

Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-14097-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: 14.05.2020

Date of issue: 14.05.2020

Holder of certificate:

**Currenta GmbH & Co. OHG
ANT-Brandtechnologie
CHEMPARK, Gebäude B 411, 51368 Leverkusen**

Tests in the fields:

Testing of the primary fire properties and fire side effects of materials of all types including polymers, plastics, paints, textiles, wood, metal, glass, composite materials, building materials and construction products, semi-finished products, electric cables, finished products of all types including components of machines and vehicles (road and rail vehicles, aircraft, ships); object-specific and scenario-dependent structures; testing of the fire resistance of components

Testing of the fire behaviour, fire resistance and behaviour in the event of external fire of construction products for which no indication of a relevant harmonised technical specification is required

(item 3, Annex V (EU) No. 305/2011), Construction Products Regulation

For the test fields marked with */, the testing laboratory is permitted to do the following without obtaining prior notification and consent from DAkKS GmbH**

***) Freely select standard test methods or equivalent test methods.**

****) Modify test methods and develop new test methods.**

The test methods listed are given by way of example.

The testing laboratory has an up-to-date list of all test methods within the flexible scope of accreditation.

This document is a translation. The definitive version is the original German annex to the accreditation certificate.

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

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1 Testing of the primary fire properties and fire side effects of materials and finished products of all types; object-specific and scenario-dependent structures; testing of the fire resistance of building components

1.1 Primary fire properties **

1.1.1 Flammability

ASTM D1929 2016-04	Standard Test Method for Determining Ignition Temperature of Plastics
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IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 1 2012-09	Non-combustibility test
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1.1.2 Ignitability

CAM-06300 01-11D 2011-08	Testing of upholstery materials in a mock-up with a wooden crib (Crib 4 or Crib 5) in accordance with BS 5852
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DIN 4102-1 1998-05	Fire behaviour of building materials and building components – Part 1: Building materials; concepts, requirements and tests; building material class B2
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DIN 53438 1984-06	Testing of combustible materials; response to ignition by a small flame
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DIN 54836 1984-02	Testing of combustible materials; determination of ignition temperature
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EN 60695-11-10 VDE 0471-11-10 2015-10	Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and vertical flame test methods (UL 94)
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EN ISO 12952-1 2011-01	Textiles – Assessment of the ignitability of bedding items – Part 1: Ignition source: smouldering cigarette
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EN ISO 12952-2 2011-01	Textiles – Assessment of the ignitability of bedding items – Part 2: Ignition source: match-flame equivalent
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EN ISO 4589-2 2017-11	Plastics – Determination of burning behaviour by oxygen index – Part 2: Ambient temperature test
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IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 7 2012-09	Test for vertically supported textiles and films
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 8 2012-09	Test for upholstered furniture
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 9 2012-09	Test for bedding components
NF D 60-013 2006-06	Ignitability of upholstered furniture – Ignition source equivalent to a burning 20 g paper cushion
UL 94 2015-01	Tests for Flammability of Plastic Materials for Parts in Devices and Appliances
UNI 9175 2010-07	Fire behaviour of upholstered furniture exposed to the application of a small flame (UNI 9175 – Reazione al fuoco di mobili imbottiti sottoposti all'azione di una piccola fiamma)
Vereinigung Kantonalen Feuerversicherungen Section 2.2 (BVD) 2005-05	Building materials and building components – Part B: Test specifications Basic test – Flammability class
EN 60695-2-11 VDE 0471-2-11 2014-11	Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods – Glow-wire flammability test method for end-products (GWEPT)
EN 60695-2-12 VDE 0471-2-12 2015-01	Fire hazard testing – Part 2-12: Glowing/hot-wire based test methods – Glow-wire flammability index (GWFI) test method for materials
EN 60695-2-13 VDE 0471-2-13 2015-01	Fire hazard testing – Part 2-13: Glowing/hot-wire based test methods – Glow-wire ignition temperature (GWIT) test method for materials
EN 60695-11-5 VDE 0471-11-5 2017-12	Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance

