

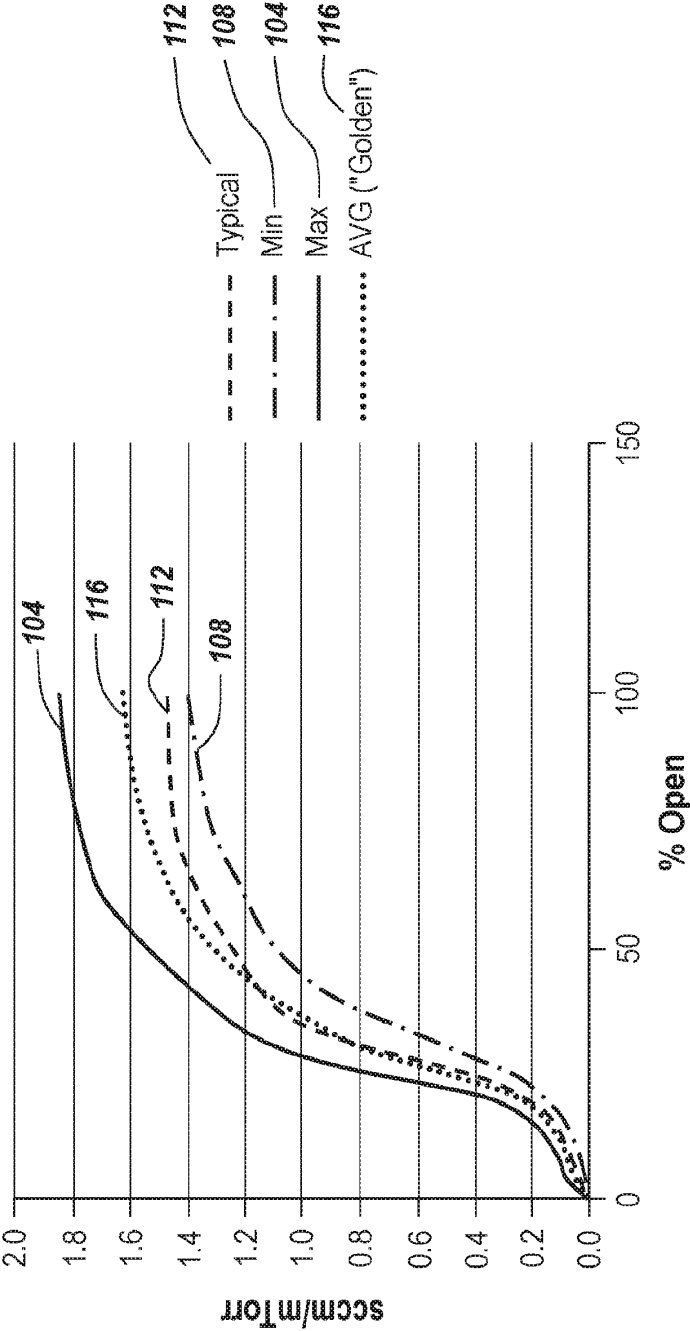
