List of Abbreviations

- Good state
- Degraded state
- Failed state
- \( t \) Time scale
- \( s \) Laplace transform variable
- \( i, j \) Numerical values
- \( E_p(t) \) Expected profit during the interval \((0, t]\)
- \( K_1, K_2 \) Revenue and service cost per unit time respectively
- \( S_j \) Transition state for any numeric value of \( j \)
- \( c \) Coverage factor
- \( P_{up}(s)/P_{down}(s) \) Laplace transformation of the probabilities that the system is in the good or degraded state/failed state
- \( A(t)/A_c(t) \) Availability of the system at time \( t \)/availability of the system at time \( t \) with respect to different values of coverage factor
- \( R(t)/R_c(t) \) Reliability of the system at time \( t \)/reliability of the system at time \( t \) with respect to different values of coverage factor
- ASA American standard association
- ASME American society for mechanical engineers
- VTDC Vacuum tube development committee
- MDT Mean down time
- SQC Statistical quality control
- AGREE Advisory group on reliability of electronic equipment
- RAMS Reliability and maintainability symposium
- SVR Support vector regression
- TMR Triple modular redundancy
- DNA Deoxyribo nucleic acid
- LOLE Loss-of-load expectation
- FACTS Flexible alternating current transmission system
- CCF Common cause failure
- CF Catastrophic failure
- MTTF Mean time to failure
- MTTR Mean time to repair
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>MTBF</td>
<td>Mean time between failure</td>
</tr>
<tr>
<td>AU</td>
<td>Active unit</td>
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<tr>
<td>SB1/W SB1</td>
<td>First standby unit / first warm standby unit</td>
</tr>
<tr>
<td>SB2/W SB2</td>
<td>Second standby unit / second warm standby unit</td>
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