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EN 60695-11-20 VDE 0471-11-20 2016-04	Fire hazard testing – Part 11-20: Test flames – 500 W flame test methods
UIC 564-2; Annex 07 1991-01	Test method for determining the fire resistance of materials by measuring the oxygen index.
EN 1021-1 2014-08	Furniture – Assessment of the ignitability of upholstered furniture – Part 1: Ignition source: smouldering cigarette
EN 1021-2 2014-08	Furniture – Assessment of the ignitability of upholstered furniture – Part 2: Ignition source match flame equivalent
AITM 2.0002 A & B 2014-05	Vertical Bunsen Burner Test for Cabin and Cargo Compartment Materials – 12 s and 60 s application time (FAR §25.853(a)/§25.855(d) & App. F, Part I, § (a)(1)(i), (ii) & (iii))

1.1.3 Flame propagation

ASTM C1166 2006-05	Flame Propagation of Dense and Cellular Elastomeric Gaskets and Accessories
ASTM D3675 2017-05	Surface Flammability of Flexible Cellular Materials Using a Radiant Heat Energy Source
ASTM E162 2016-12	Surface Flammability of Materials Using a Radiant Heat Energy Source
ASTM E648 2017-12	Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
CAM-06302 01-11D 2011-08	AFNOR NF P 92-503 – Electric burner test
DIN 4102-14 1990-05	Fire behaviour of building materials and elements; determination of the burning behaviour of floor covering systems using a radiant heat source
DIN 4102-7 2018-11	Fire behaviour of building materials and building components – Part 7: Roofing – Definitions, requirements and testing
DIN 54837 2007-12 (historical)	Testing of materials, small components and component sections for railway vehicles – Determination of burning behaviour using a gas burner

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DIN 75200 1980-09	Determination of burning behaviour of interior materials in motor vehicles
ECE R 118 - Annex 6 2015-04	Burning behaviour of interior materials in motor vehicles – Test to determine the horizontal burning rate
ECE R 118 - Annex 8 2015-04	Burning behaviour of interior materials in motor vehicles – Test to determine the vertical burning rate of materials
EN 14115 2002-04	Textiles – Burning behaviour of materials for marquees, large tents and related products – Ease of ignition
EN ISO 3582 2007-12	Flexible cellular polymeric materials – Laboratory assessment of horizontal burning characteristics of small specimens subjected to a small flame
FMVSS 302 2017-10	Standard No. 302; Flammability of interior materials
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 5 2012-09	Test for surface flammability (Test for surface materials and primary deck coverings)
ISO 3795 1989-10	Road vehicles and tractors and machinery for agriculture and forestry – Determination of burning behaviour of interior materials
ISO 5658-2 AMD 1 2011-11	Reaction to fire tests – Spread of flame – Part 2: Lateral spread on building and transport products in vertical configuration, amendment 1
ISO 9772 2012-09	Cellular plastics – Determination of horizontal burning characteristics of small specimens subjected to a small flame
UIC 564-2; Annex 04 1991-01	Test method for determining the fire resistance of solid non-thermoplastic materials
UIC 564-2; Annex 05 1991-01	Test method for determining the fire resistance of coated and uncoated textiles
UIC 564-2; Annex 06 1991-01	Test method for determining the resistance of rubber door and window seals to fire

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UIC 564-2; Annex 08 1991-01	Test method for determining the resistance of foam materials to fire
UIC 564-2; Annex 10 1991-01	Test method for determining the resistance of interconnecting gangway rubber flanges to fire
UIC 564-2; Annex 11 1991-01	Test method for determining the resistance of rigid thermoplastic materials to fire
UIC 564-2; Annex 12 1991-01	Test method for determining the fire resistance of floor coverings
UL 790 2018-06	Standard Test Methods for Fire Tests of Roof Coverings

1.1.4 Heat release

AITM 2.0006 2014-05	Heat Release and Heat Release Rate; (ABD0031 Paragraph 7.2, FAR §25.853(d) & App. F, Part IV, § (g))
ASTM E1354 2017-07	Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter
CPSC 16 CFR Part 1633 2006-03	Standard for the Flammability (Open Flame) of Mattress Sets; Final Rule (Replaces California Technical Bulletin 603)
EN 14390 2007-04	Reaction to fire tests– Large-scale room reference test for surface products
EN 16733 2016-07	Reaction to fire tests for building products – Determination of a building product's propensity to undergo continuous smouldering
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 10 2012-09	Tests for fire-restricting materials for high-speed craft
ISO 5660-1 + Amd. 1 2015-03, 2019-08	Reaction to fire tests – Heat release, smoke production and mass loss rate – Part 1: Heat release rate (cone calorimeter method) and smoke production rate (dynamic measurement)
ISO 9705-1 2016-02	Reaction to fire tests – Room corner test for wall and ceiling lining products – Part 1: Test method for a small room configuration