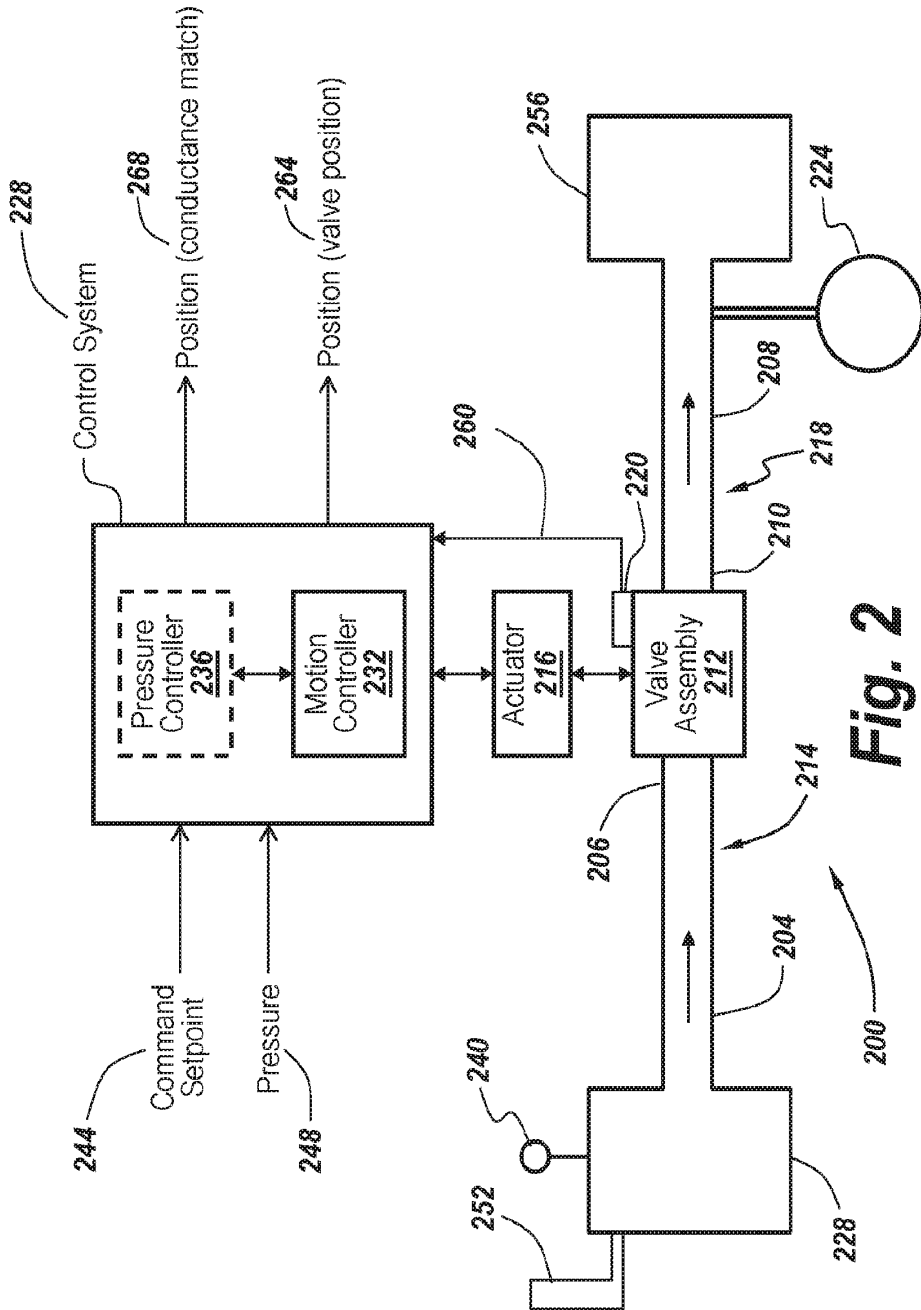


