Glass Performance Days 2025

10 – 12 JUNE 2025 | NOKIA ARENA - TAMPERE, FINLAND

GLASS PERFORMANCE DAYS 2025

Accelerating the Future of Sustainable Glass Thin, Strong, and Ready for Mass Market with Chemical Speed Strengthening

ReViSalt

MICHAEL HEIDAN / REVISALT GMBH

Topics: Chemical Speed Strengthening

a) Chemical speed Strengthening Breakthrough

b) Comparison technologies

c) Different possibilities

d) Market opportunities

e) New production Method

f) Roadmap to industrialisation

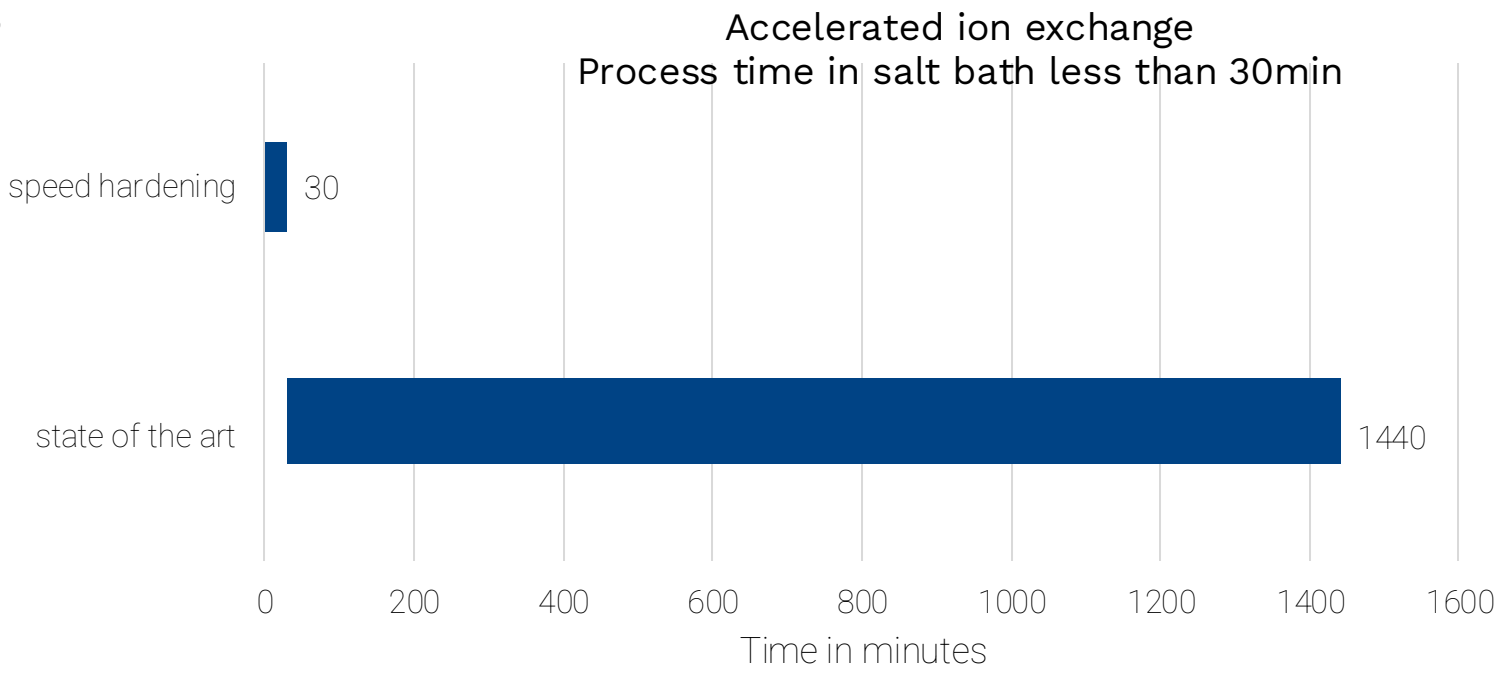
g) Summary

Chemical Speed Strengthening: The Glass Industry's Breakthrough

The Industry's Challenge
Strong glass requires thickness, leading to high costs, weight, and energy consumption.

The Bottleneck
Conventional chemical strengthening takes up to 24 hours – too slow for mass production.

