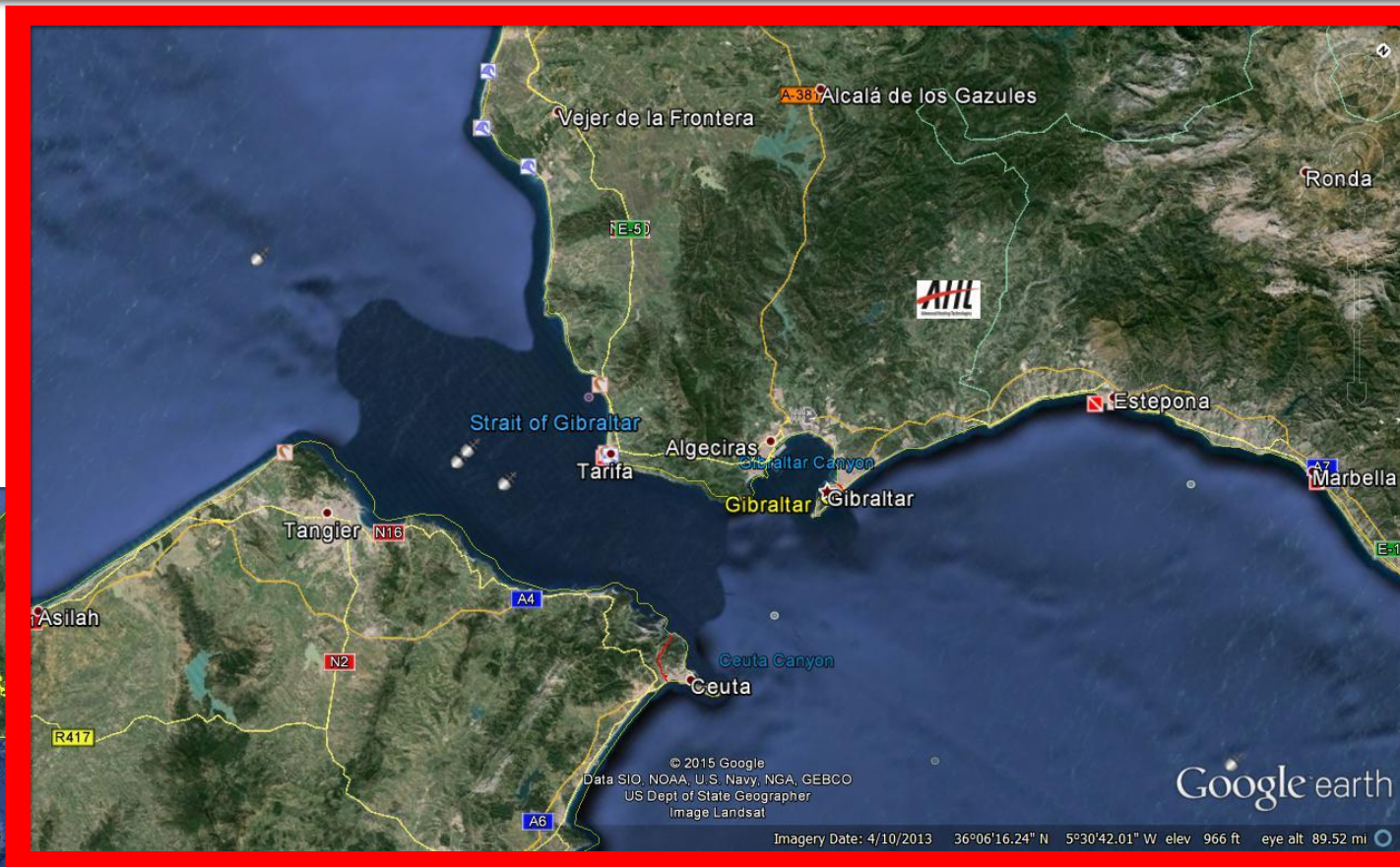


Green Technology. Creative People. Diverse Products

Sotogrande, St. Roque, Cadiz, Spain



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The Neighborhood



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Sotogrande is the largest privately owned residential development in Andalusia. Originally a gated community, it is located in the municipality of San Roque, Cádiz, Spain, southern Europe and is composed of a 20 square kilometres (8 sq mi) stretch from the Mediterranean Sea 25 km east of Gibraltar, back into the foothills of Sierra Almenara, providing contrasting views of sea, hills, cork forests and green fairways, including the Rock of Gibraltar and Morocco.

