

Anton's Sand Control Techniques and Services

Various Types of Sand Control Screens

Sand control screens are important tools to eliminate sand production for oil and gas wells. They possess features such as easy to process and low cost, therefore they are widely used for production of unconsolidated sandstone reservoirs. Anton is capable to provide a series of sand control screen products as shown below:

Precise Punched Slot Screen (PPS™)

PPS is manufactured using Anton's patented side punching technique. By applying pressure and form two side flow ports (90° apertures) for each slot, the flowing resistance is drastically reduced and allow sand control to become more effective. It is suitable for eliminating various levels of sand production for unconsolidated sandstone formations, thermal recovery of heavy oil, and gas storage wells.

Composite Screens (PMC™)

The composite screen is comprised of an outer shroud that is manufactured using Anton's patented side punching technique, and an inner multilayer filtering structure. The outer shroud and the inner multilayer filtering structure are welded as a whole using an integral assembly process. The composite screen keeps the feature of PPS, and it also has reliable sand control capability, excellent mechanical strength and strong resistance to damage. It is suitable for eliminating various levels of sand production for unconsolidated sandstone formations, thermal recovery of heavy oil, and gas storage wells.

Slotted Liners

The slotted liner is manufactured by performing laser cutting or mechanical cutting directly on API tubing to create slots. There are two types of slots, which are straight slot and keystone slot. There are three distribution types of slots: parallel, crisscross, and spiral. The outer diameter of the tubing is small and makes it easy to be pulled into downhole.

Wire Wrapped Screens

The screen consists of a perforated base pipe, wire wrapped outer jacket, and the support ring. The jacket is subsequently placed over and welded at each end to the base pipe to provide structural support. The shroud is made of stainless steel wire warp and weft crossover single point of all-welded, improving slots strength. The wire wrapped screen has high slot density and large open flow area.

Perforated Pipes (Base Pipe)

The perforated pipe is processed by drilling holes on casings or oil pipes using specific sized drill bit. It is mainly used for formations that do not require sand control and providing support for the well. The perforated pipe is easy to fabricate and cost effective. The holes are helically perforated on the pipe to maintain the mechanical strength of the pipe.

Prepacked Screens

The prepacked screen has great sand control capability and strong resistance to corrosion. It consists a three layer filtering structure. The interlayers are prepacked with resins that are solidified by high temperature sintering and thus possess high permeability. The double layered outer shroud has stable filtering capability. Prepacked resin is well sorted and its sand control capability is precise and reliable. It is also cost effective.

Facs Rite

The star shaped screen consists of a base pipe that embedded with star shaped sand control units. The sand control units normally adopts either the filtering screen or the wire wrapped structure to create slots that have sand control function. Each slot can be a standalone sand control unit, and can be set to different precisions based on the formation characteristics. The screen's outer diameter is small and can be easily pulled into the hole.



(Image sequence: PPS, PMC, PPK, WWS, Slots Screen, Perforated Pipe, Mosaic Screen)