

Method Background

Leak-sealing applications prove to be among the most challenging concrete repair projects in the industry. Extreme hydrostatic conditions often times create reoccurring leaks; even after seemingly successful chemical injection. Vague success indicators can cause costly contractor remobilization costs. Warranty work can also create disruptive and unanticipated client facility down-time.

Because of these considerations, SealBoss® Corporation has been developing a patent pending quality control system for chemical grouting that will provide the contractor, client, and engineering/consultant teams a quantified reporting system to determine chemical grouting effectiveness in real time, and before demobilization.

Through the implementation of the following specification, the **SealBoss® DataPort System®** aims to provide the chemical grouting industry a QC system that will improve chemical grouting effectiveness, and save costs for both contractors and clients. Please ask a knowledgeable SealBoss® representative for more information on the SealBoss® DataPort System®.

DataPort System™ Hardware/Software

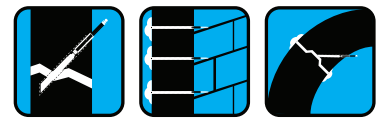
To make implementation easier, SealBoss® provides the required hardware and computer software to make the SealBoss® DataPort System® field ready to obtain the data and office ready to produce the reports.

With the purchase of a complete SealBoss® DataPort System®, contractors and/or design professionals will receive all necessary hardware items including gauge, mechanical packer couplings, hoses, water pump, and fittings.

In addition to the required hardware needed in the field, the complete system includes a flash drive with all computer programs needed for report creation and printing. Collect data in the field, input this data into the DataPort Software, and review and print results as needed.

Specification:

- 1) DataPorts to be ½"(13mm) diameter, and drilled at 45-degree angles to bisect the crack/joint at ½ thickness of substrate.
- 2) DataPorts to be spaced at 5' intervals, or in areas of most concern for subsequent leakage such as:
 - a. Terminal Ends
 - b. Areas with no grout visibly observed
- 3) DataPorts to be injected with water pump of 1.3GPM / 100psi max for 1 minute with water flow and pressures closely charted per SealBoss® DataPort System® Recording Software. Flow and pressure to be recorded at 60 seconds at each port.
- 4) Pre-chemical injection worksheet to be examined for grout selection purposes.
- 5) Prior to chemical injection, DataPort to be removed, and drill hole plugged with ½"x 10" (13mm) mechanical packer to provide clean drill hole for post-chemical injection reports.
- 6) Chemical grouting to be performed per manufacturer recommendations.
- 7) Post-chemical injection DataPort Report to be performed per the same guidelines outlined in steps 2 and 3 above.
- 8) Post-injection DataPort Quality Control Worksheet to be submitted to client and specifying engineers/consultants and is to be examined for identification of ineffective grout zones.

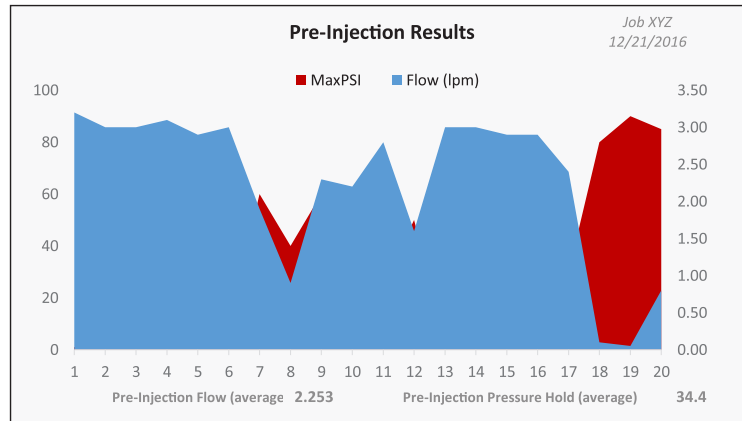


SealBoss® DataPort System® Recording Software v2.0

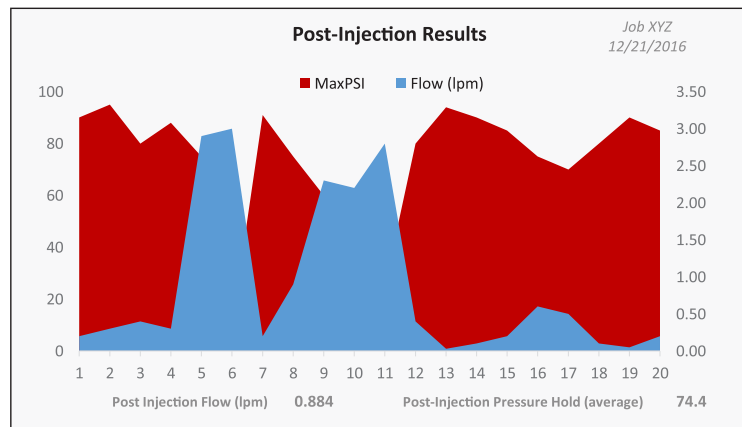
Patent-Pending Recording

Job Name:	Job XYZ
Date	12/21/2016
Total Lineal Feet:	100

Stage	Flow (lpm)	MaxPSI	Duration (sec)
1	3.20	1	60
2	3.00	4	60
3	3.00	5	60
4	3.10	8	60
5	2.90	75	60
6	3.00	10	60
7	1.90	60	60
8	0.90	40	60
9	2.30	60	60
10	2.20	50	60
11	2.80	25	60
12	1.60	50	60
13	3.00	4	60
14	3.00	3	60
15	2.90	4	60
16	2.90	4	60
17	2.40	30	60
18	0.10	80	60
19	0.05	90	60
20	0.80	85	60



Stage	Flow (lpm)	MaxPSI	Duration (sec)
1	0.20	90	60
2	0.30	95	60
3	0.40	80	60
4	0.30	88	60
5	2.90	75	60
6	3.00	10	60
7	0.20	91	60
8	0.90	75	60
9	2.30	60	60
10	2.20	50	60
11	2.80	25	60
12	0.40	80	60
13	0.03	94	60
14	0.10	90	60
15	0.20	85	60
16	0.60	75	60
17	0.50	70	60
18	0.10	80	60
19	0.05	90	60
20	0.20	85	60



Factor Decrease in Water Flow (avg.)	2.55
Factor Increase in Pressure Hold (avg.)	2.16



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