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1.1.5 Melting behaviour, flaming droplets/particles

DIN 4102-17 2017-12	Fire behaviour of building materials and building components; melting point of mineral wool insulating materials; terminology, requirements, test method
ECE R 118 - Annex 7 2015-04	Burning behaviour of interior materials in motor vehicles – Test to determine the melting behaviour of materials

1.2 Fire side effects **

1.2.1 Optical smoke density

AITM 2.0007 2014-05	Smoke Density; (ABD0031 Paragraph 7.3.1 & 7.3.2, FAR §25.853(d) & App. F, Part V, § (b))
ASTM E662 2018-12	Specific Optical Density of Smoke Generated by Solid Materials
EN ISO 5659-2 2017-11	Plastics – Smoke generation – Part 2: Determination of optical density by a single-chamber test
NF X 10-702-1 1995-11	Determination of the opacity of the fumes in an atmosphere without air renewal (Méthodes d'essai au feu – Détermination de l'opacité des fumées en atmosphère non renouvelée)
Vereinigung Kantonalen Feuerversicherungen Section 2.6 2005-05	Building materials and building components – Part B: Test specifications Smoke density test – Smoke level

1.2.2 Smoke toxicity

AITM 3.0005 2014-05	Toxicity/Interior and Equipment parts Electrical Wire/cable Insulation; (ABD0031 Paragraph 7.4)
BS 6853, Annex B 1999-01 (historical)	Code of practice for fire precautions in the design and construction of passenger carrying trains, Determination of weighted summation of toxic fume
BS 6853, Annex D 1999-01 (historical)	Code of practice for fire precautions in the design and construction of passenger carrying trains, Methods for measuring smoke density

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DIN 5510-2 - Annex C (toxicity) 2009-05 (historical)	Preventive fire protection on railway vehicles Part 2: Fire behaviour and fire side effects of materials and parts – Classification, requirements and test methods
EN 17084 2018-12	Railway applications – Fire protection on railway vehicles – Toxicity test of materials and components
EN 45545-2 - Annex C 2016-02	Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components – <i>Annex C (normative), test method for the determination of toxic gases of components for railway vehicles</i>
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 2 2012-09	Smoke and toxicity test
ISO 19701 2013-04	Methods for sampling and analysis of fire gases
ISO 19702 2015-08	Guidance for sampling and analysis of toxic gases and vapours in fire effluents using Fourier Transform Infrared (FTIR) spectroscopy
NF X 70-100 2006-04	Fire behaviour tests – Analysis of exhaust gases (tube furnace)

1.3 Component behaviour *

1.3.1 Fire resistance

DIN 4102-2 1977-09	Fire behaviour of building materials and building components; building components; definitions, requirements and tests; walls (6) without load
DIN 4102-8 2003-10	Fire behaviour of building materials and building components – Part 8: Small scale test furnace
DIN 4102-9 1990-05	Fire behaviour of building materials and building components; seals for cable penetrations; definitions, requirements and tests
EN 1363-1 2012-10	Fire resistance tests – Part 1: General requirements

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EN 1363-2 1999-10	Fire resistance tests – Part 2: Alternative and additional procedures
EN 45545-3 2013-08	Railway applications – Fire protection on railway vehicles Part 3: Fire resistance requirements for fire barriers
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 3 2012-09	Test for “A”, “B” and “F” class divisions
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 4 2012-09	Test for fire door control systems
IMO Resolution MSC.307(88) (2010 FTP Code) Annex 1, Part 11 2012-09	Test for fire-resisting divisions of high-speed craft
ISO 834-1 2012-01	Fire-resistance tests – Elements of building construction – Part 1: General requirements
ISO 834-8 Technical Corrigendum 1 2009-02	Fire-resistance tests – Elements of building construction – Part 8: Specific requirements for non-loadbearing vertical separating elements; correction 1

