

The balancing act:

How to be business efficient and sustain the environment

Q&A

You mentioned that fire prevention tanks can be used in remote areas. How exactly would that work?

“

In remote areas there may be a problem with the water supply, so you can have a ViaCon tank installed in such sites. The tank can then act as a buffer that gets filled with water from water trucks, so if there is a fire, you have a water buffer onsite that can be used preventively. This is often the case in nature preserves where forest fires can break out during dry periods. Water tank placement in such cases acts a protective measure against fires and is a safeguard for the environment.

”

A

We are currently working on fire hydrant tanks. I would like to ask if you have an operating rainwater-harvesting system and can we offer this as a point toward carbon-neutral footprint?

“

It is a good question with two answers: yes and no. Our tanks are fully customizable, so in that sense we do have a rainwater-harvesting system. The environmental production declaration considers five aspects of our products: the sourcing of raw materials, product production, transportation of the product, usage of product, and the product's end of life, or recycling of the product.

All of these stages could ideally be quantified into carbon-footprint emissions. If you are looking at a product as a product itself, producing and transporting a product, then yes, we can contribute to a carbon-reduced footprint... but if you are looking at the actual usage of a product, there is very little data today. This is not something unique to ViaCon. Generally speaking, measuring carbon emissions for the usage of certain products has not sufficiently matured. Carbon accounting is an up-and-coming way to measure, but not quite there yet. Regulations and technology are changing, so it is just a matter of time until a product such as ours can be measured in that sense.

”

VIACON
ACADEMY

How can CO2 emissions be reduced for soil steel bridge solutions in relation to the current efficiency?

“

We are ensuring and bringing far cleaner solutions into infrastructural projects already compared to conventional solutions, and our solutions are more energy efficient and more sustainable, as we are providing a lower emission of CO2. In addition to efficiency, ViaCon is also taking steps forward to build a more sustainable steel value chain by joining the SteelZero initiative – a global initiative in which we commit to sourcing and producing 100% net-zero steel by 2050 and by 2030, at least 50% of produced or sourced steel must be produced with specific science-based CO2-reduction conditions that contribute to the global net-zero steel. We are optimizing production and sourcing of raw material to reduce emissions as well.

Adding to that, ViaCon is also working with our own manufacturing, for instance on electricity and fuel consumption as well. We have seen that CO2 emissions for fuel have been decreased within ViaCon's own production by 10% and we are reducing CO2 emissions by 30% in the last year. We are also on an interesting internal journey to “walk the talk” ourselves, and not just talk about sustainability.

”

How difficult is it to maintain sand and oil separators?

“

In fact they are very easy to inspect and maintain. Not only sand and oil separators, but our stormwater tanks in general, can be fitted with a manhole, closer to ground level. For obvious reasons, a person can enter the manhole and easily inspect whether it needs to be cleaned. No specialized equipment is needed for cleaning – just a suction truck and a hose. And then to carry off the oil and sand you find inside. We recommend annual inspections, but of course this depends on site conditions and usage, as well as on local regulations.

”

A

Are there any countries or road authorities that put any requirements for CO2 emission for their infrastructure investments?

“

We see more and more inquiries related to CO2 emissions per project or solution for bridges and culverts. Some road and railway administrations already invested some CO2 or more generic greenhouse gas calculation tools to measure solutions at both the design and construction stages. We also observe that there are more clear regulations under discussion everywhere within civil infrastructure authorities, so regulations related to the carbon footprint of bridge and culvert solutions are coming soon.

”

A

How long is the design life of steel water tanks?



The service life of a tank depends on the work-site environment and conditions as well as the choice of the material of the tank itself. Normally the requested design life of a tank is 40 to 80 years. Then we build a tank according to the requested specifications. But we can build them for a longer design life, as needed. We have several different materials and thicknesses in which we can manufacture and adapt to the conditions needed for loads, soil conditions and design life. Choosing the material for the right environment can reduce the amount of material being used overall.



What does ViaCon do to decrease CO2 emission of its products and solutions?

“

We have partly answered this already, but first we need to focus on the proper design. We at ViaCon have developed design tools to design optimally, especially for bigger span structures. This is a big challenge. Usually we use for this numerical analysis. And we also continue something we have done for a long time – easy to test to be able to compare theoretical results with the easy to test results to calibrate building capacity calculations, to be able to design optimally and avoid oversized designs and maintain proper safety factors. And the second point – raw material. We use raw material that generates a lower carbon footprint in both design and later in execution. Also in the manufacturing stage, we are always aiming to use more green energy.

We focus on our own emissions and with our own suppliers and value chain to ensure that we are all supporting the customer offering that we have.

”

A

VIACON
ACADEMY

You spoke about infiltration tanks and how the number and size of holes determines the discharge rate. Does ViaCon provide a design service that determines the optimal design?

“

Yes, absolutely, ViaCon provides this design service. It is a daunting task with a lot of variables to consider. We do not leave our customers alone but instead work closely with them to find the most optimal solution for their situation, We fully customize our products, and look at things like site specifications, purpose of water collection, and the environmental situation. In fact we recently worked with a golf course operator that wanted to use rain water in order to keep his greens green. By developing a solution together, we ultimately reduced his annual costs by €30,000 and this could only happen through close collaboration.

”

A

VIACON
ACADEMY

Is there a limitation to the size of the water tanks?

“

No, there is no real limitation to how big a tank can be. If there is a large enough footprint to work with, we can build tanks in segments and send them to the work site and assemble into a whole structure. We can build the system as large as needed. However we have limitations in the diameter size but not in the cubic meter size.

”

A

We've got two main tools in the UK to measure embodied carbon for construction structures, which give us the embodied carbon per material plus "some" degree of metrics for maintenance. Steel has pretty high embodied carbon compared to concrete. We agree steel is more easily recyclable, but how can we measure this benefit?

“

There is quite a complex methodology as to how to measure the benefit coming from recycling. We have invented a calculator to measure the comparison between soil steel bridges versus concrete bridges, with stages starting from raw material, manufacturing and installation. The next step in our vision is to include maintenance and recycling at end of life. For now I can say that of course steel per kilo generates more CO₂ than concrete, but in a soil steel bridge solution, we use more than ten pounds less material compared with what is needed with the structure of concrete. So this is the benefit from the usage of the mass. Later we can imagine that at the end of life, when we need to replace the bridge, we can completely reuse the steel again to build another bridge from the same steel.

Of course we have to work with independent research institutes to set up how measurement models should work and be designed, so we look forward to defining the calculators to serve customers in the best way.

”

A

As we already produce attenuation tanks, are there any plans to produce sewage treatment tanks in the future so we can offer a larger solution?

“

Yes, we custom-make our tanks, and if there is a need in the market, we will try our best to address it. Rainwater harvesting is trending, is up and coming and will become more important in the future, especially to protect our environment. Please contact your local sales representative if you see any needs in this space in your market.

”

A

You brought up the Paris Agreement,

1. What is ViaCon doing regarding the carbon footprint resulting from the use of steel?

2. What does ViaCon do for the headquarters in each country, to be more eco-friendly?

“

Big questions, but I can refer to our holistic ESG program here. We focus on the whole supply chain, and we realize that there are a lot of emissions related to the raw material as such. We spend a lot of time working with our suppliers to resolve this. We see that there are a lot of products in the market focusing on green steel. When it comes to HQ in each country, we do a lot – some things are too small to be mentioned, such as LED lights and converting car fleets, adding electric forklifts and solar panels for factories and so on.

The list is long. But we cannot do too much here. We have a huge responsibility to our customers and stakeholders but also to ourselves and our children.

”

VIACON
ACADEMY