

11.2**mean operating time between failures****MTBF**

average of the operating times between failures

NOTE 1 In the field of reliability, mean operating time between failures is defined as the mathematical expectation of the operating time between failures.

NOTE 2 This term is applied to repairable items.

11.3**mean time between failures**

average of the times between failures

NOTE In the field of reliability, mean time between failures is defined as the mathematical expectation of the time between failures.

11.4**mean repair time****MRT**

average of the repair times

NOTE In the field of reliability, mean repair time is defined as the mathematical expectation of the repair time.

11.5**mean time to restoration****MTTR**

average of the times to restoration

Annex A (informative)

Maintenance – Overall view

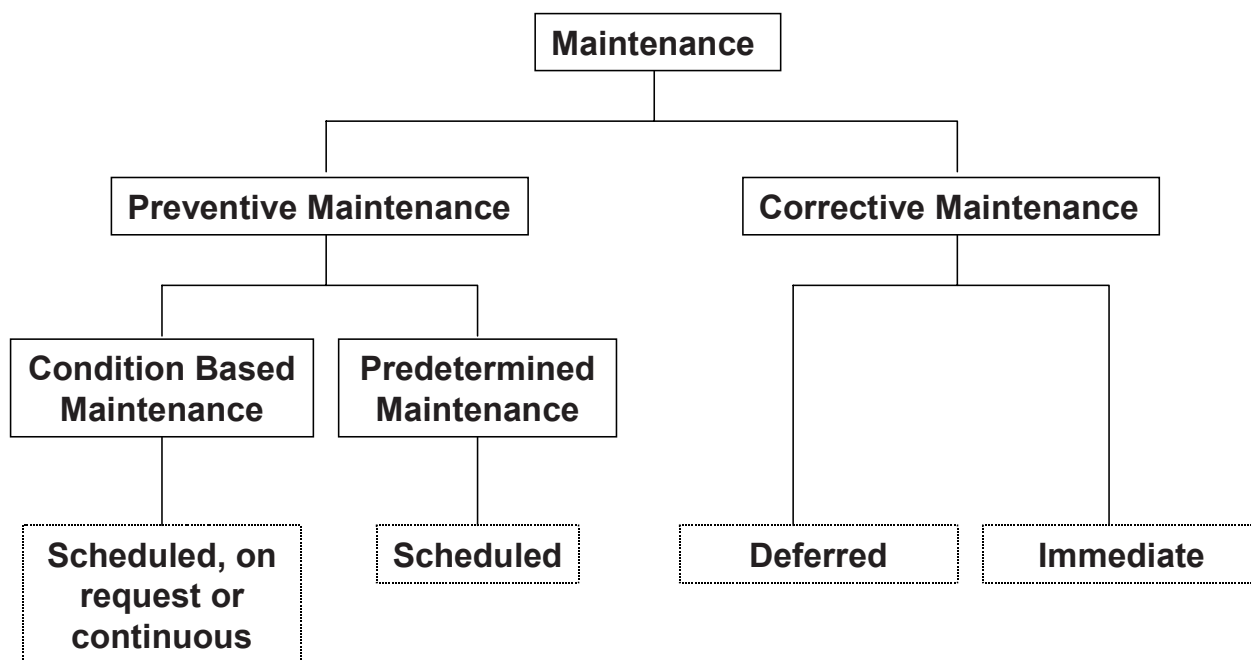


Figure A.1

Annex B (informative)

