



PUMP TEST REPORT (12x14-22 BLENDER PUMP)

(Test Date 6/29/16)



Purpose

The purpose of this test was to subject the 12x14x22 blender pump and new seal technology to several dry-running and thermal shock conditions. With a successful test under these extreme conditions, CURFLO would be able to offer a reliable seal solution to its customers who have issues with intermittent dry-running on mechanical seals and erosion/corrosion.

First Test: Dry-Running the Seal/Pump

The first test was to dry run the seal/pump. The suction line was closed and discharge line slightly opened to relieve any pressure build up. Data was recorded every 5 minutes until the test reached the 15 minute interval. The suction valve was then opened to flood the seal with cold water. There were no seal leaks or failures during this testing.

Test Data:

	<u>0 Min.</u>	<u>5Min.</u>	<u>10Min.</u>	<u>15Min.</u>
Mechanical Seal Temp.	83°F	98°F	134°F	165°F
Temp. Towards Shaft Side	88°F	110°F	181°F	259°F
Bearing Temp. (Inboard)	88°F	97°F	97°F	109°F
(Outboard)	88°F	93°F	93°F	103°F
Outside Temp.	89°F	89°F	89°F	89°F



Bearing Temperature Reading



Seal Temperature (Towards Shaft End)

(1)

Second Test: Running Pump w/ Water

The second test was to run the pump with water. Both the suction and discharge lines were open during this test. Data was recorded every 5 minutes until the test reached the 15 minute interval. There were no seal leaks or failures during this testing.

Test Data:

	<u>5 Min.</u>	<u>10Min.</u>	<u>15Min.</u>
Mechanical Seal Temp.	99°F	100°F	99°F
Temp towards Shaft Side	227°F	230°F	230°F
Bearing Temp. (Inboard)	97°F	97°F	107°F
(Outboard)	93°F	93°F	104°F
Outside Temp.	90°F	90°F	90°F



(2) 8" Suction Lines



(1) 8" Discharge Line

(2)

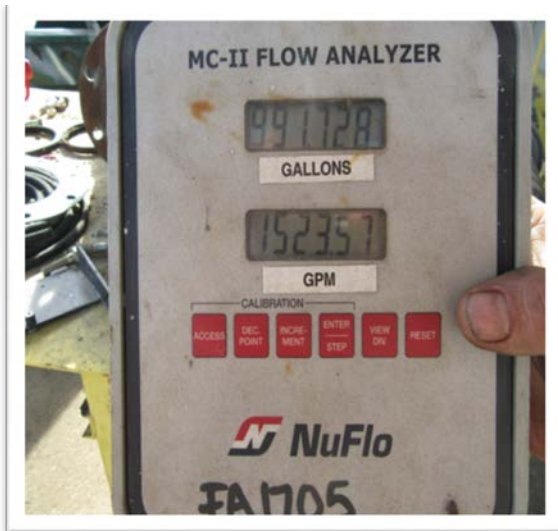


Third Test: Water Cycle (On/Off)

The third test was to run the pump without water and at each 5 minute interval open the valves and flood the seal. Data was recorded and the valves were turned off. This continued until the test reached the 15 minute interval. There were no seal leaks or failures during this testing.

Test Data:

	<u>5 Min.</u>	<u>10Min.</u>	<u>15Min.</u>
Mechanical Seal Temp.	125°F	132°F	145°F
Temp towards Shaft Side	225°F	270°F	312°F
Bearing Temp. (Inboard)	97°F	102°F	119°F
(Outboard)	93°F	100°F	114°F
Outside Temp.	90°F	90°F	90°F



Flow reading @ 900rpm is 1,523.57gpm.

Conclusion

The 12x14x22 blender pump has been successfully tested with the new CURFLO seal technology. The 12x14x22 blender pump and the new seal technology were subjected to several dry-running and thermal shock scenarios with no leaks or failures. The initial test was a 15 minute dry-run and then a 15 minute flooded run. The test concluded with six (6), 5 minute intermittent dry-runs, with a test total of 60 minutes.