Issues and Specifications – Drop Down List

1. **Electrical Malfunction:**
2. **Failure to Trip:**
   * Switchgear fails to trip during overcurrent or short-circuit conditions.
3. **False Tripping:**
   * Switchgear trips unnecessarily without any actual fault or overload.
4. **Arc Flash or Arcing:**
   * Uncontrolled electrical discharge resulting in an arc flash within the switchgear.
5. **Overheating:**
   * Excessive heat generation within the switchgear assembly.
6. **Phase Imbalance:**
   * Significant variation in electrical load among phases.
7. **Ground Faults:**
   * Current leakage to ground due to insulation breakdown.
8. **Busbar Faults:**
   * Damage or faults in the busbar assembly.
9. **Failure of Protective Devices:**
   * Malfunction or failure of protective devices such as relays or fuses.
10. **Switchgear Lockout/Tagout Issues:**
    * Inability to properly isolate or de-energize the switchgear for maintenance.
11. **Voltage Fluctuations:**
    * Unstable voltage levels within the switchgear.
12. **Corrosion or Contamination:**
    * Presence of corrosive substances or foreign contaminants affecting switchgear components.
13. **Intermittent Operation:**
    * Switchgear operates erratically or intermittently.
14. **Failure to Close/Open:**
    * Switchgear fails to close or open as commanded.
15. **Insulation Failure:**
    * Breakdown of insulation materials leading to short circuits or arcing.
16. **Inadequate Cooling:**
    * Inefficient cooling leading to overheating of switchgear components.
17. **External Damage:**
    * Physical damage to switchgear components due to external factors.
18. **Compatibility Issues:**
    * Incompatibility between switchgear components or with other electrical equipment.
19. **Failure of Auxiliary Equipment:**
    * Malfunction or failure of auxiliary equipment such as control panels, meters, or annunciators.
20. **Harmonic Distortion:**
    * Presence of harmonic currents or voltages affecting switchgear performance.
21. **Failure to Reset:**
    * Inability to reset or restore switchgear operation after a fault condition.
22. **Mechanical Failure:**
    * Which Station? –nahi chahiye
      1. Pipe Receiving
         1. What has failed? –nahi chahiye
            1. Roller
            2. Motor
            3. Sensor
            4. Tray Damaged
            5. Pneumatic Failure
            6. Hydraulic Failure
            7. Other (Give a box for the customer to write)
      2. Heating
         1. What has failed? –nahi chahiye
            1. SW Heater Failed?
            2. MW Heater Failed?
            3. Ceramic Bend Heater Failed?
            4. Pipe Rotation Shaft Broken?
            5. Pipe Rotation Motor failed?
            6. Pipe Rotation Rollers
            7. Heater Damaged – Attach Photo
            8. Pneumatic Failure
            9. Hydraulic Failure
            10. Other (Give a box for the customer to write)
      3. Forming
         1. What has failed? –nahi chahiye
            1. Forming Jaw not closing during SWR Blowing?
            2. Mandrel not coming forward?
            3. Mandrel not going home?
            4. Forming Jaw not moving in manual mode?
            5. Mandrel not moving in manual mode?
            6. Servo Machines – Forming Jaw Calibration problem?
            7. Servo Machines – Forming Jaw Position Lost Alarm?
            8. Servo Machines – Forming Mandrel Position Lost Alarm?
            9. Servo Machine – Servo Drive Blinking error?
            10. Servo Machines – Forming Jaw Servo Overload?
            11. Servo Machines – Forming Mandrel Servo Overload?
            12. Forming Calibration password required?
            13. SWR/Ring Blowing Valve malfunctioning/leaking?
            14. SWJ/Plain Cooling Blower not working?
            15. Pneumatic Failure?
            16. Hydraulic Failure?
            17. Forming Jaw sliding down and creating an alarm of Forming Jaw Not Open?
            18. Other (Give a box for the customer to write)
      4. Pipe Transfer
         1. What has failed? –nahi chahiye
            1. Pipe Lifting brackets damaged?
            2. Pneumatic Flow Control not set properly?
            3. Pneumatic Failure?
            4. Cylinder broken?
            5. Pipe Transfer Servo Not Moving?
            6. Servo Machines – Pipe Transfer Servo Position Lost Alarm?
            7. Servo Machines – Pipe Transfer Servo Overload Alarm?
            8. Servo Machine – Servo Drive Blinking error?
23. **PLC Errors (Please select which type of failure):**
24. **Communication Failure:**
    * PLC unable to communicate with other devices or systems.
    * Network connectivity issues.
    * Faulty communication modules or cables.
25. **Programming Errors:**
    * Syntax errors in ladder logic or other programming languages.
    * Logic conflicts leading to unexpected behaviour.
    * Improper addressing or data manipulation.
26. **Hardware Malfunction:**
    * Faulty input/output modules.
    * Defective power supply units.
    * Burnt-out components or circuitry.
27. **Software Issues:**
    * PLC programming software crashes or freezes.
    * Compatibility issues with operating systems or other software.
    * Licensing or activation problems.
28. **Memory or Storage Problems:**
    * Insufficient memory for program execution.
    * Corrupted memory or storage devices.
    * Difficulty in saving or loading programs.
29. **Power Supply Interruptions:**
    * Voltage fluctuations leading to erratic behaviour.
    * Power surges damaging components.
    * Inadequate power backup solutions.
30. **Environmental Factors:**
    * Temperature or humidity affecting PLC performance.
    * Exposure to dust, moisture, or other contaminants.
    * Improper installation or enclosure protection.