Some of the richest and most powerful families of Spain have summer homes in Sotogrande.

The Property



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Total Property Size: 10,000sqm

Total Building Size: 5,000sqm

Total Heated Area: ~1000sqm

This private holiday home was designed by Jesus Herrera Garcia, a local architect to accommodate a wealthy family with 6 children. Jesus designed 6 living structures for each one of the children and in the middle, an arced structure to serve as a family space with a huge 50m dining table, a huge salon, a second floor poker room, wine cellar, bowling alley, shooting range, sauna, Turkish Haamam, Disco and other attractions...

The Challenge



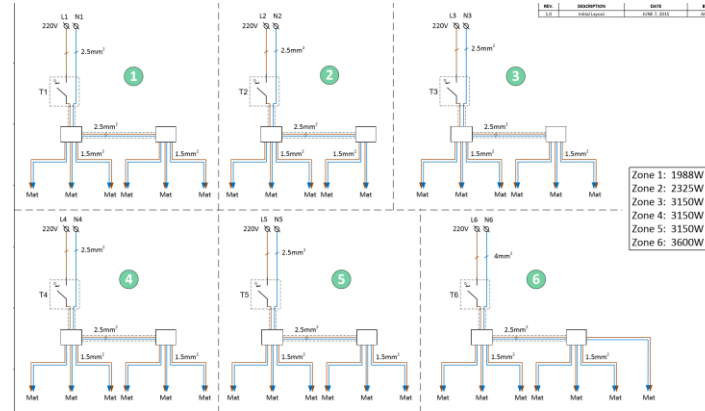
AHT

- ✓ 15m High Ceiling
- ✓ 80% Glass Walls
- ✓ Total available power of 80KW
- ✓ Multiple structures
- ✓ 5cm thick flooring
- ✓ Only 5 working days



These are just a taste of the handful of challenges which we had to deal with in such a big and complex project.

YET NON of these challenges beat our AHT System!!!



W(m)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0
L(m)	1.2	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	1.0	1.5	2.0	2.5	3.0	3.5
Area (m ²)	0.60	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	1.00	1.50	2.00	2.50	3.00	3.50
Power(w)	90	113	150	188	225	263	300	338	375	413	450	488	525	150	225	300	375	450	525

Totals:	187.88	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	7	1	33	142.2
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In order to overcome the many challenges ahead, the heating system has been designed to perfection with **less than 5% deviation real vs. planned!!**

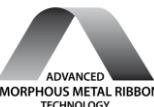
Installation



AHT



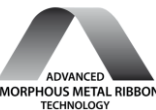
Thanks to the flawless design, careful preparation and one of a kind AHT product, the entire installation was done by 2 qualified AHT workers and 3 Spanish speaking electricitians in **ONLY 5 working days!!**



The Arc!



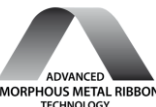
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The Living Structures



