STANDARDS UPDATE NOTICE (SUN)
ISSUED: July 15, 2022

STANDARD INFORMATION

Standard: UL 1203
Standard ID: Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations [UL 1203:2013 Ed.5+R:19Aug2020]
Previous Standard ID: Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for use in Hazardous (Classified) Locations [UL 1203:2013 Ed.5+R:30Jan2020]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **July 31, 2023**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard.

Overview of Changes: Revisions to add details for the construction and testing of blanking elements (close-up plugs) and thread adapters. Specific details of new/revised requirements are found in table below.

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
	Info	**PART VIII – OUTLET BOXES AND FITTINGS**
76	Info	**General**
76.3		***New section added;*** **Blanking elements**
76.3.1		**NPT blanking elements**
76.3.1.1		NPT blanking elements shall comply with the following: a) When made from materials other than stainless steel, thread shall conform to the NPT requirements of ANSI/ASME B1.20.1; b) When made from stainless steel, shall conform to the NPT thread form requirements of ANSI/ASME B1.20.1, except that the male threads shall gauge with +1/2 to +1-1/2 turns beyond the L-1 gauging notch in lieu of the ±1 turns described in ANSI/ASME B1.20.1; c) The effective thread length shall not be less than the "L2" dimension; d) On fittings with a shoulder or other interruption, a thread length not less than the L4 dimension defined shall be provided between the face of the shoulder and the end of the fitting thread; and e) There shall be a provision for installation / removal using a tool.
76.3.2		**Metric blanking elements**
76.3.2.1		Metric blanking elements shall comply with the following: a) The thread form for external threads shall have a tolerance Class of 6g or better according to ISO 965-1 and ISO 965-3, and any chamfer or undercut shall be limited to a maximum axial length of 2 mm from both sides of the threaded part; and the threaded part shall comprise at least eight full threads. If the thread is provided with an undercut, then a non-detachable and non-compressible washer or equivalent device shall be fitted to ensure the required length of thread engagement; b) A shoulder or interruption shall be included to preclude the blanking element from being threaded fully through the enclosure wall; and c) There shall be a provision for installation / removal using a tool.

CLAUSE	VERDICT	COMMENT
76.3.3		**Thread adapters**
76.3.3.1		Thread adapters shall comply with the following: a) A male NPT thread; 1) Made from materials other than stainless steel, shall conform to the NPT requirements of ANSI/ASME B1.20.1; 2) Made from stainless steel, shall conform to the NPT thread form requirements of ANSI/ASME B1.20.1, except that the male threads shall gauge with +1/2 to +1-1/2 turns beyond the L-1 gauging notch in lieu of the ±1 turns described in ANSI/ASME B1.20.1. b) A female NPT thread; 1) Thread form shall conform to the NPT requirements of ANSI/ASME B1.20.1; 2) Shall gauge with +1/2 to +3-1/2 turns beyond the L-1 gauging notch in lieu of the ±1 turns described in ANSI/ASME B1.20.1; and 3) Effective thread length shall not be less than the “L2” dimension; and c) Metric male threads shall have a tolerance Class of 6g or better according to ISO 965-1 and ISO 965-3, and any chamfer or undercut shall be limited to a maximum axial length of 2 mm from both sides of the threaded part; and the threaded part shall comprise at least eight full threads. If the thread is provided with an undercut, then a non-detachable and non-compressible washer or equivalent device shall be fitted to ensure the required length of thread engagement, and a shoulder or interruption shall be included to preclude the blanking element from being threaded fully through the enclosure wall; d) Metric female threads shall have a tolerance Class of 6H or better according to ISO 965-1 and ISO 965-3, and any chamfer or undercut shall be limited to a maximum axial length of 2 mm from the external wall surface; and the threaded part shall include at least five full threads; and e) Threads shall be co-axial designs. Alternatively, other designs (such as elbow adapters) shall comply with all of the following: 1) When metric on the side with the male thread, incorporate an external locknut (to secure the adapter in the intended direction); and 2) The length and internal volume of thread adapters shall be minimized.
86	Info	**Hydrostatic Pressure Test**
86.1		For a conduit fitting as described in Exception No. 1 to 85.1 that is not subjected to explosion tests, the hydrostatic test pressure is to be as specified in Table 86.2. For lower ambient temperatures below -25°C, the test pressures are increased by the factors shown in Table 86.4.

CLAUSE	VERDICT	COMMENT
Table 86.4		***New table added;*** **Additional test factor for lower ambient temperature below -25°C**

Fitting material	Additional test factor for hydrostatic test fittings rated for below -25°C		
	-40°C	-50°C	-60°C
Cast metal	1.5	1.5	1.625
Fabricated steel, stainless steel, or aluminium	1.125	1.125	1.2

86.6		***New section added;*** **Torque test for blanking elements**
86.6.1		An NPT blanking element of each size shall be screwed into a steel test-block containing a threaded entry hole of size and form appropriate to the device under test. The sample shall be tightened to a torque at least equivalent to the appropriate torque given in Table 101.1 using a suitable tool. The test shall be deemed to be satisfactory if the correct thread engagement has been achieved and if, when dismantled, no damage invalidating the type of protection is found.
86.6.2		Metric blanking element of each size shall be screwed into a steel test-block containing a threaded entry hole of size and form appropriate to the device under test. The sample shall be tightened to a torque at least equivalent to the appropriate torque given in Table 86.5 using a suitable tool. The test shall be deemed to be satisfactory if the shoulder has not pulled fully into the thread.

CLAUSE	VERDICT	COMMENT
Table 86.5		***New table added;*** **Tightening torque values, metric**

Thread size mm	Tightening torque blanking elements with shoulder Nm
< 16	3,5 d[a]
16	65
20	65
25	95
32	110
40	130
50	165
63	195
75	230
> 75	3,5 d[a]
[a] The variable d is the major diameter of thread in millimetres	

86.7		***New section added;*** **Torque tests for thread adapters**
86.7.1		A sample thread adapter of each size shall be screwed into a steel test-block, containing a threaded entry of size and form appropriate to the device under test. A steel or brass threaded plug of appropriate form and size shall be screwed into the female entry of the thread adapter.
86.7.2		The plug shall be tightened to a torque at least equivalent to the torque given in Table 101.1 or Table 86.5, based on the larger of the two threads on the adapter. The test shall be deemed to be satisfactory if no viable deformation to the thread adapter is found when the assembly is dismantled.