

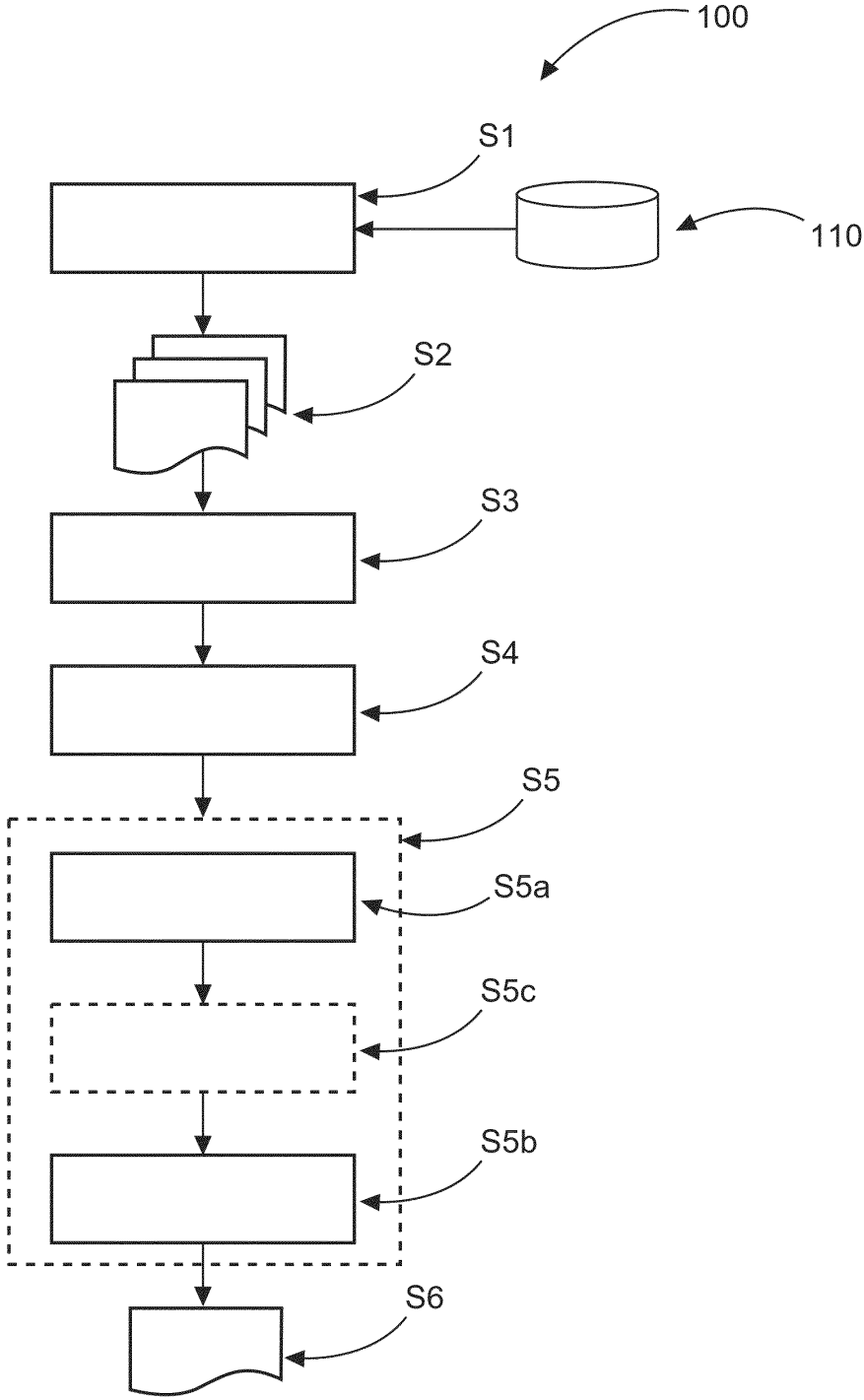
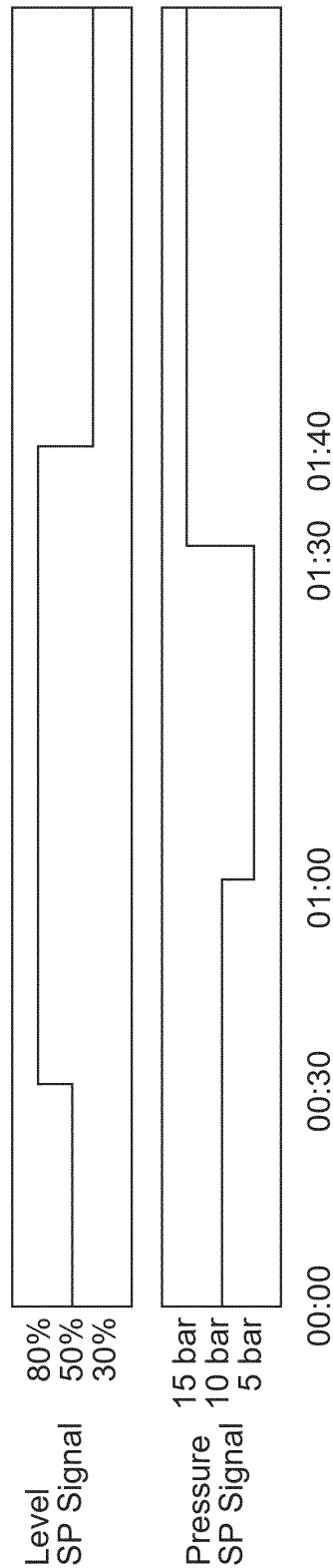