The Solution
Chemical Speed Strengthening reduces this process to just **10-30 minutes**.



Transforming Glass Hardening: Old vs. New

Conventional methods limit advanced glass properties for mass markets:

- **Thermal Hardening**
- **Conventional Chemical Strengthening:** Works for thin glass, but **takes up to 24 hours**, making it uneconomical for mass production.

Chemical Speed Strengthening:

- Achieves high strength and scratch resistance for thin glass.
- **Revolutionary process time is the key**

Process	Duration	Suitability for Thin Glass	Scratch Resistance	Economy
Thermal strengthening	minutes	❌ no	❌ no	✅ yes
Chemical strengthening	up to 24 h	✅ yes	✅ yes	❌ no
Chemical speed strengthening	10 to 30 minutes	✅ yes	✅ yes	✅ yes

Chemical Speed Strengthening enables chemical glass enhancement for the mass market with maximum efficiency.

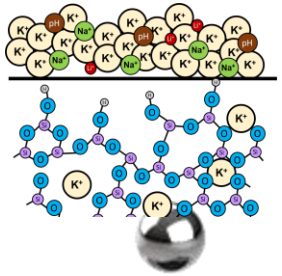
Float Strengthening – Different possibilities

Thermal

- Needs a wall thickness >2mm
- Widely used in float glass

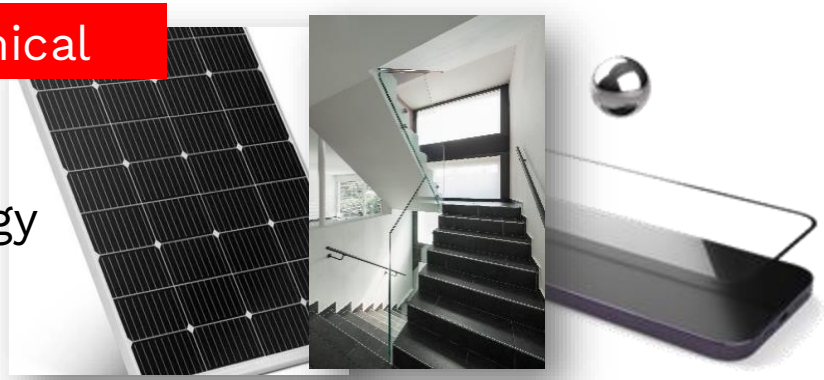
Chemical

- Worked as batch process
- Slow process as diffusion driven
- Currently no activity except displays etc.