States of an item

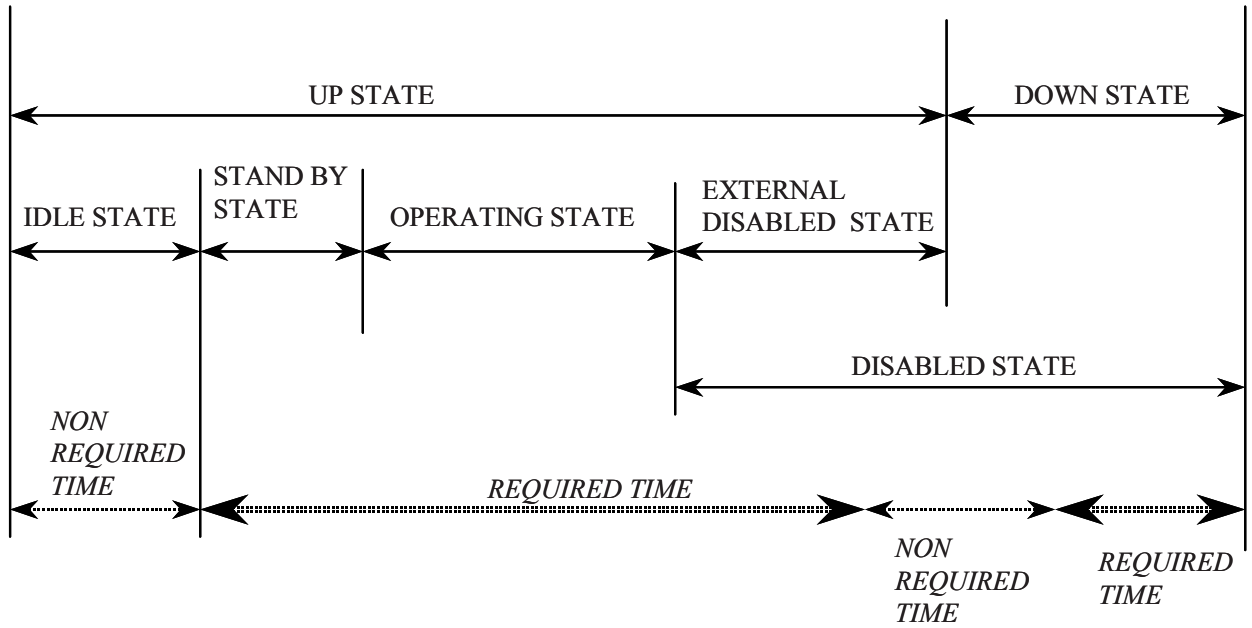


Figure B.1

Annex C (informative)