FIG. 1



a)

| Time             | Event/Action             |
|------------------|--------------------------|
| 2019-12-04 00:30 | Level SP 50% → 80%       |
| 2019-12-04 01:00 | Pressure SP 10bar → 5bar |
| 2019-12-04 01:30 | Pressure SP 5bar → 15bar |
| 2019-12-04 01:40 | Level SP 80% → 30%       |

b)

FIG. 2

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| Procedure Instance 1<br>Start = 2019-12-04 9:08:00<br>End = 2019-12-04 9:16:30 |                 |             | Procedure Instance 2<br>Start = 2019-17-04 13:15:32<br>End = 2019-17-04 13:24:12 |                 |             |
|--------------------------------------------------------------------------------|-----------------|-------------|----------------------------------------------------------------------------------|-----------------|-------------|
| Time                                                                           | Event           | Level Value | Time                                                                             | Event           | Level Value |
| 2019-12-04 9:08:00                                                             | Closing Valve A | 0%          | 2019-17-04 13:15:32                                                              | Closing Valve B | 0%          |
| 2019-12-04 9:08:02                                                             | Valve A = 0     | 0%          | 2019-17-04 13:15:32                                                              | Valve B = 0     | 0%          |
| 2019-12-04 9:08:15                                                             | Closing Valve B | 0%          | 2019-17-04 13:15:47                                                              | Closing Valve A | 0%          |
| 2019-12-04 9:08:17                                                             | Valve B = 0     | 0%          | 2019-17-04 13:15:49                                                              | Valve A = 0     | 0%          |
| 2019-12-04 9:08:30                                                             | Closing Valve C | 0%          | 2019-17-04 13:16:02                                                              | Open Valve C    | 0%          |
| 2019-12-04 9:08:31                                                             | Valve C = 1     | 0%          | 2019-17-04 13:16:01                                                              | Valve C = 1     | 0%          |
| 2019-12-04 9:09:01                                                             | Start pump D    | 0%          | 2019-17-04 13:16:12                                                              | Start pump D    | 0%          |
| 2019-12-04 9:09:02                                                             | Pump = 1        | 1%          | 2019-17-04 13:16:13                                                              | Pump = 1        | 1%          |
| 2019-12-04 9:09:30                                                             | Flow = 100      | 2%          | 2019-17-04 13:16:22                                                              | Flow = 100      | 2%          |
| 2019-12-04 9:15:21                                                             | Flow = 80       | 50%         | 2019-17-04 13:23:30                                                              | Flow = 80       | 50%         |
| 2019-12-04 9:15:37                                                             | Stop pump D     | 80%         | 2019-17-04 13:23:45                                                              | Flow = 20       | 80%         |
| 2019-12-04 9:15:42                                                             | Pump D = 0      | 80%         | 2019-17-04 13:24:03                                                              | Stop pump D     | 80%         |
| 2019-12-04 9:16:01                                                             | Closing Valve C | 80%         | 2019-17-04 13:24:05                                                              | Pump D = 0      | 80%         |
| 2019-12-04 9:16:02                                                             | Valve C = 0     | 80%         | 2019-17-04 13:24:11                                                              | Closing Valve C | 80%         |
|                                                                                |                 |             | 2019-17-04 13:24:12                                                              | Valve C = 0     | 80%         |

