Information about Standards

List of Standards for Hardness Testing Machines and Test Equipment

QA-E200008 Rev.5.0
Drawn date：2023-09-25

The following table lists various national standards and international standards on hardness testing machines and test equipment including Japanese Industrial Standards (JIS), ISO International Standards, and other national standards. (The table below is investigated by Mitutoyo as of September, 2023)

	Norm	Japan		International		Germany				U.K.		France		U.S.A.		Brazil		China				India	
	Nomenclature*	JIS**		ISO**		DIN**		VDI**		BS**		NF**		ASTM**		NBR**		GB/T, JB/T**		JJG, JJF**		IS** ＊1	
1	Vickers hardness test－Part 1: Test method	JIS Z 2244-1	2020	ISO 6507-1	2018	DIN EN ISO 6507-1	2018			BS EN ISO 6507-1	2018	NF EN ISO 6507-1	2018			ABNT NBR NM ISO 6507-1	2019	GB/T 4340.1	2009	JJG 151	2006	IS 1501-1	2020
	Vickers hardness test－Verification and calibration of testing machines	JIS B 7725	2020	ISO 6507-2	2018	DIN EN ISO 6507-2	2018	-	-	BS EN ISO 6507-2	2018	NF EN ISO 6507-2	2018	E92 E384	2023 2022	ABNT NBR NM ISO 6507-2	2019	GB/T 4340.2	2012 -	JJG 151	2006	IS 1754 IS 1501-2	2002 2020
																						IS 1501-2	2020
	Vickers hardness test－Calibration of reference blocks	JIS B 7735	2020	ISO 6507-3	2018	DIN EN ISO 6507-3	2018			BS EN ISO 6507-3	2018	NF EN ISO 6507-3	2018			ABNT NBR NM ISO 6507-3	2019	GB/T 4340.3	2012	JJG 148	2006	IS 1501-3	2020
	Vickers hardness test－Part 2: Tables of hardness values	JIS Z 2244-2	2020	ISO 6507-4	2018	DIN EN ISO 6507-4	2018			BS EN ISO 6507-4	2018	NF EN ISO 6507-4	2018			ABNT NBR NM ISO 6507-4	2019	GB/T 4340.4	2022	-	-	IS 1501 -4	2020
2	Test methods for Vickers hardness at elevated temperatures	JIS Z 2252	1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Rockwell hardness test－Test method	JIS Z 2245	2021	ISO 6508-1	2016	DIN EN ISO 6508-1	2016			BS EN ISO 6508-1	2016	NF EN ISO 6508-1	2016			ABNT NBR NM ISO 6508-1	2019	GB/T 230.1	2018	JJG 112	2013	IS 1586-1	2018
	Rockwell hardness test－Verification and calibration of testing machines and indenters	JIS B 7726	2017	ISO 6508-2	2015	DIN EN ISO 6508-2	2015	-	-	BS EN ISO 6508-2	2015	NF EN ISO 6508-2	2015	E18	2022	ABNT NBR NM ISO 6508-2	2019	GB/T 230.2	2022	JJG 112	2013	IS 1586-2	2018
	Rockwell hardness test－Calibration of reference blocks	JIS B 7730	2017	ISO 6508-3	2015	DIN EN ISO 6508-3	2015			BS EN ISO 6508-3	2015	NF EN ISO 6508-3	2015			ABNT NBR NM ISO 6508-3	2019	GB/T 230.3	2022	JJG 113	2013	IS 1586-3	2018
4	Plastics－Determination of hardness－Part 1: Ball indentation method ＊2	-	-	ISO 2039-1	2001	DIN EN ISO 2039-1	2003			BS EN ISO 2039-1	2003	NF EN ISO 2039-1	2003	-	-			GB/T 3398.1	2008	JJG 369	1993		
	Plastics－Determination of hardness－Part 2: Rockwell hardness	JIS K 7202-2	2001	ISO 2039-2	1987	DIN EN ISO 2039-2	2000	-	-	BS EN ISO 2039-2	2000	NF EN ISO 2039-2	1999	ASTM D785-08	2015	-	-	GB/T 3398.2	2008	JJG 884	1994	-	-
	Rockwell－α hardness－Test method	JIS K 7202-2 Annex A (normative)	2001	ISO 2039-2 Annex A	1987	-	-			-	-	-	-	ASTM D785-08	2015			-	-	-	-		
5	Brinell hardness test－Part 1: Test method	JIS Z 2243-1	2018	ISO 6506-1	2014	DIN EN ISO 6506-1	2015			BS EN ISO 6506-1	2014	NF EN ISO 6506-1	2014			ABNT NBR NM 6506-1	2019	GB/T 231.1	2018	JJG 150	2005	IS 1500-1	2019
