

ISO 13381-1:2025-09 (E)

Condition monitoring and diagnostics of machine systems - Prognostics - Part 1: General guidelines and requirements

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Data requirements	2
5	Prognosis concepts	4
5.1	Basic concepts	4
5.2	Influence factors	5
5.3	Trending, setting alert, alarm and trip (shutdown) limits	7
5.4	Multiple parameter analysis	9
5.5	Initiation criteria	11
5.6	Prognosis of failure mode initiation	12
6	Failure and deterioration models used for prognostics	14
6.1	Failure mode behaviour modelling concepts	14
6.2	Modelling types	14
6.3	Artificial intelligence (AI) and machine learning (ML)	15
7	Generic prognosis process	15
7.1	Prognosis confidence levels	15
7.2	Prognosis process	16
7.2.1	General	16
7.2.2	Pre-processing	16
7.2.3	Existing failure mode prognosis	16
7.2.4	Future failure mode prognosis	16
7.2.5	Post-action prognosis	17
7.3	Prognosis report	17
Annex A (informative)	Condition monitoring flowchart	19
Annex B (informative)	Example prognosis confidence level determination	20
Annex C (informative)	Failure modelling techniques	21
Bibliography		23