

10 MICRON WEDGE WIRE

Florian Van Assche¹

¹TRISLOT USA, INC.

Trislot is a manufacturer of wedge wire screens, filter elements and complete internals. The company was founded in 1984. The headquarters is located in Waregem, Belgium but we have a full scale manufacturing location in Shanghai, China as well. Recently, in March 2018 we opened up a small manufacturing shop in Ramsey NJ, which is now fully operational. All locations combined, we have a total of 130 employees. The US is an important target market. It is our intention to grow fast, and expand our manufacturing capabilities over the next few years. Trislot is active in many different industries such as: water filtration, waste water treatment, oil filtration, oil refining, petrochemical, chemical, pharmaceutical, beer filtration, corn wet milling (starch), ... Wedge wire is a stainless steel filter media consisting out of V-shaped profile wires which are resistance welded to support wires. It can be constructed in many different shapes and forms: cylindrical with the V-shaped surface wire wrapped as a spiral around the support wires, creating radial slots which are called "slottubes". Same configuration is also possible with axial slots, or flat screens and even conical shaped screens. The flow is always from the smooth surface of the triangle to the "pointy" side. The triangular shaped design allows for an easy pass-through non clogging design, with high open area. Also the robustness of wedge wire is much higher than e.g. a conventional mesh screen. The distance between the V-shaped surface wires determines the filtration rate, or as we call it the "slot opening". Conventional wedge wire screens are limited to 25 micron slot opening. Accurately manufacturing anything smaller than 25 micron is next to impossible considering the fuse welded manufacturing method. Trislot has invented and patented a new manufacturing method, which allows us to manufacture screens with slot openings as small as 10 micron with high accuracy. We achieve this by applying a torque/torsion on a wedge wire slottube which equally and evenly narrows the "gap" between the surface wires. With a fast growing demand for finer filtration media, we believe that our new fine filter design can and will be a very good, durable, and more robust alternative for bag, mesh, cartridge media which were the only options up until now.