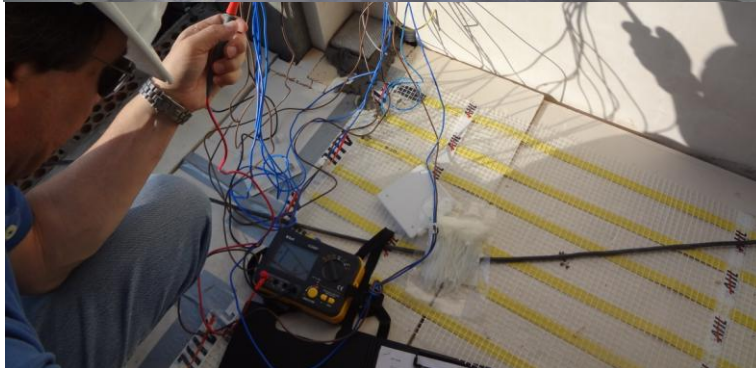
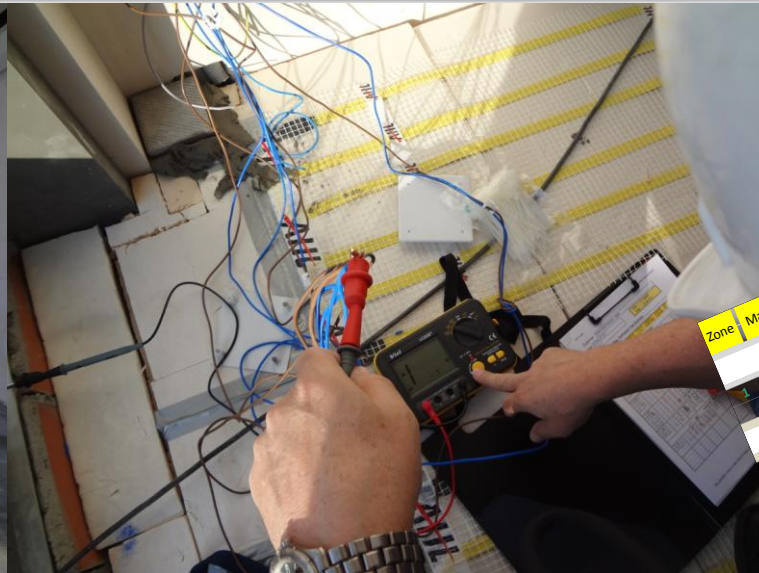
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Testing & Safety



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Zone	Mat #	Mat S/N	WIDTH (cm)	LENGTH (cm)	Resistance Range [Ω]	Measured Ohms	Measured Insulation (500V)	Measured Current [A]	Calculated Power [W]	Measured Power [W]
Level (-1) - SOTANO										
1	54942		100	250	131 - 153	119	>1000 MΩ		375	0
Level (0) - BAJA										
1	49997		50	650	92 - 107	95.4	>1000 MΩ	2.21	488	486.2
2	53661		50	650	92 - 107	95.6	>1000 MΩ	2.21	488	486.2
3	53669		50	650	92 - 107	94.6	>1000 MΩ	2.23	488	490.6
4	53671		50	650	92 - 107	97	>1000 MΩ	2.27	488	972.4
1	53665		50	650	92 - 107	95.5	>1000 MΩ	2.2	488	499.4
2	53665		50	650	92 - 107	96	>1000 MΩ	2.2	488	484
3	53665		50	650	92 - 107	101	>1000 MΩ	2.03	450	446.6
4	50901		100	300	107 - 124	151	>1000 MΩ	2.07	450	455.4
1	50902		50	450	146 - 172	155	>1000 MΩ	1.4	338	308
2	49791		50	450	147 - 172	155	>1000 MΩ	1.41	338	310.2
3	49790		50	400	154 - 183	126	>1000 MΩ	1.41	300	367.4
4	49789		50	200	207 - 241	169	>1000 MΩ	1.33	300	292.6
5	53068		100	150	155 - 183	230	>1000 MΩ	0.53	225	116.6
6	53769		100	150	445 - 516	475	>1000 MΩ	1	113	220
Level (1) - ALTA										
1	54821		50	150	445 - 516	479.5	>1000 MΩ			
2	54915		100	250	131 - 153	119	>1000 MΩ			
TOTAL WATTS:										7,619
										6,732

In order to insure ribbon safety, cement was casted immediately after mats were put into place, not before each mat was tested and recorded for **resistance, current and insulation resistance!!**

The Team



AHL



Thanks for the hard work!!!