1.4 Behaviour of components **

1.4.1 Seating tests

California TB117 2013-06	Requirements, Test Procedure and Apparatus for Testing the Smolder Resistance of Materials Used in Upholstered Furniture
California TB133 1991-01	Flammability Test Procedure for Seating, Furniture for Use in Public Occupancies
DIN 5510-2 - Annex A (Seating tests) 2009-05 (historical)	Preventive fire protection on railway vehicles Part 2: Fire behaviour and fire side effects of materials and parts – Classification, requirements and test methods
EN 16989 2018-08	Railway applications – Fire protection on railway vehicles – Fire behaviour test for a complete seat

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EN 45545-2 - Annex A 2016-02	Railway applications – Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components – <i>Annex A (normative), standard vandalism destruction test for seat covers</i>
EN 45545-2 - Annex B 2016-02	Railway applications – Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components – <i>Annex B (normative), fire test procedures for seats</i>
UIC 564-2; Annex 13 1991-01	Method for testing the fire behaviour of seats

1.4.2 Ignition of the outer housing of electrical appliances

EN 62441 VDE 0868-441 2015-03	Safeguards against accidentally caused candle flame ignition
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1.4.3 Photovoltaic and solar thermal systems

CAM-06287 02-12D 2012-12	Test method based on UL 790 and ASTM E 108 "Fire Test of Roof Coverings", adapted to photovoltaic modules in accordance with the requirements of UL 1703 "Flat-Plate Photovoltaic Modules and Panels" IEC 61730-2 "Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing"
CAM-06319 01-12D 2012-04	Determination of the ignitability of solar modules and collectors
CAM-06502 01-16D 2016-06	Test method for photovoltaic (PV) modules based UL 790 "Fire Test of Roof Coverings", adapted to photovoltaic modules in accordance with the requirements of UL 1703:2014 "Flat-Plate Photovoltaic Modules and Panels"
EN 61730-2 VDE 0126-30-2 2018-10	Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing

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1.4.4 Cables and insulated wires

EN 50305, Section 9 2003-03	Railway applications – Railway rolling stock cables having special fire performance – Test methods, Section 9 Burning behaviour tests
EN 50399 VDE 0482-399 2017-02	Common test methods for cables under fire conditions – Heat release and smoke production measurement on cables during flame spread test – Test apparatus, procedures, results
EN 60332-1-2 VDE 0482-332-1-2 2017-06	Tests on electric and optical fibre cables under fire conditions – Part 1-2: Test for vertical flame propagation for a single insulated wire or cable – Procedure for 1 kW pre-mixed flame
EN 60332-1-3 VDE 0482-332-1-3 2017-09	Tests on electric and optical fibre cables under fire conditions – Part 1-3: Test for vertical flame propagation for a single insulated wire or cable – Procedure for determination of flaming droplets/particles
EN 60332-2-2 VDE 0482-332-2-2 2005-06	Tests on electric and optical fibre cables under fire conditions – Part 2-2: Test for vertical flame propagation for a single small insulated wire or cable – Procedure for diffusion flame
EN IEC 60332-3-21 VDE 0482-332-3-21 2019-05	Tests on electric and optical fibre cables under fire conditions – Part 3-21: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A F/R
EN IEC 60332-3-22 VDE 0482-332-3-22 2019-05	Tests on electric and optical fibre cables under fire conditions – Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category A
EN IEC 60332-3-23 VDE 0482-332-3-23 2019-05	Tests on electric and optical fibre cables under fire conditions – Part 3-23: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category B
EN IEC 60332-3-24 VDE 0482-332-3-24 2019-05	Tests on electric and optical fibre cables under fire conditions – Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables – Category C
EN IEC 60332-3-25 VDE 0482-332-3-25 2019-05	Tests on electric and optical fibre cables under fire conditions – Part 3-25: Test for flame spread of vertically-mounted bunched wires or cables – Category D
EN 60754-1 VDE 0482-754-1 2015-08	Test on gases evolved during combustion of materials from cables – Part 1: Determination of the halogen acid gas content