FIG. 3a

| Procedure Instance 1 |             |      |   | Procedure Instance 2 |             |      |   |
|----------------------|-------------|------|---|----------------------|-------------|------|---|
| Event                | Level Value | ID   | # | Event                | Level Value | ID   | # |
| Closing Valve B      | 0%          | CA   | 1 | Closing Valve B      | 0%          | CA   | 1 |
| Valve B = 0          | 0%          |      |   | Valve B = 0          | 0%          |      |   |
| Closing Valve A      | 0%          | CB   | 1 | Closing Valve A      | 0%          | CB   | 1 |
| Valve A = 0          | 0%          |      |   | Valve A = 0          | 0%          |      |   |
| Open Valve C         | 0%          | CC   | 1 | Open Valve C         | 0%          | OC   | 1 |
| Valve C = 1          | 0%          |      |   | Valve C = 1          | 0%          |      |   |
| Start pump D         | 0%          | StaD | 1 | Start pump D         | 0%          | StaD | 1 |
| Pump = 1             | 1%          |      |   | Pump = 1             | 1%          |      |   |
| Flow = 100           | 2%          | FU   | 1 | Flow = 100           | 2%          | FU   | 1 |
| Flow = 80            | 50%         | FD   | 1 | Flow = 80            | 50%         | FD   | 1 |
| Stop pump D          | 80%         | StoD | 1 | Flow = 20            | 69%         | FD   | 2 |
| Pump D = 0           | 80%         |      |   | Stop pump D          | 80%         | StoD | 1 |
| Closing Valve C      | 80%         | CC   | 1 | Pump D = 0           | 80%         |      |   |
| Valve C = 0          | 80%         |      |   | Closing Valve C      | 80%         | CC   | 1 |
|                      |             |      |   | Valve C = 0          | 80%         |      |   |

FIG. 3b

|      | CB1                  | CA1                  | OC1                  | StaD                 | Fu1                  | FD1                  | StoD                 | CC                   |
|------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| CB1  | <input type="text"/> | 0                    | 2                    | 2                    | 2                    | 2                    | 2                    | 2                    |
| CA1  | 0                    | <input type="text"/> | 2                    | 2                    | 2                    | 2                    | 2                    | 2                    |
| OC1  | 0                    | 0                    | <input type="text"/> | 2                    | 2                    | 2                    | 2                    | 2                    |
| StAD | 0                    | 0                    | 0                    | <input type="text"/> | 2                    | 2                    | 2                    | 2                    |
| FU1  | 0                    | 0                    | 0                    | 0                    | <input type="text"/> | 2                    | 2                    | 2                    |
| FD1  | 0                    | 0                    | 0                    | 0                    | 0                    | <input type="text"/> | 2                    | 2                    |
| StoD | 0                    | 0                    | 0                    | 0                    | 0                    | 0                    | <input type="text"/> | 2                    |
| CC   | 0                    | 0                    | 0                    | 0                    | 0                    | 0                    | 0                    | <input type="text"/> |



