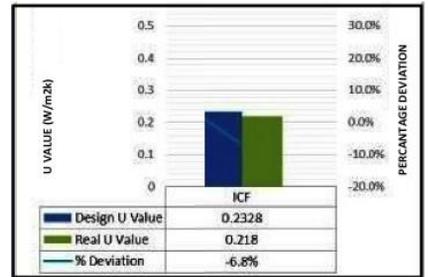


Effective or actual U Value measured on-site



## GBSI Research & Testing for Sustainability Code Compliance

As per the international Passive House Standard, the total primary energy consumption must not be more than 120kWh/m per year. The G+1 Villa project in Al Warqa performed even better, consuming 100kWh/m per year. The wall assembly inspected by GBSI with heat flux thermocouple sensors showed an effective U value of 0.218, 6.23% better than the calculated U value.

## GBSI Provides the Research Behind the Bgreen Magazine Award Green Building of the Year

Green Building Solutions International was an integral member of the team awarded Green Building of the Year by Bgreen Magazine.

GBSI supported the project with analytical research and project performance evaluations including: air tightness testing, effective in-situ U value testing and infrared thermographic survey. Using the project as a field laboratory, GBSI mentored Masters of Science students from Heriot Watt University, acting as a pro-bono industry advisor for their MSc Science diploma in Energy Studies. Over the past three years, GBSI, HWU and recently the British University in Dubai have formed a collaboration to guide students with the field research to support findings and hypothesis from the classroom. This research is especially valuable to the GCC due to the present lack of field tested data in this emerging field of building physics and performance in extreme climates

Royal City Contracting constructed the Residential G+1 Villa project in Al Warqa, Dubai, in accordance with the Passive House Standard, reducing air conditioning tonnage by 60% and earning 38 points on the LEED rating system. Air leakage in the villa was recorded 1.78m<sup>3</sup>/h/m<sup>2</sup> @50 Pascal, out performing the Dubai Green Building Regulations requirements. The villa was constructed using ICF (Insulated Concrete Form), which provides superior thermal resistance and air tightness qualities.



Center, Abdul Razzak Malik, RCC President and William Whistler, GBSI Managing Director right, at the awards presentation.

A total of 11 awards were given at the annual sustainable projects, products and services presentation.