

Resin Technology around the Globe

CHIMAR – HELLAS S.A.

Mrs. Effy Markessini
President



Company Profile

- ❖ CHIMAR HELLAS is a provider of industrial technology for resins and chemicals for wood-based panels, not a resin producer
- ❖ It is also active in industrial engineering and plant procurement for formaldehyde, UFC, resins and chemical additives
- ❖ It is an innovative, knowledge-intensive, global service company
- ❖ It offers customer focussed R&D, technical support and training, it offers knowledge
- ❖ It provides services to its customers and to its customers' customers



Company Profile (II)

- ❖ An independent company - was the R&D arm of ACM Wood Chemicals plc
- ❖ Develops its Know-How in house
- ❖ Develops Know-How continuously
- ❖ Converts research ideas into commercially valuable products
- ❖ Worldwide experience in all fields of the wood-based panel industry
- ❖ Licensees in all continents
- ❖ Licensees as Partners



R&D structure

A balance among

1. R&D
 - a. Medium- and long-range projects
 - b. Short-range or Troubleshooting – a fast response line serving customers remotely
2. Technical support – Field chemists & engineers serving customers in situ
3. R&D support – Funding and administration of long-range projects - IPR protection



Product Portfolio

- ❖ Formaldehyde based resins - all types (UF, UMF, MF, MUF, MUPF, PF) for all panel types (PB, MDF, OSB and plywood) & grades (standard and moisture resistant)
- ❖ Laminating syrups – UF and MF
- ❖ Resins for F**** panels
- ❖ Natural resins – partial substitution of petrochemical raw materials or totally natural
- ❖ Resin additives – hardeners, scavengers and extenders
- ❖ Additives for laminating syrups
- ❖ Special additives – for fire retardant boards, for enabling board recycling
- ❖ Specialty resin systems for laminated flooring, doorskins, MDF mechanical blending
- ❖ All the above-mentioned products conform to the most stringent standards worldwide, while offering cost savings
- ❖ Processes: GNOSSI™ - CFD for plant operations - Recycling of boards - FR boards
- ❖ Formaldehyde, UFC and Resin plants



Resins from renewable resources

- ❖ PF with partial substitution of phenol
 - Industrial scale – pyrolysis oil , tannin and liquefied olive stone
 - Experimental scale – soy, lignin, pulping spent liquor, lignosulphonate, CNSL/cardanol, liquefied wood, vinasse
- ❖ Totally natural resins – only experimental



GNOSSI™ applications

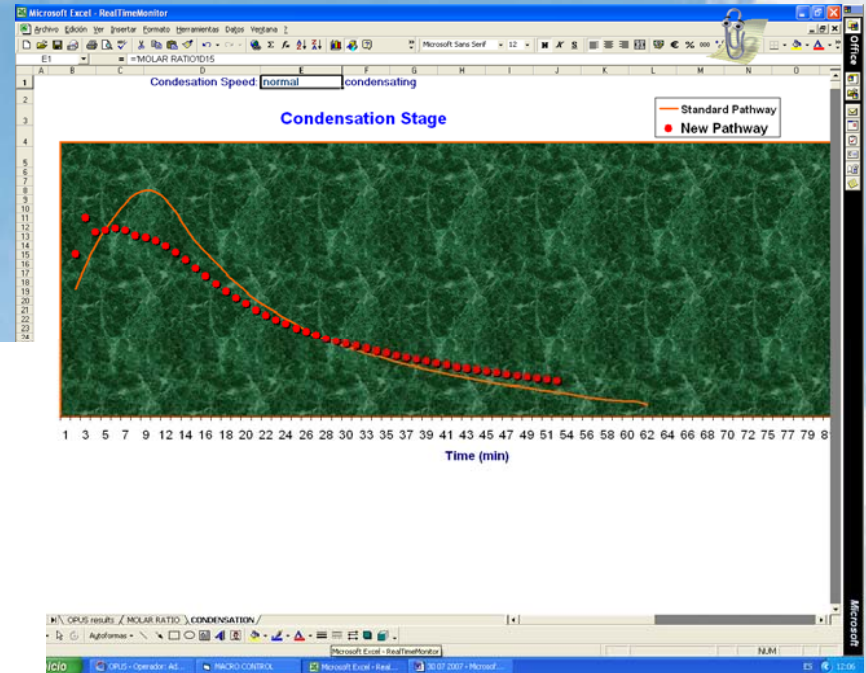
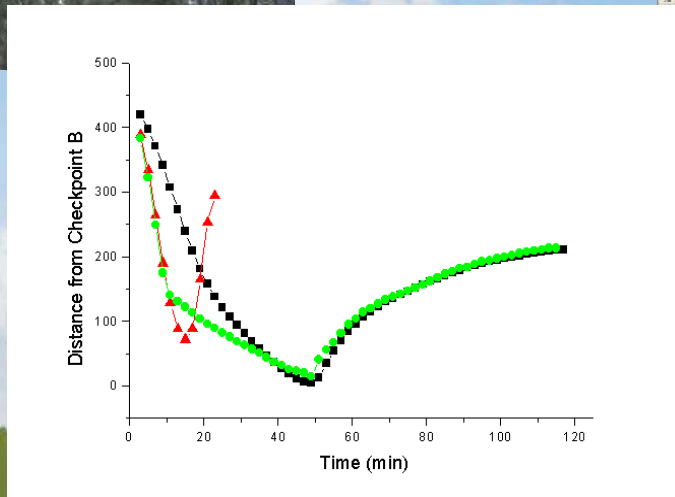
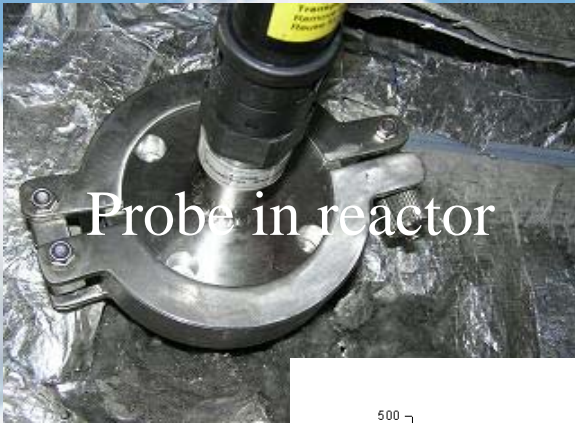
(General Non-destructive On-line SpectroScopic Interpretation)

