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| Task number | Task | Time Requirement | Read memory | Write memory |
| 1: if Well-bore physical behavior is in steady state | Evaluate pressure: writing pressure |  | Surface sensor from #Memory 5 | Pressure in #Memory 10 |
| 2: if Well-bore physical behavior is in transient state | Evaluate pressure: writing Pressure |  | Surface sensor from #Memory 5 | Pressure in #Memory 10 |
| 3 | Comparison task to compare the evaluated pressure with the measurement (from BHA sensor) and sending true or false command to the machinery(Pump) | The command must be sent to the pump **within 5 msec** from the time that surface pressure in memory 5 is read. | 1- #Memory 10  2-Pressure from BHA sensor #Memory 15 | #Memory 20 (bool) |

Task 2 is an event: has periority over task 1. If the state of the well bore is in trasnient, task 2 preempt task 1 and will calculate pressure and write in memory 10.

flowrate = emergency flowrate

Normal pressure

Abnormal pressure

Normal pressure