Fig. 1



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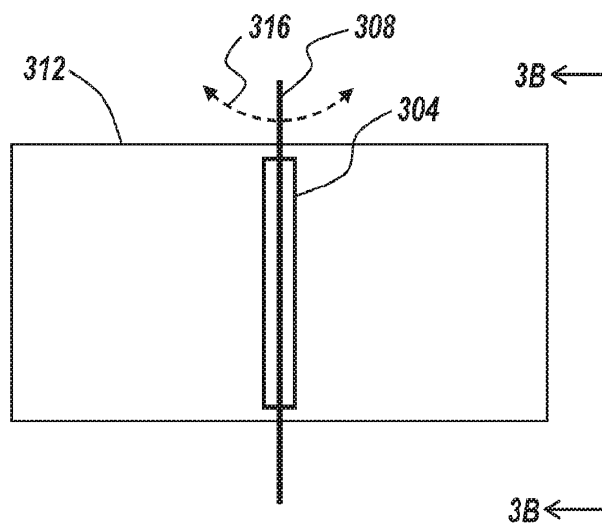


Fig. 3A

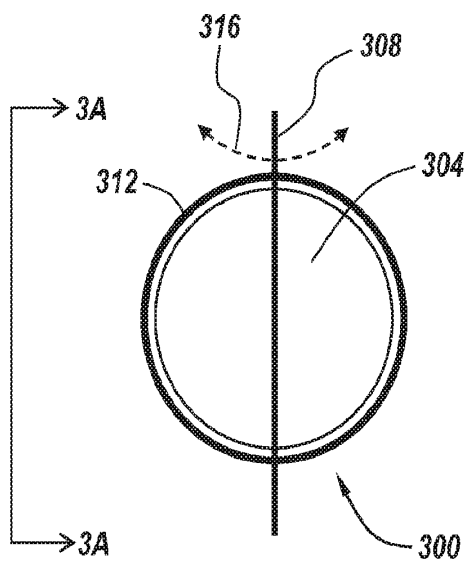


Fig. 3B

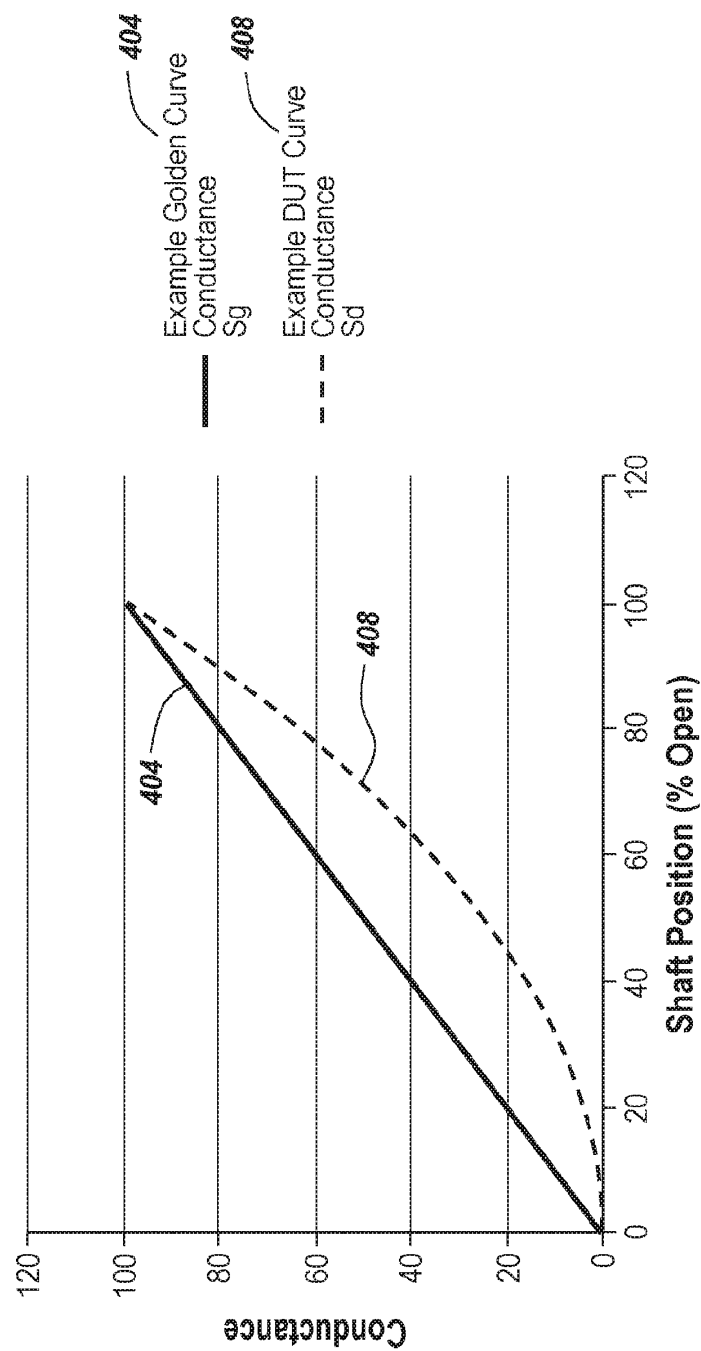


Fig. 4

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A	B	C	D	E
Actual Shaft Position (% OPEN)	Example Golden Curve Conductance: Sg	Example DUT Curve Conductance: Sd	POSd->Sg	Sd->POSg
0	0.02	0.02	0.00	0.00
1	1.02	0.03	10.00	0.01
2	2.02	0.06	14.14	0.04
3	3.02	0.11	17.32	0.09
4	4.02	0.18	20.00	0.16
5	5.02	0.27	22.36	0.25
6	6.02	0.38	24.49	0.36
7	7.02	0.51	26.46	0.49
8	8.02	0.66	28.28	0.64
9	9.02	0.83	30.00	0.81
10	10.02	1.02	31.62	1.00
11	11.02	1.23	33.17	1.21
12	12.02	1.46	34.64	1.44
13	13.02	1.71	36.06	1.69
14	14.02	1.98	37.42	1.96
15	15.02	2.27	38.73	2.25
16	16.02	2.58	40.00	2.56