FIG. 4a

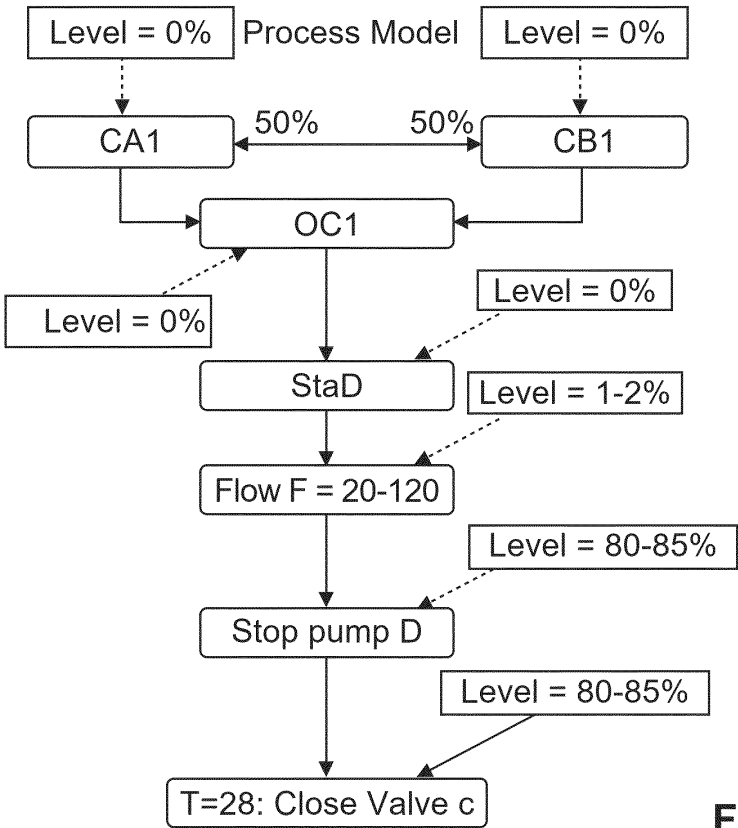


FIG. 4b

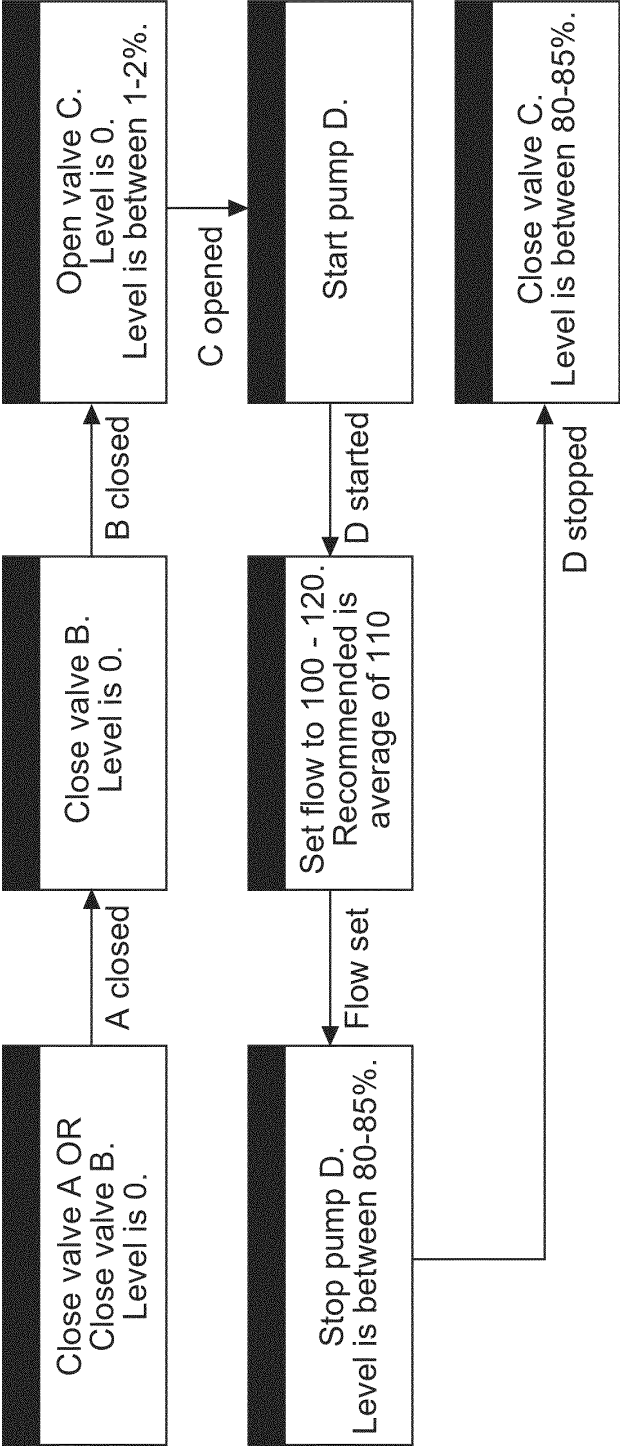


FIG. 5