	Brinell hardness test－Verification and calibration of testing machines	JIS B 7724	2017	ISO 6506-2	2017	DIN EN ISO 6506-2	2019			BS EN ISO 6506-2	2018	NF EN ISO 6506-2	2018	ASTM E10	2018	ABNT NBR NM 6506-2	2019	GB/T 231.2	2022	JJG 150	2005	IS 1500-2	2021
	Brinell hardness test－Calibration of reference blocks	JIS B 7736	2017	ISO 6506-3	2014	DIN EN ISO 6506-3	2015	-	-	BS EN ISO 6506-3	2014	NF EN ISO 6506-3	2014			ABNT NBR NM 6506-3	2019	GB/T 231.3	2022	JJG 147	2017	IS 1500-3	2019
	Brinell hardness test－Part 2: Table of hardness values	JIS Z 2243-2	2018	ISO 6506-4	2014	DIN EN ISO 6506-4	2015			BS EN ISO 6506-4	2014	NF EN ISO 6506-4	2014			ABNT NBR NM 6506-4	2019	GB/T 231.4	2009	-	-	IS 1500-4	2019
	Titanium and titanium alloys－Brinell hardness test for titanium sponge	JIS H 0511	2015	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Shore hardness test－Test method	JIS Z 2246	2022															GB/T 4341.1	2014	JJG 346	1991		
	Shore hardness test－Verification of testing machines	JIS B 7727	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 4341.2	2016	JJG 304	2003	-	-
																				JJG 346	1991		
	Shore hardness test－Calibration of reference blocks	JIS B 7731	2000															GB/T 4341.3	2016	JJG 347	1991		
7	Knoop hardness test－Part 1: Test method	JIS Z 2251-1	2020	ISO 4545-1	2017	DIN EN ISO 4545-1	2019			BS EN ISO 4545-1	2018	NF EN ISO 4545-1	2018					GB/T 18449.1	2009	JJG1047	2009	IS 6885-1	2020
	Knoop hardness test－Verification and calibration of testing machines	JIS B 7734	2020	ISO 4545-2	2017	DIN EN ISO 4545-2	2018			BS EN ISO 4545-2	2017	NF EN ISO 4545-2	2018					GB/T 18449.2	2012	JJG 1047	2009	IS 6885-2	2020
		JIS B 7734 Annex A (infomative)	2020	-	-	-	-	-	-	-	-	-	-	E92 E384	2023 2022	-	-	-	-	-	-	-	-
	Metallic materials－Knoop hardness test－Part 3: Calibration of reference blocks ＊2	-	-	ISO 4545-3	2017	DIN EN ISO 4545-3	2018			BS EN ISO 4545-3	2017	NF EN ISO 4545-3	2018					GB/T 18449.3	2012	JJG 1048	2009	IS 6885-3	2020
	Knoop hardness test－Part 2: Table of hardness values	JIS Z 2251-2	2020	ISO 4545-4	2017	DIN EN ISO 4545-4	2018			BS EN ISO 4545-4	2018	NF EN ISO 4545-4	2018					GB/T 18449.4	2022	-	-	IS 6885-4	2020
8	Metallic and other inorganic coatings－Vickers and Knoop microhardness tests ＊2	-	-	ISO 4516	2002	DIN EN ISO 4516	2002	-	-	BS EN ISO 4516	2002	NF EN ISO 4516	2002	-	-	-	-	GB/T 9790	2021	-	-	-	-
9	Metallic materials－Conversion of hardness values ＊2	-	-	ISO 18265	2013	DIN EN ISO 18265	2014	-	-	BS EN ISO 18265	2013	NF EN ISO 18265	2013	-	-	-	-	GB/T 33362	2016	-	-	-	-
10	Metallic materials－Leeb hardness test－Part 1: Test method ＊2			ISO 16859-1	2015	DIN EN ISO 16859-1	2016			BS EN ISO 16859-1	2015	NF EN ISO 16859-1	2015					GB/T 17394.1	2014	JJG 747	1999		
						-	-																
	Metallic materials－Leeb hardness test－Part 2: Verification and calibration of the testing devices ＊2	-	-	ISO 16859-2	2015	DIN EN ISO 16859-2	2016	-	-	BS EN ISO 16859-2	2015	NF EN ISO 16859-2	2015	A956/A956M-17a	2017	-	-	GB/T 17394.2	2022	JJG 747	1999	-	-
	Metallic materials－Leeb hardness test－Part 3: Calibration of reference test blocks ＊2			ISO 16859-3	2015	DIN EN ISO 16859-3	2016			BS EN ISO 16859-3	2015	NF EN ISO 16859-3	2015					GB/T 17394.3	2022	-	-		