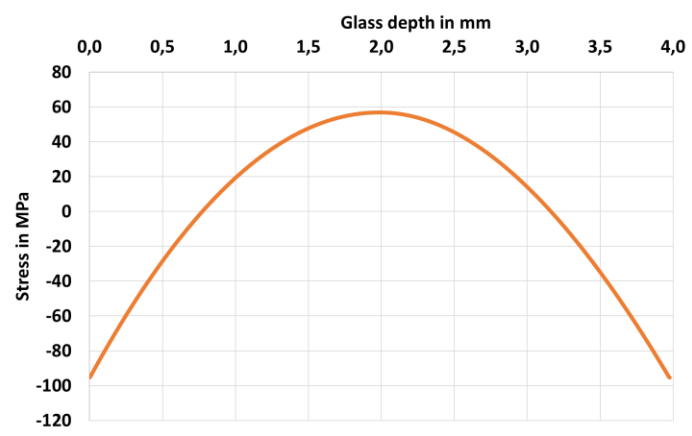
Combined Thermal and Chemical

- Accelerated Ion exchange
- Needs new application technology

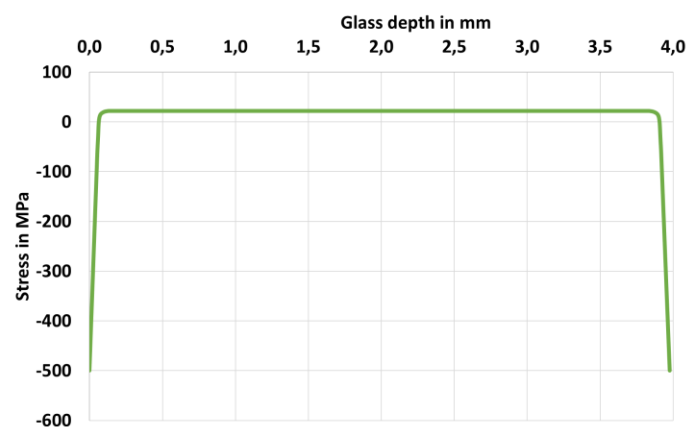


Float Strengthening – Different stress profiles

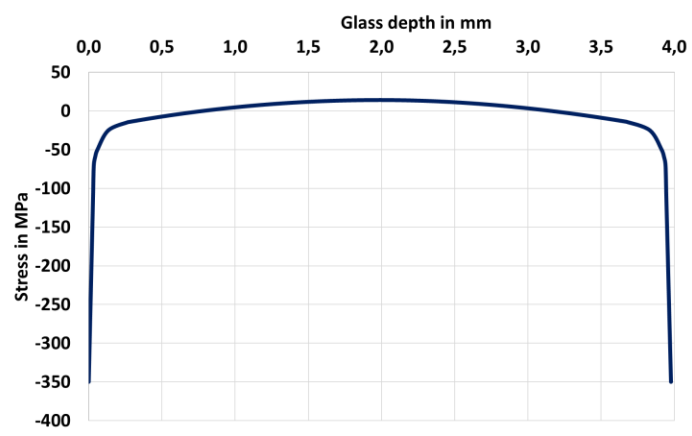
Thermal



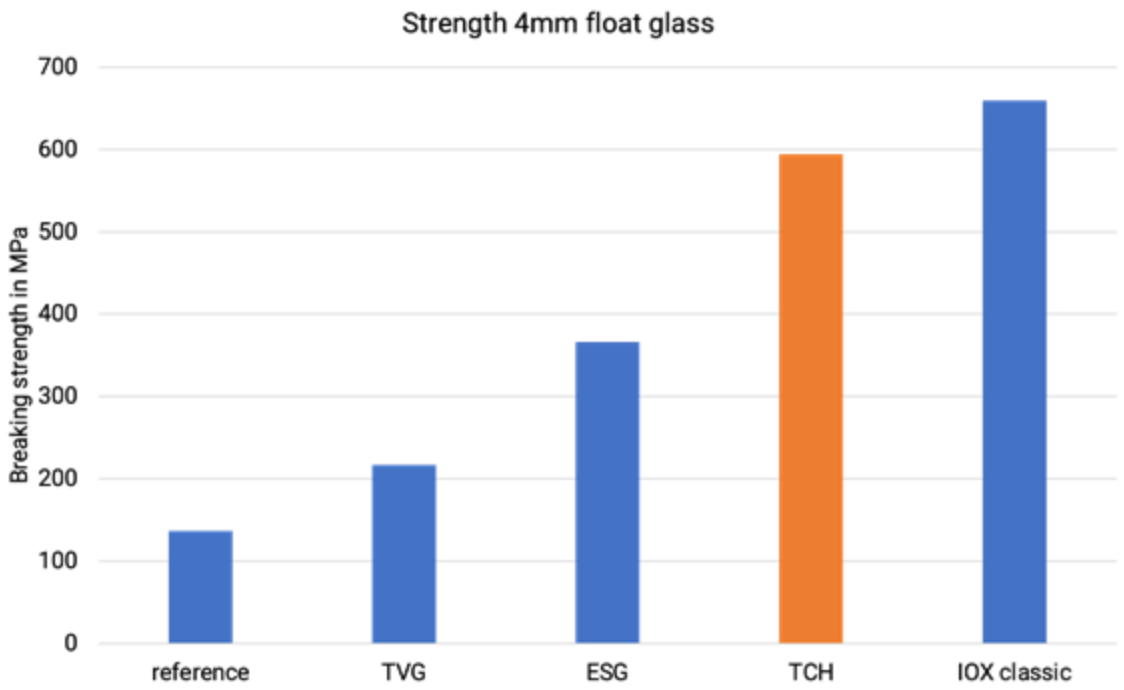
Chemical

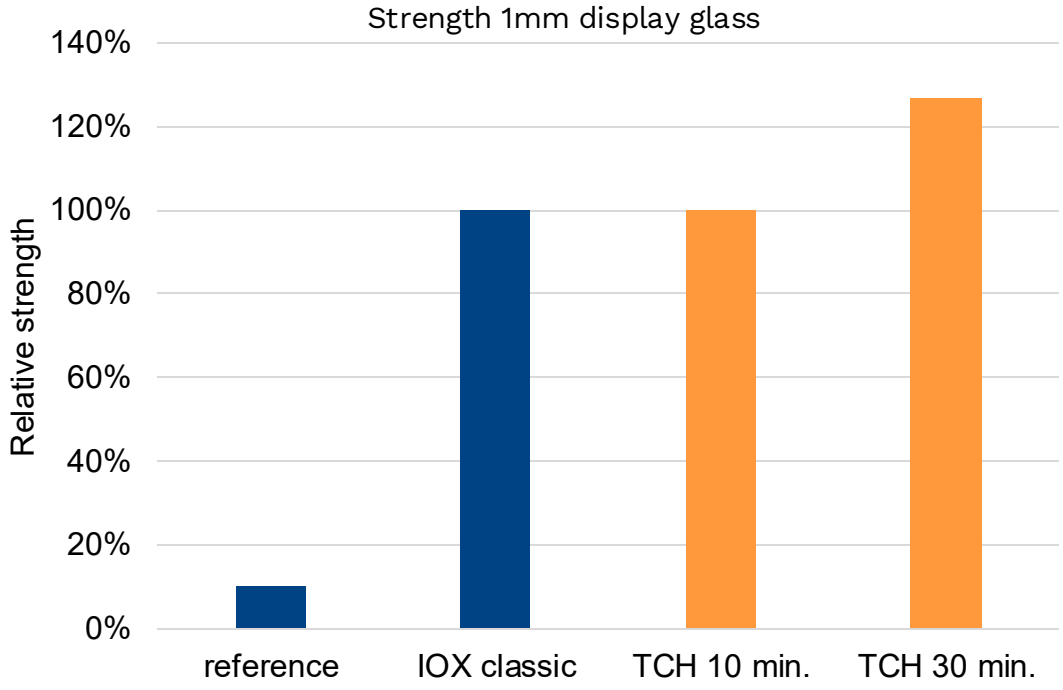


Combined Thermal and Chemical



Breaking strength comparison

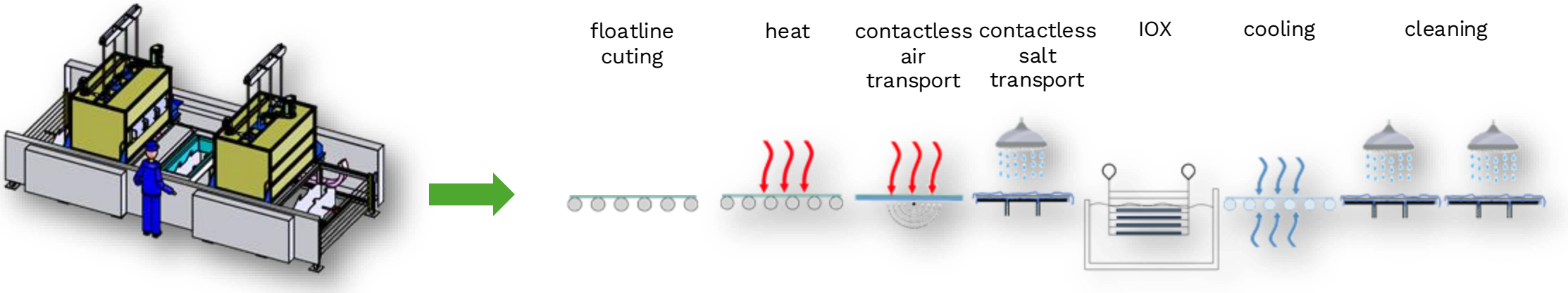




The technology makes high-quality glass strengthening economical for mass-produced goods for the first time.

Production Revolution: Seamless Integration of Chemical Speed Strengthening

- **Previous Bottleneck:** Chemical strengthening was a **batch process**.
- **The Breakthrough: Chemical Speed Strengthening** is designed for **seamless integration** into new or existing production lines.
- **Automated & Contactless:** Ideal for ultra-thin glass, avoiding mechanical stress.

