Financial Report "Asia Gardens Hotel"

Substitution of Silex filter media for Natureworks Alta tecnologia Glass Filter

Nature Works Alta tecnologia Filter Media is a filtration media based on glass, developed by Camacho Group by means Anti-compaction Technology.

Only Nature Works can ensure its quality with a 10-year guarantee and is re-usable.

- **Sustainability**:
  - complete absence of free silica, unlike sand it does not spill free silica into the water treatment.
  - it originates from a re-cycling process, it does not consume any natural resources to be manufactured.
  - it reduces environmental impact of water treatments by reducing greatly the consumption of water, energy an chemical products.
- **Savings** in cost of water, energy and chemicals.
- **Durability**, thanks to Anti-compaction Technology it has an **unlimited usable life and is reusable** after repairing filter.
- it optimizes the **quality of filtration and sanitation** conditions, specially due to the reduction of THM's.


BUREAU VERITAS Certification

CERTIFICADO BVC DE PRODUCTO

Arena de vidrio reciclado para la filtración de aguas
Nature Works Hi-Tech Glass Filter Media®

CAMACHO RECYCLING, S.L.

Bureau Veritas Certifications:

- **total absence of free silica**
- **full product quality**
- **full production process**
- **UNE-EN 12.904 fresh water**

Account of the expected annual savings using NatureWorks Hi-Tech Filter Media

Saving Concept	Source of the saving	Estimated Annual Cost	Budget Cost (with Nature Works)	Estimated Saving
Energy Costs	**Filtration Pumps** Thanks to NatureWorks Hi-Tech Filtration Media, pumps are working less strained, saving a lot of energy.	1pump 3Kw performance. 4 kWh consumption. 24 hours a day. 35.040 Kwh. a year. Price of the kWh. 0,14 cts **4.900 €/year** This is the current electrical consumption cost of the filtering pump.	The filtration continues 24 hours a day by law, but the pressure is reduced from an average of 1 kg/cm2 to 0,35 kg/cm2 (65% reduction) **1.715 €/year** Would be the electrical consumption cost reducing the filter pressure with NatureWorks.	**3.185 €/year** Saving in the filtration pump electrical consumption. This can be verified observing that the work pressure is reduced to 0,35 kg/cm2 average or using a electrical tester.
	Heating The water wasted when washing filter, must be heated when is replaced We get energy saving reducing number of filter washing needed.	1pump 3Kw performance. Nominal flow rate 75 m3/h 5 minutes between backwashing and rising every 2 days. 1.140 m3 a year Cost of the heating from14to28ºC with a heating pump is 4,5 €/m3 **5.310 €/year** Is the current cost of heating the water needed to be replaced when washing the filter.	The frequency in which you need to wash the filter is reduced to a third. (Reduction of 65%) We therefore consume 65% less water (399 m3/year from now on) **1.858 €/year** Would be the cost of heating the water needed to be replaced when washing the filter with NatureWorks.	**3.452 €/año** Saving in cost of heating the water needed to be replaced when washing the filter. This is easily verified as the frequency in wich you need to wash the filter is reduced to once every 5 or 6 days. Yet even this figure will probably be reduced considerably too.
Water Consumption	**Water Consumption for washing the filter** A lot of water is wasted when washing the filter. We get saving on cost of the water, reducing number of filter washing needed.	1pump 3Kw performance. Nominal flow rate 75 m3/h 5 minutes between backwashing and rising every 2 days. 1.140 m3 a year. Cost of the water 0,5€/m³ **570 €/year** Is the current cost of the water needed to be replaced when washing the filter.	The frequency in which you need to wash the filter is reduced to a third. (Reduction of 65%) We therefore consume 65% less water (399 m3/year from now on) **199 €/year** Would be the cost of the water needed to be replaced when washing the filter with NatureWorks	**371 €/año** Saving in cost of the water needed to be replaced when washing the filter. This is easily verified as the frequency in wich you need to wash the filter is reduced to once every 5 or 6 days. Yet even this figure will probably be reduced considerably too.
Labour Costs (Calculated on a cost of 12 € an hour)	**Washing the filter** Time used by the workers for washing the filter.	A worker needs at least 5 minutes every 2 days. 15 hours a year. **180 €/year** This is the cost of the workers needed currently to wash the filter	The frequency in which you need to wash the filter is reduced to a third. (Reduction of 65%) We take 65% less time. **63 €/year** Would be the labour cost of washing the filter with NatureWorks.	**117 €/año** Saving in labour cost of washing the filter. This is easily verified as the frequency in wich you need to wash the filter is reduced to once every 5 or 6 days. Yet even this figure will probably be reduced considerably too.
	Substitution of the sand Time used by the workers changing the sand of the filter.	It must be changed by law every year, but we calculate on twice every 5 year 2 people 1 working day each. 16 hours every 5 years. **38 €/year** This is the cost of the workers needed currently to change sand.	It is not necessary to substitute the filtration media at all. **0 €/year**	**38 €/year** Saving in labour cost of changing the filtration media. This can be verified stating that the Nature Works Filter Media DOES NOT SUFFER CLOGGING
Products	**The consumption of liquid chlorine, algicide and flocculant agents is reduced**	Consumption 250 liters a week at 0,5 €/liter. Plus costs of Algicide, flocculant agents, PH- **6.500 €/year** Is the approximate cost of chemical products needed for the swimming pool maintenance currently, due to the fact that sand is the perfect environment for the growth of algae and bacteria.	Chemical product consumption is reduced by at least 25% Because bacteria and algae do not grow in Nature Works Hi-Tech Filtration Media **4.875 €/year** Would be the approximate cost of the chemical products needed for the swimming pool maintenance with Nature Works.	**1.625 €/year** Saving in chemical products consumption cost. This can be easily verified observing that the amount of chemical products needed is reduced immediately keeping the same values. Yet even this figure will probably be surpassed widely too.
	Substitution of the Silex sand Silex cost of the successive replacements.	It must be changed by law every year, but we calculate on twice every 5 year. 1650kg x 2 replacements. 3300 kg every 5 years. 660 kg/year x 0,28 €/kg **185 €/year** Is the current cost of the Silex in its successive replacement need.	**It is no longer necessary to replace the Filtration Media** **0 €/year**	**185 €/year** Saving in cost of the Silex in its successive replacement need. This can be verified stating that the Nature Works Filter Media DOES NOT SUFFER CLOGGING

Expected annual savings: **8.938 € a year**