11	Hardness testing with portable measuring instruments operating with mechanical penetration depth－Test method ＊3					DIN 50157-1	2020																
	Hardness testing with portable measuring instruments operating with mechanical penetration depth－Verification and calibration of the testing devices ＊3	-	-	-	-	DIN 50157-2	2020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Hardness testing with portable measuring instruments operating with electrical penetration depth－Test method ＊3					DIN 50158-1	2008																
	Hardness testing with portable measuring instruments operating with electrical penetration depth－Verification and calibration of the testing devices ＊3	-	-	-	-	DIN 50158-2	2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	Hardness testing with the UCI method Part 1: Test method ＊3					DIN 50159-1	2022											GB/T 34205	2017	-	-		
	Hardness testing with the UCI method Part 2: Verification and calibration of the testing devices ＊3	-	-	-	-	DIN 50159-2	2022	-	-	-	-	-	-	A 1038	2019	-	-			JJF 1436	2013	-	-
14	Hardness testing of metallic materials (HBT, HVT etc.) ＊3	-	-	-	-	-	-	VDI/VDE 2616-1	2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Hardness testing of plastics and elastomers ＊3	-	-	-	-	-	-	VDI/VDE 2616-2	2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Calibration of force-proving instruments used for the verification of uniaxial testing machines	JIS B 7728	2013	ISO 376	2011	DIN EN ISO 376	2011	-	-	BS EN ISO 376	2011	NF EN ISO 376	2011	E74-18e1	2018	ABNT NBR ISO 376	2021	GB/T 13634	2019	JJG 734	2001	IS 4169	2014
17	Tension / compression testing machines－Calibration and verification of the force-measuring system	JIS B 7721	2018	ISO 7500-1	2018	DIN EN ISO 7500-1	2018	-	-	BS EN ISO 7500-1	2018	NF EN ISO 7500-1	2018	E4	2021	ABNT NBR NM ISO 7500-1	2023	GB/T 16825.1	2022	JJF 1296.1 JJF 1296.2 JJF 1296.3	2011 2011 2011	-	-
				-	-	DIN EN ISO 7500-1 Supplementary sheet 1	2022			-	-	-	-	-	-	-	-	-	-	-	-		
						DIN EN ISO 7500-1 Supplementary sheet 2	2022																
						DIN EN ISO 7500-1 Supplementary sheet 3	1999																
18	Metallic materials－Verification of static uniaxial testing machines－Part 2: Tension creep testing machines－Verification of the applied force ＊2	-	-	ISO 7500-2	2006	DIN EN ISO 7500-2	2007	-	-	BS EN ISO 7500-2	2006	NF EN ISO 7500-2	2007	-	-	-	-	GB/T16825.2	2018	JJF 1296.1 JJF 1296.2 JJF 1296.3	2011 2011 2011	-	-
19	Mettalic materials－Uniaxial creep testing in tension－Method of test	JIS Z 2271	2019	ISO 204	2023	DIN EN ISO 204	2019	-	-	BS EN ISO 204	2023	NF EN ISO 204	2023	-	-	ABNT NBR ISO 4965-1	2016	GB/T 2039	2012	-	-	-	-
20	Method of hardness test for brake linings, pads and clutch facings of automobiles	JIS D 4421	1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Methods of measuring case depth hardened by carburizing treatment for steel	JIS G 0557	2019	ISO 18203	2016	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	GB/T 9450	2005	JJF 1721	2018	-	-
22	Steels－Determination of depth of decarburization	JIS G 0558	2020	ISO 3887	2017	DIN EN ISO 3887	2018	-	-	BS EN ISO 3887	2018	NF EN ISO 3887	2018	-	-	-	-	GB/T 224	2019	-	-	-	-
