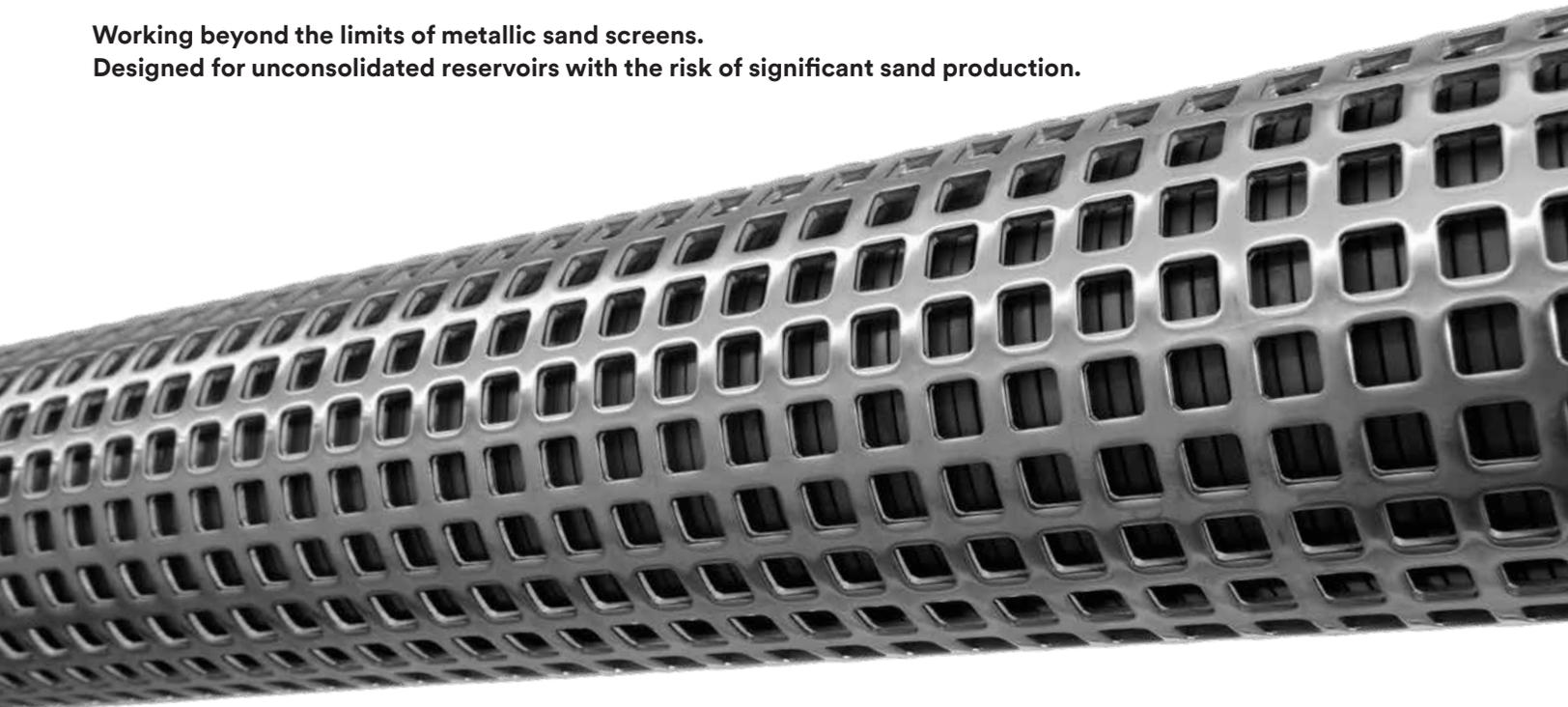


3M™ Ceramic Sand Screens

Working beyond the limits of metallic sand screens.
Designed for unconsolidated reservoirs with the risk of significant sand production.



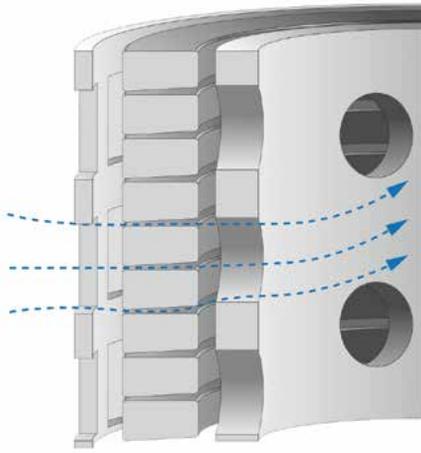
The proven 3M™ Ceramic Sand Screen offers a breakthrough sand and proppant flowback control technology for demanding conditions where erosion is a major challenge. Conventional sand screen systems generally consist of metals that are not erosion resistant. Since erosion resistance is determined by material properties, 3M ceramic sand screens use ceramic materials. These materials are approximately 10 times harder than metallic materials and show minimal abrasion under reservoir conditions.

The screens can be deployed for regular sand-control in new wells or retrofitted to existing wells that suffer from sand problems as a result of reduced reservoir pressure. They can be set in most standard well completions and offer the opportunity to produce reserves that would otherwise have been lost.

Solution

The technology of 3M™ Ceramic Sand Control Screen Systems improves the known wire wrap screen principle by taking advantage of the unique properties of technical ceramics.

- Flexible stack of ceramic rings
- Specially designed with v-shape or keystone gaps
- Slot sizing, screen length and screen diameter defined for specific application
- The 3M sand screen can also be used to protect valves, SSDs (sliding sleeve doors) and ICDs (inflow control devices)



Cross section of ceramic sand screen

3M has more than 85 years of experience in ceramic materials. Our design and engineering competence facilitates the selection of optimized ceramic systems for challenging applications.

The design of 3M™ Ceramic Sand Screens is well suited to ceramics and provides flexibility to the stack of ceramic rings. 3M ceramic sand screens can be deployed through high deviations to set depth in cased or open hole applications.

Benefits

- Increased well life-cycle longevity helps lower capital expenditures
- Increased production envelope enables higher production rates, especially in fraced wells
- Unlocking wells where sand failure has occurred
- Alternative to gravel packing, with simplified logistic and completion design
- For horizontal, deviated and vertical wells
- The 3M ceramic sand screen design can be conveyed through existing production tubing or optimized for well work over or new well applications
- 3M ceramic sand screen can be suspended from an existing nipple profile, or be deployed with an E-packer, mechanical or swell packer

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The management system has been certified according to DIN EN ISO 9001, DIN EN ISO 50001, DIN EN ISO 14001.

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