ISO 13379-2:2015-04 (E)

Condition monitoring and diagnostics of machines - Data interpretation and diagnostics techniques - Part 2: Data-driven applications

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 2

4 Procedure to implement data-driven monitoring 2
4.1 Principle of data-driven monitoring methods 2
4.2 Asset critical failures and process parameters selection 3
4.3 Data cleaning and resampling 3
4.3.1 General 3
4.3.2 Interpolation errors 3
4.3.3 Data quality issues 3
4.3.4 Data resampling 4
4.4 Model development 4
4.4.1 General 4
4.4.2 Definition of models and selection of relevant inputs 4
4.4.3 Selection of relevant operating conditions and data 4
4.4.4 Preparation of the model tests 5
4.5 Model performance evaluation 5
4.6 Alarm setting 5

5 Procedure to implement data-driven diagnosis 6
5.1 General 6
5.2 Automated pattern classification approach 6
5.3 Simplified automated signature classification approach 7

6 General recommendations to implement data-driven monitoring methods 8

Annex A (informative) Example of data-driven monitoring application 9

Annex B (informative) Example of data-driven diagnostic application 11

Bibliography 12