

ISO 18435-1:2009-08 (E)

Industrial automation systems and integration - Diagnostics, capability assessment and maintenance applications integration - Part 1: Overview and general requirements

Contents		Page
Foreword	v
Introduction	vi
0.1	General	vi
0.2	Asset operation and maintenance lifecycle management integration framework	vi
0.3	Approach	viii
0.4	Intended benefits	viii
0.5	Relationship to other parts of ISO 18435	ix
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Abbreviated terms	4
5	Integration and interoperability of applications	4
5.1	Requirements for integration of applications	4
5.2	Requirements for integration models	5
5.3	Criteria for interoperability and integration	5
5.4	Application domains	6
5.4.1	General	6
5.4.2	Categories of application domains	6
5.4.3	Operations planning and scheduling (D3.1)	7
5.4.4	Supervisory control and HMI (D2.1)	7
5.4.5	Control, I/O, operational data historian and panel display (D1.1)	8
5.4.6	Capability assessment and decision support (D3.2)	8
5.4.7	Asset prognostics and health, product quality, safety and environmental management (D2.2)	8
5.4.8	Asset utilization, condition monitoring and quality monitoring (D1.2)	9
5.4.9	Maintenance planning and scheduling (D3.3)	9
5.4.10	Maintenance work order management and tracking (D2.3)	9
5.4.11	Asset configuration, calibration, repair and replace (D1.3)	10
5.4.12	Intra-enterprise and inter-enterprise activities (D4.1 and D4.2)	10
5.4.13	Resource registry services (D0.1 and D0.2)	10
5.5	Integration within an application	11
5.5.1	Application interoperability model	11
5.5.2	Interoperability and integration of resources in an application	12
5.5.3	Interoperability and integration of processes in an application	12
5.6	Integration within a domain	12
5.6.1	Interoperability and integration of applications in a domain	12
5.6.2	Overview of Matrix Elements	13
6	Integration among domains	14
6.1	Interoperability and integration between applications in different domains	14
6.2	Applications in different domains at the same level in a hierarchy	14
6.3	Applications in different domains at different levels in a hierarchy	15

6.4	Integration requirements across application scenarios	15
6.5	Integration requirements in terms of interoperability templates	15
7	Conformance and compliance	15
7.1	Conformance aspects	15
7.2	Compliance aspects	15
Annex A (informative) Application domain matrix		16
Annex B (informative) Coordinated asset registry service		21
Bibliography		23