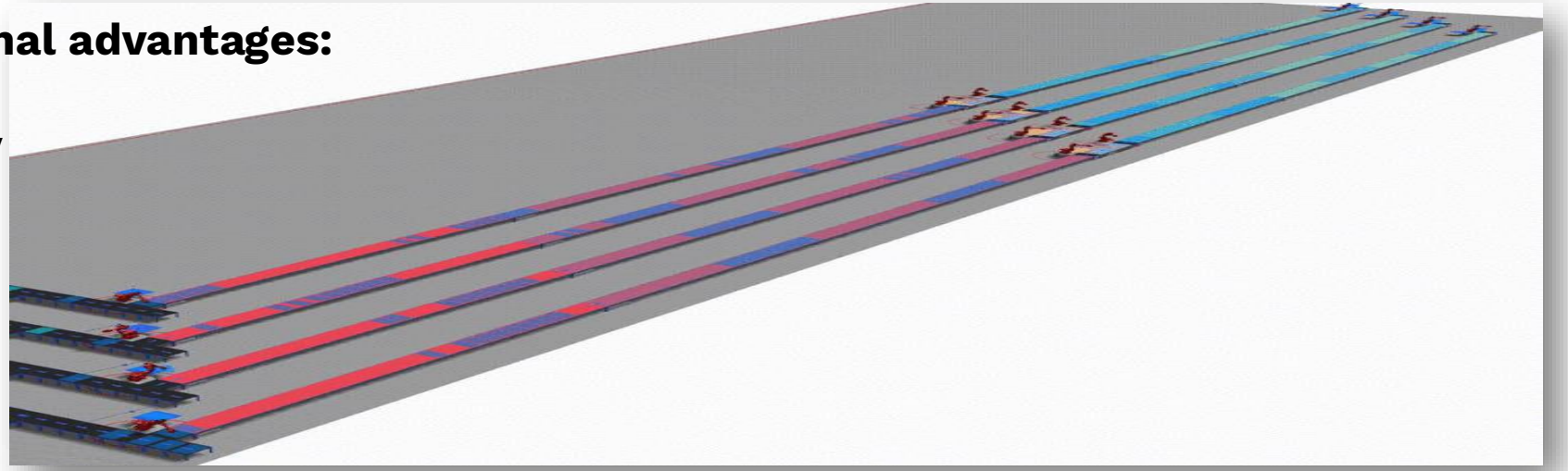


This technology means not just a new process, but a new way of production.

How it Works: Efficiency & Precision with Chemical Speed Strengthening

The new system's operational advantages:

- **Direct from Production**
- **Non-Contact Technology**
- **Maximum Scalability**



Resulting Benefits:

- ✅ **Fast, efficient, and consistent.**
- ✅ **No additional handling.**
- ✅ **Ideal for solar and architectural glass.**

A groundbreaking strengthening technology demands an equally groundbreaking production method.

Roadmap: From Pilot Plant to Global Implementation of Chemical Speed Strengthening

Future Trajectory:

- **Strategic Partnerships**
- **Mass Production Scaling**
- **Market Expansion**

Chemical Speed Strengthening is ready to sustainably transform the glass industry.

Chemical Speed Strengthening: The New Era for High-Performance Glass

This technology unlocks properties previously uneconomical for mass markets, transforming key sectors:

1. Solar Glass:
Impact: Enables **0.7 mm solar modules**

2. Architectural Glass:
Impact: Creates **thinner, stronger** glass for facades and interiors, offering greater design freedom and sustainability.

The technology is poised to redefine glass applications and manufacturing across critical industries.

Chemical Speed Strengthening: The Future of Glass is Now

Summary of Impact:

✔ **Revolutionary Process:** Redefining high-performance glass production with unparalleled speed and efficiency.

✔ **Mass Market Access:** Enabling economical application of advanced glass properties for volume products.

✔ **Broad Application:** Beginning with solar, poised for expansion into architectural, automotive and packaging industries.

Call to Action: 👉 Interested in pilot projects or strategic partnerships? Let's transform the glass industry together.

Breakthrough Innovation:

Process → Pilot Plant → Industrial Scale

Be part of a sustainable change!

ReViSalt GmbH
Michael Heidan, CEO, Founder

Ferdinand-Reich-Strasse 1
09599 Freiberg, Germany
Mobil. +49 178 799 7880
mheidan@revisalt.com
www.revisalt.com

ReViSalt GmbH
www.revisalt.com