23	Steel－Determination of case depth after flame hardening or induction hardening	JIS G 0559	2019	ISO 18203	2016	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	GB/T 5617	2005	-	-	-	-
24	Steel－Determination of the thickness of surface－hardened layers ＊2	-	-	ISO 18203	2016	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	-	-	-	-	-	-
25	Sintered ferrous materials, carburized or carbonitrided－Determination and verification of case-hardening depth by a micro-hardness test ＊2	-	-	ISO 4507	2000	DIN EN ISO 4507	2007	-	-	BS EN ISO 4507	2007	NF EN ISO 4507	2007	-	-	-	-	-	-	-	-	-	-
26	Iron and steel－Determination of the conventional depth of hardening after surface heating; German version EN 10328:2005 ＊3	-	-	-	-	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	-	-	-	-	-	-
27	Hardness depth of heat-treated parts; determination of the effective depth of hardening after nitriding ＊3	-	-	-	-	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	-	-	-	-	-	-
28	Method of hardenability test for steel (End quenching method)	JIS G 0561	2020	ISO 642	1999	DIN EN ISO 642	2000	-	-	BS EN ISO 642	1999	NF EN ISO 642	1999	-	-	-	-	GB/T 225	2006	-	-	-	-
29	Method of measuring nitrided case depth for iron and steel	JIS G 0562	1993	ISO 18203	2016	DIN EN ISO 18203	2022	-	-	BS EN ISO 18203	2022	NF EN ISO 18203	2022	-	-	-	-	GB/T 11354	2005	-	-	-	-
30	Method of measuring surface hardness for nitrided iron and steel	JIS G 0563	1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Rubber－General procedures for preparing and conditioning test pieces for physical test methods	JIS K 6250	2019	ISO 23529	2016	DIN ISO 23529	2020	-	-	BS ISO 23529	2016	NF ISO 23529	2017	-	-	ABNT NBR ISO 23529	2014	GB/T 2941	2006	-	-	-	-
32	Sintered metal materials, excluding hardmetals－Determination of apparent hardness and microhardness ＊2	-	-	ISO 4498	2010	DIN EN ISO 4498	2010	-	-	BS EN ISO 4498	2010	NF EN ISO 4498	2010	-	-	-	-	GB/T 9097	2016	-	-	IS 15703	2018
33	Sintered metal materials, excluding hardmetals－Determination of apparent hardness－Part 1: Materials of essentially uniform section hardness ＊3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 9097	2016	-	-	-	-
34	Sintered metal materials, excluding hardmetals－Determination of apparent hardness－Part 2: Case-hardened ferrous materials, surface enriched by carbon or carbon and nitrogen ＊3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 3850	2015	-	-	-	-
35	Rubber, vulcanized or thermoplastic-－Determination of hardeness－Part 1: General guidance	JIS K 6253-1	2012	ISO 48-1	2018	-	-	-	-	BS ISO 48-1	2018	NF ISO 48-1	2018	-	-	-	-	GB/T 23651	2009	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 2: IRHD method (hardness between 10 IRHD and 100 IRHD)	JIS K 6253-2	2012	ISO 48-2	2018	DIN ISO 48-2	2021	-	-	BS ISO 48-2	2018	NF ISO 48-2	2018	-	-	-	-	GB/T 6031	2017	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 3: Dead-load hardness using the very low rubber hardness (VLRH) scale ＊2	-	-	ISO 48-3	2018	DIN ISO 48-3	2021	-	-	BS ISO 48-3	2018	NF ISO 48-3	2018	-	-	-	-	-	-	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 3: Durometer method	JIS K 6253-3	2023	ISO 48-4	2018	DIN ISO 48-4	2021	-	-	BS ISO 48-4	2018	NF ISO 48-4	2018	ASTM D2240-15	2021	-	-	GB/T 531.1	2008	-	-	IS 13360-5	2013