Times

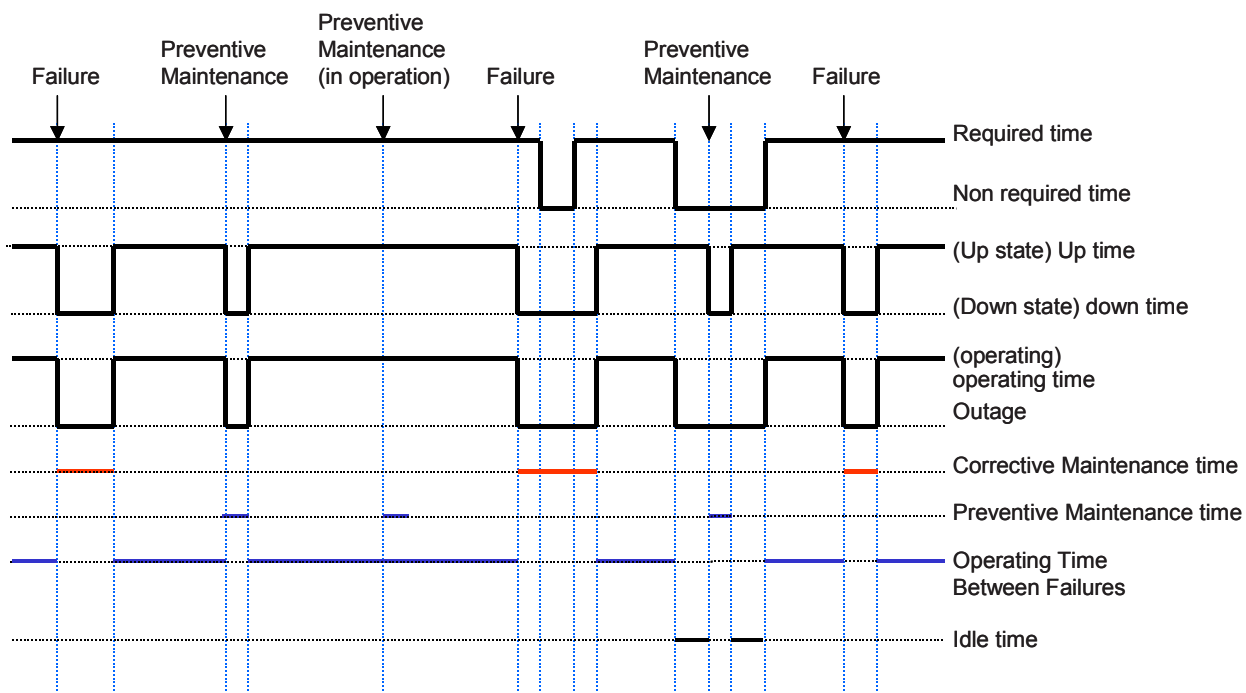


Figure C.1

Annex D
(informative)

Maintenance times

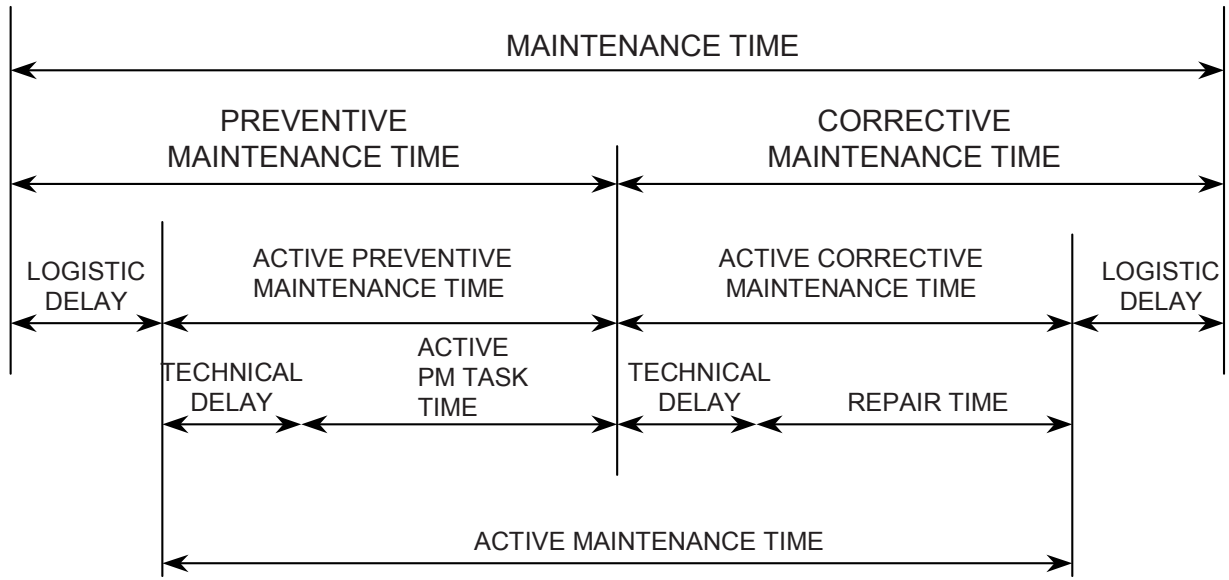


Figure D.1

Annex E (informative)

