LUFKIN
DON·NAN

Solids Control Solutions

Stainless-steel wool screen

APPLICATIONS

- Reservoirs with poorly defined grain size distributions or varied grain sizes
- Openhole horizontal wells needing a stand-alone screen
- High-viscosity oil-producing wells
- Thermal and steam-assisted gravity drainage wells
- Water producers and injectors requiring sand control
- Remedial sand control recompletions inside failed completions
- Wells requiring an alternative to gravel packing
- Wells needing a support screen for gravel-packing or frac-packing
- High-flow-rate ESP wells
- Exploration wells where particle sizes are unknown

BENEFITS

- High flow capacity and plugging resistance optimizes the balance of sand control and well productivity
- High erosion and corrosion resistance result in fewer workovers and longer well life.
- High mechanical strength and flexibility limit damage from load-force stresses.
- Screen reduces completion costs compared with gravel packs and many conventional screen alternatives.

FEATURES

- 40% open flow area
- 3,000 Darcy initial permeability
- High retained permeability and plugging resistance
- Increased erosion resistance
- Enhanced structural strength and stability
- Compatibility with other completion products

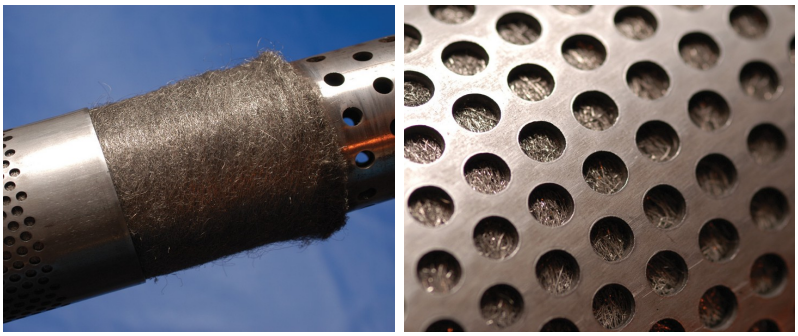
The stainless-steel wool screen[1] is a patented 3D filter formed by wrapping layers of compressed stainless-steel wool onto perforated basepipe, then covering it with a perforated outer shroud. The screen's 40% open flow area and greater than 3,000 Darcy air permeability result in almost no additional resistance to flow in the near-wellbore area or across the screen.

Open flow area, angular pores, and 3D filtration

The screens provide higher initial and retained permeability and superior well productivity. The high open flow area, combined with a wide range of angular pores and 3D filtration, minimizes flow restriction and the risk of erosion. The screens are insensitive to variations in formation particle size, reducing the costs of sample collection, analysis, and lab testing. They also decrease the risks associated with running a screen into a well where the particle size distribution is not known or varies from heel to toe.

3D pore structure

The screen's high flow capacity is a function of its unique 3D pore structure. The angular pores range in size from 15 to 600 um and are difficult to plug because they retain harmful sand while allowing fines smaller than 30 microns to pass through. These fines would otherwise get trapped at the sandface-screen interface and cause plugging over time.



Stainless-steel wool screen.

[1]MeshRite™, a mark of Schlumberger Technology Corporation

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Stainless-Steel Screen Specifications

Basepipe						Jacket		Perforated Basepipe		
Basepipe Size, in [mm]	Basepipe Weight, lbm/ft [kg/m]	Min. ID, in [mm]	Nominal Thread Type	Coupling OD, in [mm]	Max. OD, In [mm]	Max. Shroud OD, in [mm]	Holes per Foot	Holes per Foot	Perf. Diameter, in [mm]	Open Flow Area, %
2.375 [60.30]	4.6 [6.8]	1.995 [50.70]	NUE	2.88 [73.0]	3.01 [76.4]	3.01 [76.4]	783	108	0.375 [9.5]	13.3
2.875 [73.00]	6.4 [9.5]	2.441 [62.00]	NUE	3.50 [88.9]	3.51 [89.1]	3.51 [89.1]	911	132	0.375 [9.5]	13.5
3.500 [88.90]	9.2 [13.7]	2.992 [76.00]	NUE	4.25 [108.0]	4.25 [108.0]	4.06 [103.1]	1,071	84	0.5 [12.7]	12.5
4.000 [101.6]	11.0 [16.4]	3.459 [87.90]	NUE	5.20 [132.1]	5.20 [132.1]	4.56 [115.8]	1,199	96	0.5 [12.7]	12.5
4.500 [114.3]	11.6 [17.3]	4.000 [101.6]	LTC or BTC	5.00 [127.00]	5.06 [128.5]	5.06 [128.5]	1,327	108	0.5 [12.7]	12.5
	12.6 [18.8]	3.958 [100.5]	LTC or BTC	5.00 [127.00]	5.06 [128.5]	5.06 [128.5]	1,327	108	0.5 [12.7]	12.5
5.000 [127.0]	15.0 [22.3]	4.408 [112.0]	LTC or BTC	5.56 [141.3]	5.56 [141.3]	5.56 [141.3]	1,455	120	0.5 [12.7]	12.5
5.500 [139.7]	17.0 [25.3]	4.892 [124.3]	LTC or BTC	6.05 [153.7]	6.06 [153.9]	6.06 [153.9]	1,583	132	0.5 [12.7]	12.5
6.625 [168.3]	24.0 [35.7]	5.921 [150.4]	LTC or BTC	7.39 [187.7]	7.39 [187.7]	7.32 [185.9]	1,872	156	0.5 [12.7]	12.3
7.000 [177.8]	26.0 [38.7]	6.276 [159.4]	LTC or BTC	7.66 [194.5]	7.66 [194.5]	7.66 [194.5]	1,968	168	0.5 [12.7]	12.5
7.625 [193.7]	29.7 [44.2]	6.875 [174.6]	LTC or BTC	8.50 [215.9]	8.50 [215.9]	8.34 [211.7]	2,128	180	0.5 [12.7]	12.3
8.625 [219.1]	32.0 [47.6]	7.921 [201.2]	LTC or BTC	9.63 [244.5]	9.63 [244.5]	9.34 [237.1]	2,640	204	0.5 [12.7]	12.3
9.625 [244.5]	40.0 [59.5]	8.835 [224.4]	LTC or BTC	10.63 [269.9]	10.63 [269.9]	10.34 [262.5]	2,640	228	0.5 [12.7]	12.3

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Made to Perform

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[1]MeshRite™, a mark of Schlumberger Technology Corporation