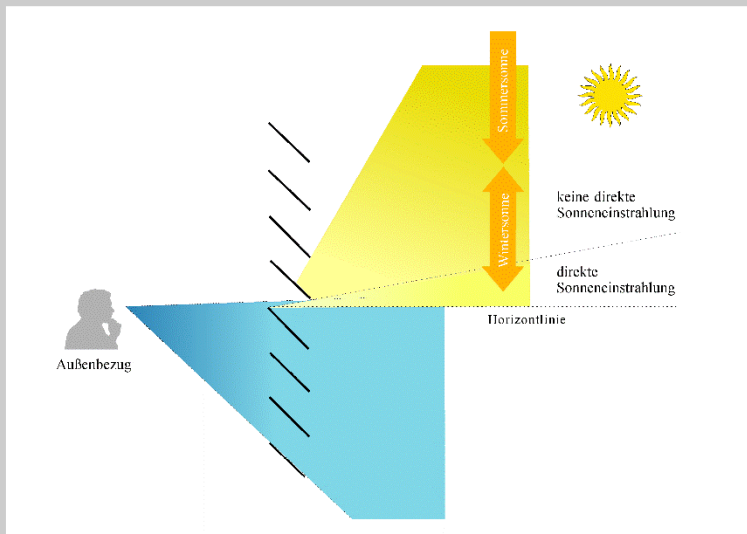
active de-airing
by bag exhausting

lamination
by autoclaving



high temperature
high pressure
permanent vacuum

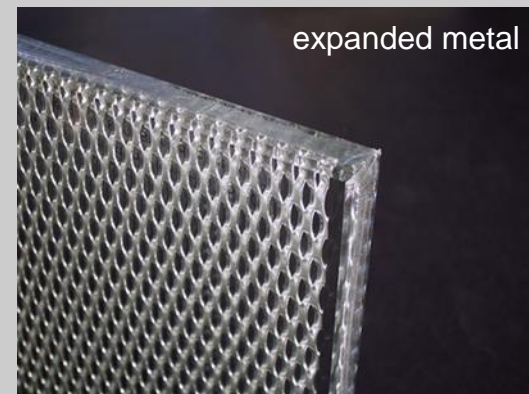
Inlay expanded metal: angle dependent sun protection



Principle of angle dependent sun protection

expanded metal operates like
a Venetian blind with sloped slats

sun-light from outside is shielded
from inside a splendid view outside



Façade glazing with functional inlay expanded metal



KFW Frankfurt revitalization
with sun protection elements

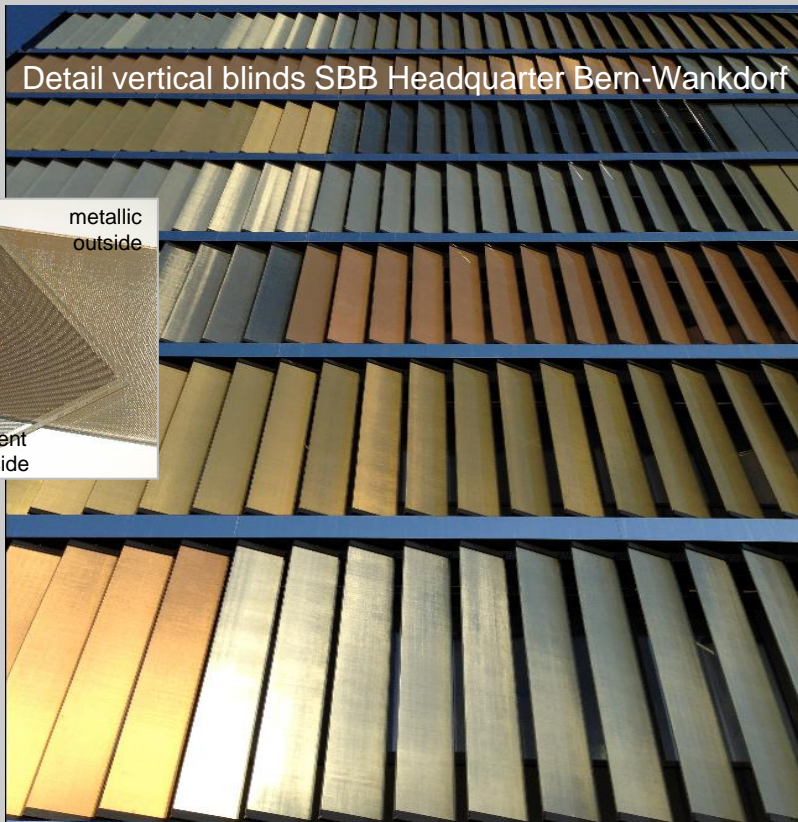
1.500 controllable elements

16 mm laminated glass with inlay
and step at all sides

typ. size: 1.200 mm x 1.800 mm

RKW Architects Düsseldorf / 2005

Inlay SEFAR-mesh VISION®: sun and insight protection



Lussi + Halter Luzern / 2013

Architectural mesh SEFAR VISION®

black pigmented woven PET mesh
one side metallically coated and/or printed

on outer side:
bright metallic surface with high reflection

on inner side:
black semi-transparent surface with perfect view outside

sun protection properties modified by open area of mesh type: 140/25, 140/50, 140/70, 260/25, 260/55

Façade glazing with inserted sun protection mesh



Renovation Sihlpost areal Zürich

laminated glass with SEFAR-mesh
for sun protection and façade design

4.000 m² sun protection
2.500 m² constructive design
laminated safety glass with
coppery printed SEFAR-inlay
type 140/70 and 260/55

David Chipperfield Berlin, Gigon - Guyer Zürich / 2012

Inlay LED stripes: MEDIAGLASS® display for video presentation



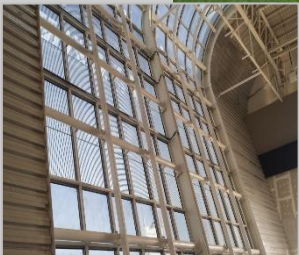
MEDIAGLASS® a façade integrated video presentation system

laminated glass with inserted channels assembled with flexible SMD-LED stripes

from outside LED screen with video ability for day and night visibility, from inside high transparency even during operation

in-situ maintenance with easy replacement of defect LEDs

Façade glazing with integrated display MEDIAGLASS®



Al Sadd sport stadium with
video glass façade MEDIAGLASS®

laminated glass with integrated
LED display for video light show as
component of an insulating double
glazing

2 x 90 m² LED display (14.1 m x 6.4 m)

RGB pixel pitch: 50 mm x 46.5 mm

→ 288 x 140 = 40.320 pixel / display

James Cubitt + partners London / 2014



Thank you for your attention



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