17	17.02	2.91	41.23	2.89
18	18.02	3.26	42.43	3.24
19	19.02	3.63	43.59	3.61
20	20.02	4.02	44.72	4.00
21	21.02	4.43	45.83	4.41
22	22.02	4.86	46.90	4.84
23	23.02	5.31	47.96	5.29
24	24.02	5.78	48.99	5.76
25	25.02	6.27	50.00	6.25
26	26.02	6.78	50.99	6.76
27	27.02	7.31	51.96	7.29
28	28.02	7.86	52.92	7.84
29	29.02	8.43	53.85	8.41
30	30.02	9.02	54.77	9.00
31	31.02	9.63	55.68	9.61
32	32.02	10.26	56.57	10.24
33	33.02	10.91	57.45	10.89
34	34.02	11.58	58.31	11.56
35	35.02	12.27	59.16	12.25
...	...	...	...	...
...	...	...	...	...
95	95.02	90.27	97.47	90.25
96	96.02	92.18	97.98	92.16
97	97.32	94.11	98.49	94.09
98	98.02	96.06	98.99	96.04
99	99.02	98.03	99.50	98.01
100	100.02	100.02	100.00	100.00

500

504

508

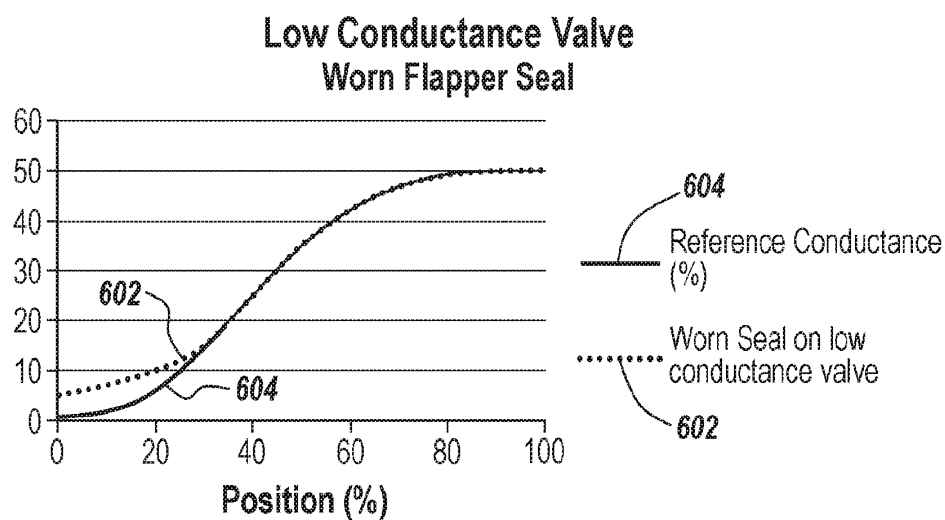
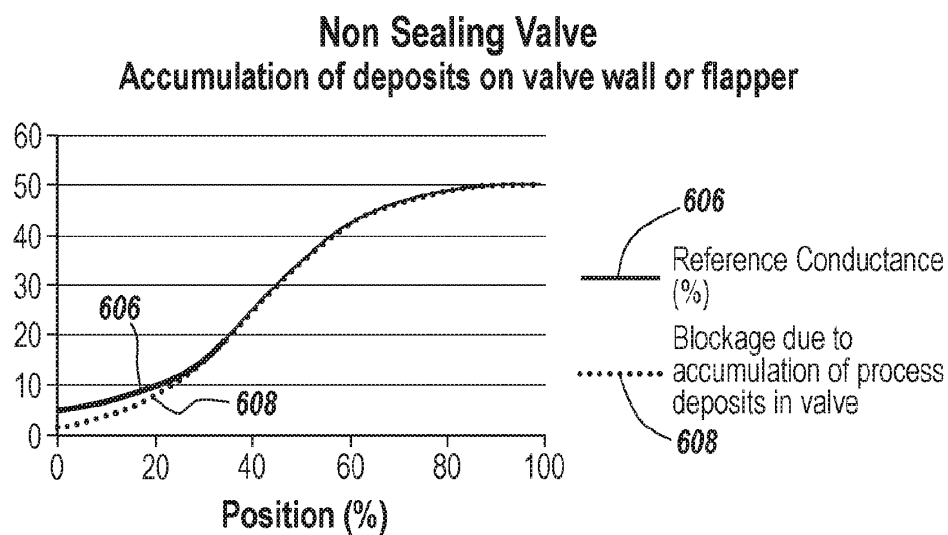
512