- ❖ Control UFC solids and molar ratio, either on-line or off-line
- ❖ Follow up resin production online, ensuring consistency and correcting mistakes
- ❖ Test raw materials' common contaminants and test conformity (off-line and possibly on-line)
- ❖ Testing of laminating paper condition using a usability index
- ❖ On-line monitoring of impregnation line for % volatiles and resin pick up
- ❖ Unique patented process



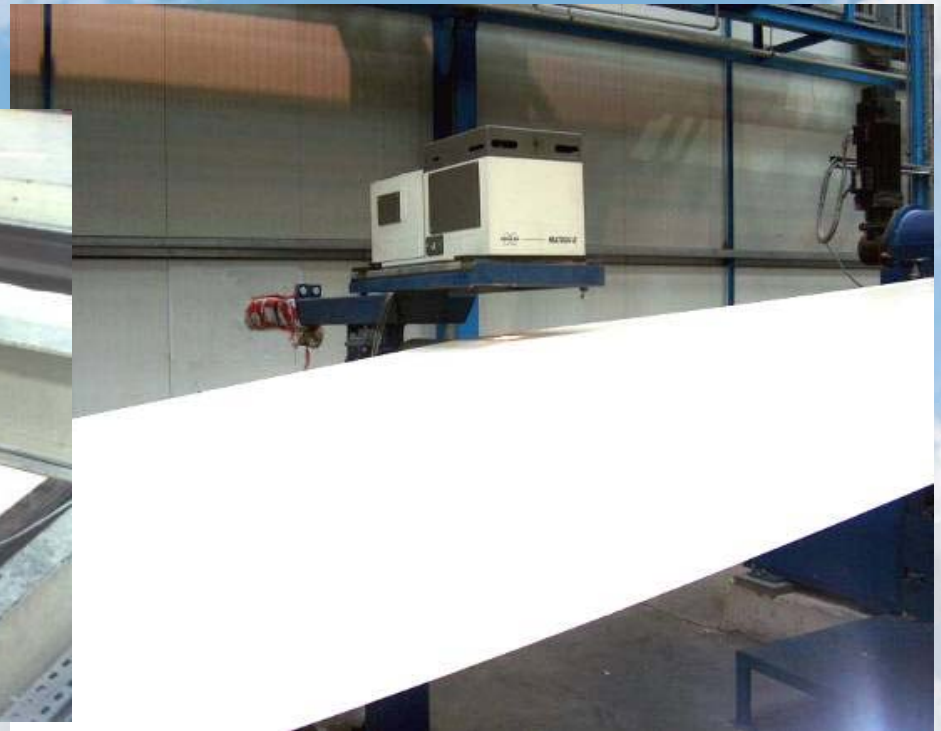
GNOSSI™ applications (II)

Resin Monitoring



GNOSSI™ applications (III)

Paper impregnation



Green Technologies

Aims/challenges

- ❖ Protect health of working personnel and product users
- ❖ Eco-efficiency
- ❖ The 3Fs
- ❖ Climate change

CHIMAR Response

- ❖ Resins from renewable resources
- ❖ Panels with F-emission at the level of natural wood
- ❖ Halogen-free fire resistant wood-based panels
- ❖ Panel recycling technologies to produce MDF



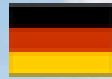


31 Years Expertise in 36 Countries

Indicative references



Hadjilucas
Shelman
Alfa Wood
Akritis



Sapemus Chemie



Woodchem S.Africa



Flakeboard



GPC Química



Poulina/Cetiba



Alto Parana



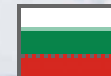
Duraplay



P.G. Zimboard
Products



CHH



Kronospan



Finsa Group



Conclusion

- ❖ CHIMAR grows **CONSTANTLY**
- ❖ We grow together with our **CUSTOMERS**
- ❖ Corporate Culture – Agility – Dynamism - Constant re-examination
- ❖ CHIMAR – 31 Years History in 36 Countries
- ❖ Strong Presence – even Stronger **FUTURE!**



Chimar Hellas S.A.



Mrs. Effy Markessini
President

Sofouli 88, 55131 Thessaloniki, GREECE

Tel: +30 2310 424167, Fax: +30 2310 424149

e-mail: office@ari.gr, www.chimar-hellas.com

Chimar Hellas S.A.