31. **Sensor or Input Device Issues:**
    * Faulty sensors providing inaccurate data.
    * Wiring or connection problems with input devices.
    * Sensor calibration or configuration errors.
32. **Output Device Problems:**
    * Output modules failing to trigger actuators or relays.
    * Wiring faults or short circuits in output circuits.
    * Insufficient power supply to output devices.
33. **Safety System Faults:**
    * Failures in safety relay circuits.
    * E-stop or safety interlock malfunctions.
    * Safety PLC programming errors.
34. **Network Security Concerns:**
    * Vulnerabilities in networked PLCs.
    * Unauthorized access or hacking attempts.
    * Lack of proper encryption or authentication measures.
35. **System Integration Issues:**
    * Incompatibility with other automation systems.
    * Difficulty interfacing with legacy equipment.
    * Protocol mismatches between devices.
36. **Real-Time Clock or Timing Problems:**
    * Inaccurate timekeeping affecting scheduling or logging functions.
    * Clock drift leading to synchronization issues.
    * Battery backup failures in maintaining clock settings.
37. **Diagnostic and Troubleshooting Tools:**
    * Issues with built-in diagnostics or monitoring features.
    * Limited visibility into PLC status or error messages.
    * Difficulty in accessing or interpreting diagnostic data.
38. **Firmware Updates or Patching:**
    * Problems with firmware updates or patches.
    * Failed updates causing device instability.
    * Issues with rollback procedures.
39. **Documentation or Training Needs:**
    * Lack of comprehensive documentation for troubleshooting.
    * Insufficient training on PLC operation and maintenance.
    * Need for additional resources or training materials.
40. **Customization or Configuration Challenges:**
    * Difficulty in customizing PLC functions to specific requirements.
    * Configuration errors leading to improper system behavior.
    * Need for expert assistance in optimizing configurations.
41. **Legacy System Support:**
    * Challenges in maintaining and supporting older PLC models.
    * Availability of spare parts or replacement components.
    * Upgrading or migrating legacy systems to newer platforms.
42. **Intermittent or Random Failures:**
    * Unpredictable behaviour or sporadic failures.
    * Difficulty reproducing issues for diagnosis.
    * Root cause analysis for intermittent faults.
43. **Sensor/Feedback Issues:**
    * Inaccurate data leading to incorrect machine behaviour
    * Reduced precision and quality in output
    * Risk of safety hazards due to incorrect feedback
44. **Hydraulic/Pneumatic Problems:**
    * Fluid leaks leading to environmental hazards.
    * Reduced efficiency and output due to loss of pressure
    * Risk of system contamination
45. **Control System Failure:**
    * Loss of control over critical functions
    * Potential for erratic behaviour endangering operators or products.
    * Difficulty in diagnosing underlying issues
46. **Safety Concerns:**
    * Increased risk of accidents or injuries to operators
    * Compliance violations leading to regulatory issues
    * Loss of trust in the safety systems
47. **Component Wear or Breakage:**
    * Increased likelihood of further failures if not addressed promptly
    * Potential for supply chain disruptions if replacement parts are unavailable
    * Higher maintenance costs over time
48. **Calibration Issues:**
    * Reduced accuracy and precision in production processes
    * Variability in output quality
    * Compliance risks with industry standards
49. **Lubrication Problems:**
    * Increased friction leading to accelerated wear on moving parts
    * Potential for overheating and damage to components
    * Contamination of machinery due to inadequate lubrication
50. **Overheating:**
    * Risk of thermal damage to sensitive components
    * Reduced efficiency and output due to thermal throttling
    * Potential fire hazard
51. **Vibration or Noise:**
    * Fatigue and stress on components leading to premature failure
    * Occupational health concerns for operators
    * Potential for noise pollution in the workplace
52. **Material Jamming:**
    * Production stoppages leading to downtime
    * Damage to machinery and potential for costly repairs
    * Impact on product quality and consistency
53. **Production Interruption:**
    * Loss of revenue due to halted production
    * Potential for missed deadlines and contractual obligations
    * Negative impact on customer satisfaction
54. **Operator Error:**
    * Training deficiencies leading to repeated mistakes
    * Increased risk of accidents or damage to machinery
    * Decreased morale among operators
55. **Environmental Factors (e.g., temperature, humidity):**
    * Degradation of machine components due to exposure
    * Increased risk of corrosion or rust
    * Impact on product quality and consistency
56. **Maintenance Required:**
57. **Parts Replacement Needed:**
    * Please list down which parts are required and attach photos or part codes as required
58. **Connectivity Issues (for networked machinery):**
    * Data loss or corruption during transmission
    * Vulnerabilities to cyber threats if security measures are compromised
    * Disruption to automated processes relying on network connectivity
59. **Quality Control Problems:**
    * Higher rates of defective products reaching customers
    * Increased rework or scrap costs
60. **Documentation/Training Needs:**
    * Difficulty in troubleshooting without adequate documentation
    * Increased training costs for operators
    * Risk of knowledge loss if experienced staff leave
61. **Unexpected Shutdowns:**
    * Loss of revenue due to unplanned downtime
    * Potential for damage to machinery or products during shutdown
    * Increased wear on components due to frequent startup/shutdown cycles
62. **Performance Degradation:**
    * Reduced efficiency and output over time
    * Potential for increased energy consumption
    * Negative impact on competitiveness
63. **Compatibility Issues (with other machinery or systems):**
    * Integration challenges with existing systems
    * Potential for disruptions in the production workflow
    * Increased risk of errors and inefficiencies
64. **Other (allowing users to input custom issues):**