Requirements Embeddes Systems Project

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ID | Name | Description | Version | Status |
| 1 | Service movement | In service mode, conveyer belt shall move to both directions with the specified profile. | 1 | In progress |
| 2 | Service speed | In service mode, speed of conveyer belt shall be modifiable by the user within 100 – 2200 rpm in steps of 100. | 1 | In progress |
| 3 | Chain movement | In chain mode, conveyer belt shall move to right direction | 1 | In progress |
| 4 | Request left | If in idle state, conveyer belt shall wait for request from left conveyer belt | 1 | In progress |
| 5 | Send wait | If conveyer belt is moving state and server get request, server shall send “WAIT” to left conveyer belt | 1 | In progress |
| 6 | Send read | If conveyer belt is in idle state and server get request, server shall send “READY” to left conveyer belt | 1 | In progress |
| 7 | Slow movement | If server sent “READY”, conveyer belt shall start moving with v = 100rpm for tpp=1 second and get in moving state | 1 | In progress |
| 8 | Send release | After conveyer belt is moving tpp with v = 100rpm, server shall send “RELEASE” to left conveyer belt | 1 | In progress |
| 9 | Profile movement | If server send “RELEASE”, conveyer belt start moving with specified profile | 1 | In progress |
| 10 | Send request | After conveyer belt is moving specified profile, client shall sent request to right conveyer belt | 1 | In progress |
| 11 | Get wait | If client get “WAIT”, conveyer belt shall be stop | 1 | In progress |
| 12 | Get ready | If client get “READY”, conveyer belt shall start moving with v = 100rpm | 1 | In progress |
| 13 | Get release | If client get “RELEASE”, conveyer belt shall be stop and get in idle state | 1 | In progress |
| 14 | Motor control | Speed of motor shall be controlled by closed loop PID | 1 | In progress |
| 15 | Operate mode | Conveyer belt shall be operated by local keyboard or telnet connection | 1 | In progress |
| 16 | Information | Necessary information shall be displayed on display board | 1 | In progress |
| 17 | Hardware | Code shall work on given hardware | 1 | In progress |
| 18 | Changes | Requirements shall be able to change over time. | 1 | In progress |
| 19 | Profile parameter v | In chain mode, velocity-parameter v shall be 1800rpm | 1 | In progress |
| 20 | Profile parameter tr/tf | In chain mode, acceleration-time tr and tf shall be 1 second | 1 | In progress |
| 21 | Profile parameter tt | In chain mode, parameter tt shall be 8 seconds | 1 | In progress |
| 22 | Extra Task VHDL | The controller shall be implemented in VHDL on an FPGA as an extra task. | X | In progress |
| 23 | Extra Task Stop | If the conveyor is in service mode, the running profile can be stopped at any time. | X | In progress |
| 24 | Extra Task Time | If the conveyor is in service mode, the time length of the profile is modifiable. | X | In progress |