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EN 60754-2 VDE 0482-754-2 2015-08	Test on gases evolved during combustion of materials from cables – Part 2: Determination of acidity (by pH measurement) and conductivity
EN 61034-2 VDE 0482-1034-2 2014-11	Measurement of smoke density of cables burning under defined conditions Part 2: Test procedure and requirements
IEC 60331-1 CEI 60331-1 2018-03	Tests for electric cables under fire conditions – Circuit integrity – Part 1: Test method for fire with shock at a temperature of at least 830 °C for cables of rated voltage up to and including 0.6/1.0 kV and with an overall diameter exceeding 20 mm (1st edition)
IEC 60331-11 Edition 1.1 CEI 60331-11 Edition 1.1 2009-07	Tests for electric cables under fire conditions - Circuit integrity - Part 11: Apparatus - Fire alone at a flame temperature of at least 750 °C
IEC 60331-21 CEI 60331-21 1999-04	Tests for electric cables under fire conditions – Circuit integrity – Part 21: Procedures and requirements – Cables of rated voltage up to and including 0.6/1.0 kV
ISO 6722-1 Technical Corrigendum 1 2012-09	Road vehicles - 60 V and 600 V single-core cables - Part 1: Dimensions, test methods and requirements for copper conductor cables; Technical Corrigendum 1
UIC 564-2; Annex 09 1991-01	Test method for determining the resistance of electric cables to fire

1.4.5 Other test methods for components

ABD 0031 2014-08	Fireworthiness Requirements, Pressurized Section of Fuselage
DIN 18234-1 2018-05	Fire safety of large roofs for buildings – Fire exposure from below – Part 1: Roof areas without openings – Requirements and testing
EN 1794-3 2016-12	Road traffic noise reducing devices – Non-acoustic performance – Part 3: Reaction to fire – Burning behaviour of noise reducing devices and classification
EN 45545-2 2016-02	Railway applications – Fire protection on railway vehicles Part 2: Requirements for fire behaviour of materials and components

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**2 Testing of the fire behaviour, fire resistance and behaviour in the event of external fire of construction products for which no indication of a relevant harmonised technical specification is required
(item 3, Annex V (EU) No. 305/2011), Construction Products Regulation**

2.1 Reaction to fire

EN 13823 2015	Reaction to fire tests for building products – Building products excluding floorings exposed to the thermal attack by a single burning item
EN ISO 1182 2010	Reaction to fire tests for products – Non-combustibility test
EN ISO 11925-2 2010	Reaction to fire tests – Ignitability of products subjected to direct impingement of flame – Part 2: Single-flame source test
EN ISO 1716 2018	Reaction to fire tests for products – Determination of the gross heat of combustion (calorific value)
EN ISO 9239-1 2010	Reaction to fire tests for floorings – Part 1: Determination of the burning behaviour using a radiant heat source

In conjunction with:

DIN EN 13501-1 Fire classification of construction products and building elements – Part 1: Classification using data from reaction to fire tests

2.2 Resistance to fire

EN 1364-1 2015	Fire resistance tests for non-loadbearing elements – Part 1: Walls
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In conjunction with:

DIN EN 13501-2 Fire classification of construction products and building elements – Part 2: Classification using data from fire resistance tests, excluding ventilation services

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2.3 External fire performance

CEN/TS 1187 Test methods for external fire exposure to roofs
2012

In conjunction with:

*DIN EN 13501-5 Fire classification of construction products and
2015-11 building elements – Part 5: Classification using
data from external fire exposure to roofs tests*

The requirements for a testing laboratory in accordance with Article 43 of the Construction Products Regulation are met.

Abbreviations used:

ABD	Airbus Directive
AFNOR NF	Association française de normalisation Norme Française
AITM	Airbus Industries Test Method
AMD	Amendment
ASTM	American Society for Testing and Materials
BS	British Standard
BVD	Brandverhütungsdienst (Fire Prevention Service)
CAM	Currenta Analysis Method
CEN	Comité Européen de Normalisation
CEN/TS	Technical specification of the European Committee for Standardization
CPSC	United States Consumer Product Safety Commission
DIN	Deutsches Institut für Normung e. V. (German Institute for Standardization)
ECE	Economic Commission for Europe
EC	European Community
EN	European standard
FMVSS	Federal Motor Vehicle Safety Standards
FprEN	Draft European Standard for formal vote
FTP	Fire Test Procedures
IEC	International Electrotechnical Commission
IMO	International Maritime Organization
ISO	International Organization for Standardization
ISO/DIS	Draft international standard
MSC	Maritime Safety Committee
NF	Norme Française
DIR	Directive
TS	Technische Spezifikation (technical specification)
UIC	Union internationale des chemins de fer
UL	Underwriters Laboratories
UNI	Italian national standard

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