



PCE AUTOMATION LTD



Abersham Technology Group – ‘Ambiente Housing’

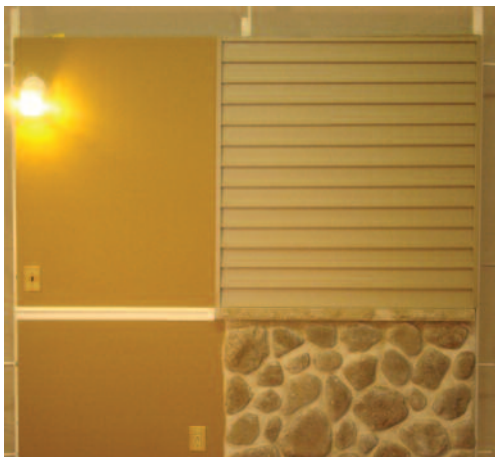


PCE Automation Ltd has built a reputation for robust and reliable automation in the rigid plastic packaging producing industries. **PCE** is also active in other markets. One such project was to automate the production of modular panels for a new type of housing system.



Abersham Technology Group developed the technology over twenty years to produce a modular housing system that was able to resist hurricanes, floods, mould, fires, insects and earthquakes. The founders, Simon & Malcolm Parrish looked at what was required for a housing system for some of the harshest conditions in the world alongside affordable housing in all other areas. The results of the research lead to the creation of a housing system unlike any other in the world, which met the following requirements:

- Contain no timber or steel.
- Be produced in mass quantities to meet demand.
- No negative environmental impact from the house design or manufacturing process.
- Able to withstand extreme weather conditions, heat, cold, rain, humidity, etc
- Structurally able to withstand even earthquakes and hurricanes.
- Attractive appearance of high quality.
- Low cost, appropriate for affordable or subsidized programs.



The technology involves mixing glass bead sourced from 100% recycled glass. This makes 85% of the panels that are used for the floors, walls and roof. The panels are uniquely tied together to form the building. Any finish or colour can be applied to give a durable building that looks like any other home, that can be constructed in as little as 10-days by a semi-skilled workforce. Green credentials were always to the fore in the development.



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All materials can be recycled, meaning virtually no manufacturing waste. The unique glass bead composite has an R-30 insulation rating and the buildings can gain insurance in most areas where traditional builds cannot.

Having researched and honed the process of producing composite panels from bonded recycled glass beads and Simon & Malcolm were looking for a partner to automate, what up until now, had been a labour intensive process.

PCE were asked to look at the first automated line in a purpose built factory in Waukesha, in Wisconsin in the USA. The process was designed to be continuous, with first the composite material being mixed and moulded into the panel. The system had to give the level of control required to maintain the panel dimensions whilst the composite set-off. The next processes were to bond the outer skins prior to cutting to the required size. The cut panels are finished by cross drilling to take the building ties and the machining of the edges allow the panels to be easily assembled.



Once the first line has completed all the trials the option is for a further three lines at this factory and many more factories around the world.

For more information on these and other products please contact **PCE Automation Ltd** on 01502 713287; e-mail info@pce-automation.co.uk or visit our website www.pce-automation.co.uk. Also visit www.abersham.com or www.ambientmidwest.com for detailed information on Abersham Technology.



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