516

520

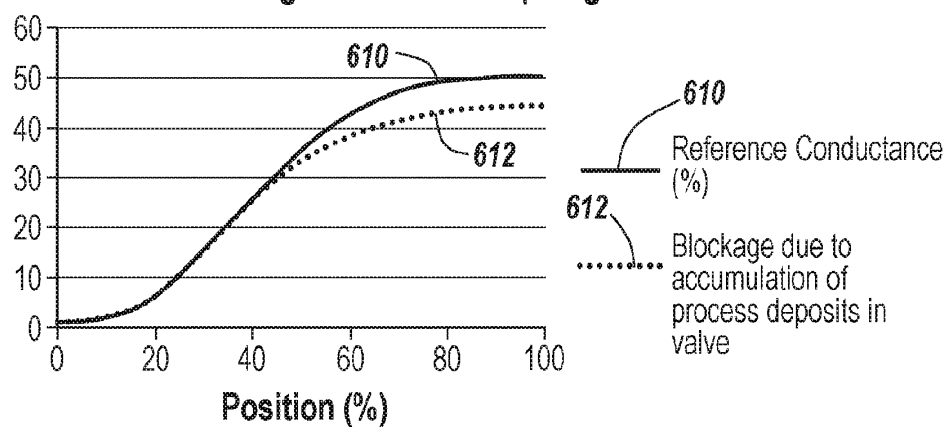
Fig. 5

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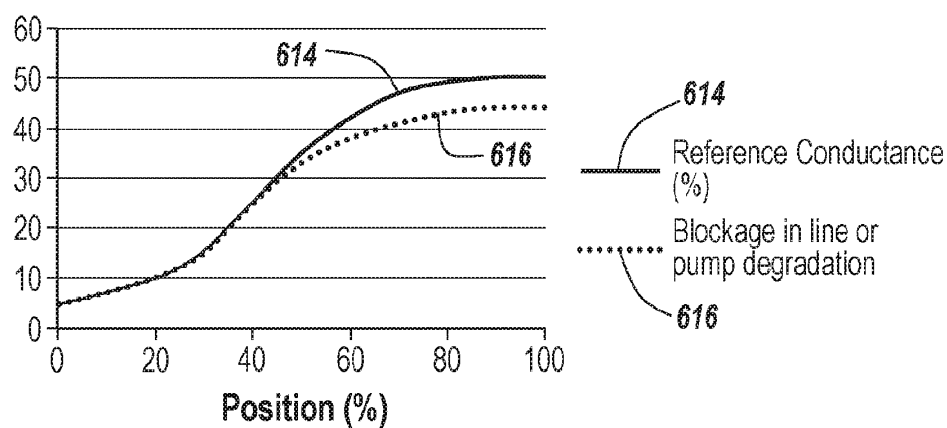
**Fig. 6****Fig. 7**

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Low Conductance Valve
Blockage in Line or Pump Degradation

**Fig. 8**

Non Sealing Valve
Blockage in line or pump degradation

**Fig. 9**