

Create an I/O list as a table with 15 lines for a rolling mill in a steel production plant. Have as columns signal name, input/output, signal tagnumber, analog/digital, engineering unit, ranges, setpoint, and P&ID reference.



| Signal<br>Name                   | Input/Output | Signal<br>TagNumber | Analog/Digital | Engineering<br>Unit | Ranges | Setpoint | Pa<br>Re |
|----------------------------------|--------------|---------------------|----------------|---------------------|--------|----------|----------|
| 1. Mill<br>Motor<br>Speed        | Input        | MMSPD-<br>101       | Analog         | RPM                 | 0-1800 | 1200     | M        |
| 2. Mill<br>Motor<br>Current      | Input        | MMCUR-<br>101       | Analog         | A                   | 0-2000 | 1500     | M        |
| 3. Mill<br>Motor<br>Vibration    | Input        | MMVIB-101           | Analog         | mm/s                | 0-10   | 5        | M        |
| 4. Roll Gap<br>Position          | Input        | RGP-101             | Analog         | mm                  | 0-50   | 25       | R.       |
| 5. Hydraulic<br>Pressure         | Input        | HP-101              | Analog         | bar                 | 0-350  | 250      | Н        |
| 6. Cooling<br>Water Flow         | Input        | CWF-101             | Analog         | L/min               | 0-1000 | 600      | C.       |
| 7. Strip<br>Thickness            | Input        | ST-101              | Analog         | mm                  | 0-25   | 10       | R.       |
| 8. Strip<br>Temperature          | Input        | STMP-101            | Analog         | °C                  | 0-1200 | 900      | T-       |
| 9.<br>Emergency<br>Stop          | Input        | ESTOP-101           | Digital        | N/A                 | N/A    | N/A      | E-       |
| 10. Mill<br>Motor Start          | Output       | MMSTART-<br>101     | Digital        | N/A                 | N/A    | N/A      | M        |
| 11. Mill<br>Motor Stop           | Output       | MMSTOP-<br>101      | Digital        | N/A                 | N/A    | N/A      | М        |
| 12. Roll Gap<br>Adjust           | Output       | RGADJ-101           | Analog         | mm                  | 0-50   | 25       | R.       |
| 13.<br>Hydraulic<br>Pressure Set | Output       | HPSET-101           | Analog         | bar                 | 0-350  | 250      | Н        |
| 14. Cooling<br>Water Flow<br>Set | Output       | CWFSET-<br>101      | Analog         | L/min               | 0-1000 | 600      | C.       |
| 15. Strip<br>Temperature<br>Set  | Output       | STMPSET-<br>101     | Analog         | °C                  | 0-1200 | 900      | T-       |







