

SOLIDS-REMOVAL PERFORMANCE TESTING

Test Model: LAKOS Separator (2-inch inlet/outlet); Recommended Flow Range: 65-108 U.S. gpm (14.5-24.5 m³/hr)

Date of Testing: August, 1996

Test Agency: C.I.T. Research Center, California State University, Fresno. A recognized independent testing facility, utilizing accurate instrumentation and standardized test procedures.

Procedures: The sand sample for each run of the testing was 50 grams (dry), measured to be within the 50-200 mesh (300-74 micron) range; predominantly 70-140 mesh (200-100 microns). Specific gravity: 2.6.

Test equipment was assembled as illustrated below. The sand was introduced, after flow characteristics had stabilized, at a rate of 36 ppm or less.

Inlet pressure to the separator was set at 55 psi (3.8 bar). Several flow rates were tested (note details in the results below). Duration of each test was sufficient to introduce and pass all sample sand through the system.

Solids collected in the separator and in the downstream ring filter were separately captured and weighed (dry, for accurate comparison to initial sample).

The entire system was flushed clean after each test run to ensure reliable and independent results each time.

Results: As shown below, the sand removal efficiency ranged from 98.6 to 99.6%, statistically within the manufacturer's published statements.

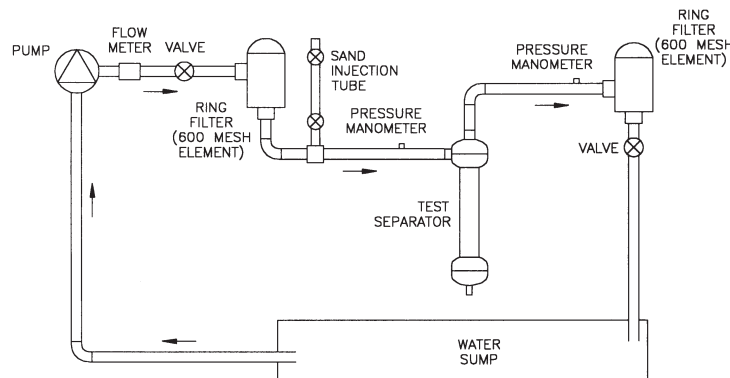
Test Run	Flow Rate (U.S. gpm)	Separator Pressure Loss	Final Sample* (grams)	Test Discharge** (grams)	Separator Efficiency (gm) (%)
1	72	5.5	45.66	0.60	45.06 98.7
2	90	8.7	48.72	0.66	48.06 98.6
3	110	14.0	48.24	0.59	47.65 98.8
4	130	20.0***	49.81	0.20	49.61 99.6

NOTE: See reverse for test results of high flow rate LAKOS Separator.

* Testing and recovery techniques captured an average of 96.22% of the initial sample, well within testing standards. Unrecoverable particles may be lost in the piping or untraceable in the various testing components.

** Solids recovered on the ring filter at the downstream discharge from the test separator.

*** This test run exceeds the recommended flow range of this model, thus resulting in a relatively high pressure loss. Test was performed in order to match the flow testing of a selected competitor (consult LAKOS for specific details).



SOLIDS-REMOVAL PERFORMANCE TESTING

Test Model: LAKOS Separator (6-inch inlet/outlet); Recommended Flow Range: 450-825 U.S. gpm (102-187 m³/hr)

Date of Testing: August, 2000

Test Agency: C.I.T. Research Center, California State University, Fresno. A recognized independent testing facility, utilizing accurate instrumentation and standardized test procedures.

Procedures: The sand sample for each run of the testing was 150 grams (dry), measured to be within the 50-200 mesh (300-74 micron) range; predominantly 70-140 mesh (200-100 microns). Specific gravity: 2.6.

Test equipment was assembled as illustrated below. The sand was introduced, after flow characteristics had stabilized, at a rate of 36 ppm or less.

Inlet pressure to the separator was set at 55 psi (3.8 bar). Several flow rates were tested (note details in the results below). Duration of each test was sufficient to introduce and pass all sample sand through the system.

Solids collected in the separator and in the downstream ring filter were separately captured and weighed (dry, for accurate comparison to initial sample).

The entire system was flushed clean after each test run to ensure reliable and independent results each time.

Results: As shown below, the sand removal efficiency ranged from 95.1 to 97.6%, statistically within the manufacturer's published statements.

Test Run	Flow Rate (U.S. gpm)	Separator Pressure Loss	Final Sample* (grams)	Test Discharge** (grams)	Separator Efficiency*** (gm) (%)
1	500	4.1	145.6	7.1	138.5 95.1
2	600	6.1	150.9	5.9	145.1 96.1
3	705	8.6	147.1	4.9	142.2 96.6
4	825	12.0	145.0	3.5	141.5 97.6

* Testing and recovery techniques captured an average of 96.22% of the initial sample, well within testing standards. Unrecoverable particles may be lost in the piping or untraceable in the various testing components.

** Solids recovered on the ring filter at the downstream discharge from the test separator.

*** According to test protocol, these results are statistically within reasonable range of the manufacturer's claim of 98%.

NOTE: See reverse for test results of low flow rate LAKOS Separator.

