



INAMESA Stainless Steel CNC Bridge Slot Water Well Screen

Member company
Categories

Acerinox
significant global market potential;
strong environmental improvement
potential; GHG emissions reduction;
preservation of scarce resources;
reduction in routine maintenance
costs; life cycle costs lowest
compared to competing materials

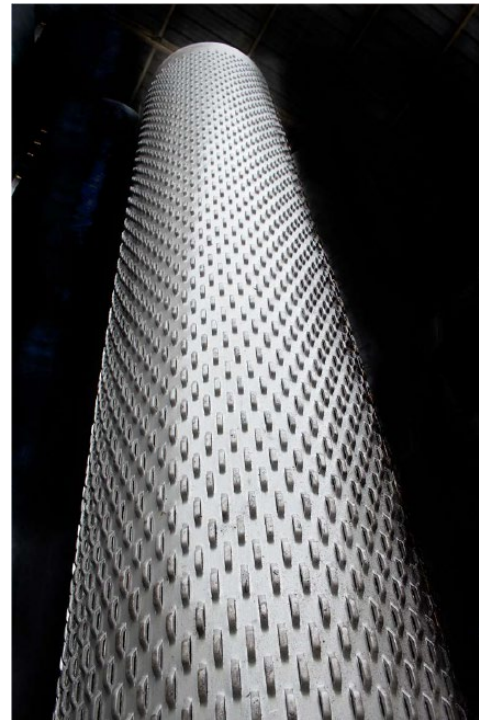
The Challenge

Water worldwide is increasingly becoming a more scarce resource. Large quantities of water used for human, industrial and agricultural consumption come from wells, which need screens to pre-filter it. The Gold Industry standard for these screens is the Stainless Steel based Continuous Slot type. For most developing countries however, this type of screen is cost prohibitive and for this reason, two reduced price alternatives have emerged, the louver and the bridge type, both of which rely on standard steel as well as copper based alloys which have been proven to be harmful to the environment and not as corrosion resistant as the Continuous Slot one. Additionally, many of these cheaper solutions are done using a semi manual process, which cannot guarantee strength and water flow requirements.

INAMESA has spent years improving the bridge type design using CNC (Computer Based Control) tools to ensure a consistent set of characteristics for each screen that is manufactured. Based on several studies testing water flow and structural resistance among other parameters, and backed by renowned industry certifying

agencies as well as a patent backing the uniqueness of such design, came up with an innovative improvement that makes this inexpensive option and excellent alternative to the Continuous Slot Screen.

In addition to the screen itself, a stainless steel industrial bristle brush based cleaning mechanism has also been developed to help with the cleaning as part of the standard maintenance needed in order to increase the life expectancy of the product.



Pictures courtesy of INAMESA



Why?

Significant cost reduction when compared to the alternatives, increase in sales and revenues, less harmful for the environment, better life cycle management and maintenance, less pollution as most competing products have to be imported which greatly increased the CO₂ emissions from transportation thus reducing our overall carbon footprint. It also helps develop the local economy.

Needed Action

We started from a proven design and based on experience and technical knowledge began tweaking the main parameters such as thickness of the screen, slot height, width, etc. until finally arriving to the optimal design that had to also take into account the manufacturability of the product.

After this we undertook several tests with local renowned institutions to verify our work as well as obtaining certifications from leading international inspection, verification and testing organizations and obtained a patent to back our findings.

Since the screens are manufactured using CNC equipment, we can guarantee that the engineering design tolerance will ensure that the performance will be as specified, and therefore, allow us to certify such products.

Action Review

Specific; Need a design that could compete in terms of durability, strength, water flow.

Measurable; Corrosion resistance, flow and strength that rivals the best in the industry

Achievable; The product has been proven in the field by several of our customers



Picture courtesy of INAMESA

Realistic; There was already a much more expensive Industry Gold Standard to which to compare

Time-bound; The project was paced to achieve milestones in terms of increasing depths of wells. We are currently at the 200-meter depth mark and plan to be at the 300 plus mark before the end of the year.



Horizontal Expansion Capability

Scale up in order to be able to get to greater depths of wells and develop new applications around it such as the stainless steel brushes for maintenance. One option for example would be accessories for better handling and placement of the screens at the well sites.

Outcome

Predictability of outcome when compared to low-end solutions. Based on our studies and design, we can certify our product for a specific well depth, water flow, expected life, and other important parameters.

Significant price reduction when compared to high-end solutions.

Increase in sales, better inventory level management, as there is less reliance on imported goods.