Criticality matrix

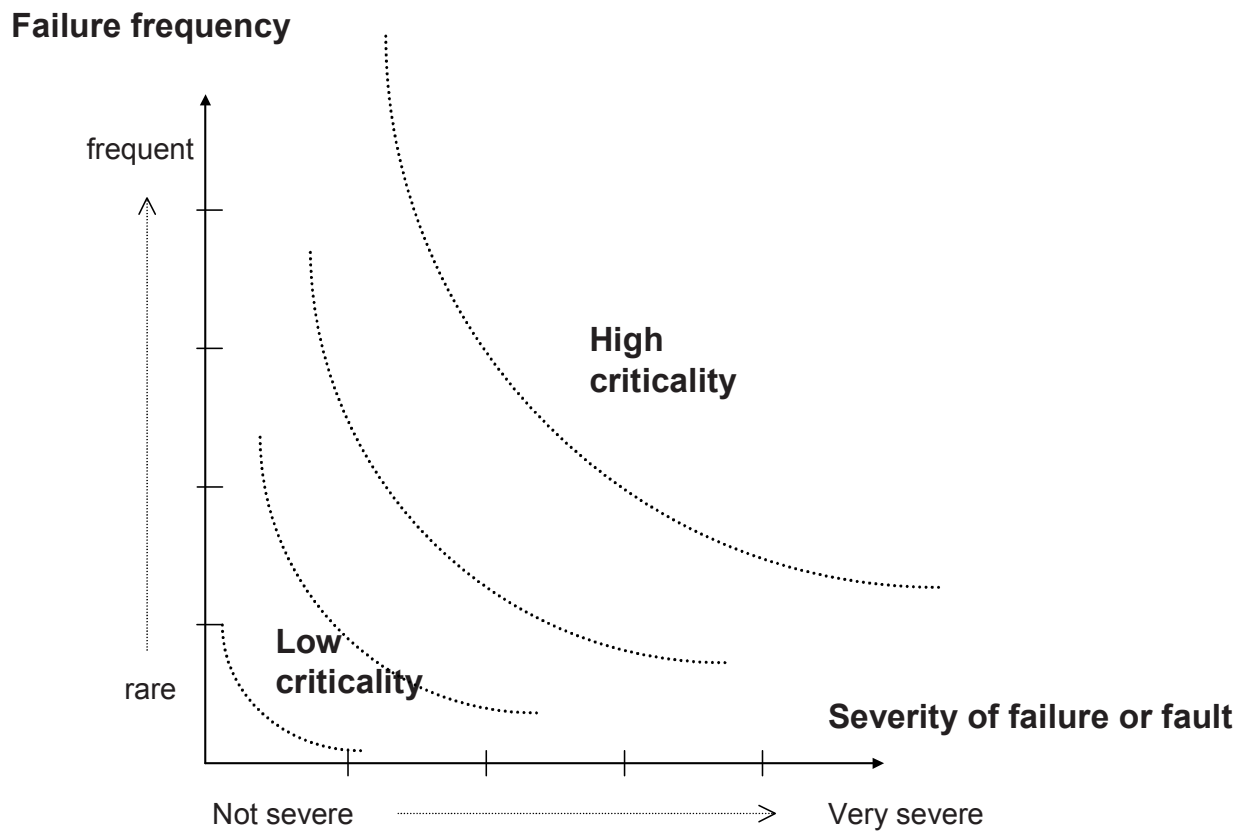


Figure E.1

Annex F (informative)

Identification of significant technical changes between this standard and the previous edition (EN 13306:2001)

New clauses and annexes in the current edition	Modified clauses and annexes in the current edition
2.9 Operation 3.6 Insurance spare part 4.3 Intrinsic (inherent) Reliability 4.5 Intrinsic (inherent) Maintainability 4.12 Mean failure rate 4.14 Obsolescence (for maintenance purposes) 5.2 Failure mode 5.11 Hidden failure 5.13 Severity 5.14 Criticality 5.15 Failure criteria 6.15 Software fault 7.13 Maintenance level 7.14 Maintenance outsourcing 8.9 Restoration 8.15 Maintenance task preparation 8.16 Maintenance schedule 9.12 Active preventive maintenance task time 9.14 Technical delay 9.15 Operating time to failure 9.22 Early failure period 11.5 Mean time to restoration Annex D Maintenance Times Annex E Criticality matrix	Clause 2 to Clause 11 and Annexes A to C have been reviewed and updated.
Deleted clauses of 2001 edition	
3.4 Repaired item 4.10 Rate of occurrence of failure 6.5 Fault mode 6.6 Actual state 9.13 Time to failure 10.4 Fault analysis 10.5 Maintenance documentation 11.2 Maintenance effectiveness 11.3 Maintenance support efficiency	

Bibliography

- [1] IEC 60050-191, *International Electrotechnical Vocabulary. Chapter 191: Dependability and quality of service*

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