	Testing Methods for Durometer Hardness of Plastics	JIS K 7215	1986	ISO 868	2003	DIN EN ISO 868	2003	-	-	BS EN ISO 868	2003	NF EN ISO 868	2003	-	-	-	-	GB/T 2411	2008	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 4: IRHD pocket meter method	JIS K 6253-4	2012	ISO 48-5	2018	-	-	-	-	BS ISO 48-5	2018	NF ISO 48-5	2018	-	-	-	-	GB/T 531.2	2009	-	-	IS 3400-2	2019
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 6: Apparent hardness of rubber-covered rollers by IRHD method ＊2	-	-	ISO 48-6	2018	-	-	-	-	BS ISO 48-6	2018	NF ISO 48-6	2018	-	-	-	-	-	-	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 7: Apparent hardness of rubber-covered rollers by Shore-type durometer method ＊2	-	-	ISO 48-7	2018	-	-	-	-	BS ISO 48-7	2018	NF ISO 48-7	2018	-	-	-	-	-	-	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 8: Apparent hardness of rubber-covered rollers by Pusey and Jones method ＊2	-	-	ISO 48-8	2018	DIN ISO 48-8	2021	-	-	BS ISO 48-8	2018	NF ISO 48-8	2018	-	-	-	-	-	-	-	-	-	-
	Rubber, vulcanized or thermoplastic－Determination of hardness－Part 5: Calibration and verification of hardness testers	JIS K 6253-5	2012	ISO 48-9	2018	DIN ISO 48-9	2021	-	-	BS ISO 48-9	2018	NF ISO 48-9	2018	ASTM D2240-15	2021	-	-	-	-	-	-	IS 3400-2	2019
								-	-							-	-	-	-	-	-		
		-	-	ISO 21509	2006	DIN EN ISO 21509	2015	-	-	BS EN ISO 21509	2015	NF EN ISO 21509	2015	-	-	-	-	-	-	JJG 304（A） JJG 1039（D）	2003 2008	-	-
36	Destructive tests on welds in metallic materials－Hardness testing－Part 1: Hardness test on arc welded joints ＊2	-	-	ISO 9015-1	2001	DIN EN ISO 9015-1	2011	-	-	BS EN ISO 9015-1	2011	NF EN ISO 9015-1	2011	-	-	-	-	-	-	-	-	-	-
37	Destructive tests on welds in metallic materials－Hardness testing－Part 2: Microhardness testing of welded joints ＊2	-	-	ISO 9015-2	2016	DIN EN ISO 9015-2	2016	-	-	BS EN ISO 9015-2	2016	NF EN ISO 9015-2	2016	-	-	-	-	GB/T 27552	2021	-	-	-	-
38	Metallic materials－Instrumented indentation test for hardness and materials parameters－Part 1: Test method ＊2	-	-	ISO 14577-1	2015	DIN EN ISO 14577-1	2015	-	-	BS EN ISO 14577-1	2015	NF EN ISO 14577-1	2015	-	-	-	-	GB/T 21838.1	2019	-	-	-	-
	Metallic materials－Instrumented indentation test for hardness and materials parameters－Part 2: Verification and calibration of testing machines ＊2	-	-	ISO 14577-2	2015	DIN EN ISO 14577-2	2015	-	-	BS EN ISO 14577-2	2015	NF EN ISO 14577-2	2015	-	-	-	-	-	-	-	-	-	-
	Metallic materials－Instrumented indentation test for hardness and materials parameters－Part 3: Calibration of reference blocks ＊2	-	-	ISO 14577-3	2015	DIN EN ISO 14577-3	2015	-	-	BS EN ISO 14577-3	2015	NF EN ISO 14577-3	2015	-	-	-	-	-	-	-	-	-	-
	Metallic materials－Instrumented indentation test for hardness and materials parameters－Part 4: Test method for metallic and non-metallic coatings ＊2	-	-	ISO 14577-4	2016	DIN EN ISO 14577-4	2017	-	-	BS EN ISO 14577-4	2016	NF EN ISO 14577-4	2017	-	-	-	-	-	-	-	-	-	-
	Metallic materials－Instrumented indentation test for hardness and materials parameters－Part 5: Linear elastic dynamic instrumented indentation testing (DIIT) ＊2	-	-	ISO 14577-5	2022	-	-	-	-	BS ISO 14577-5	2022	-	-	-	-	-	-	-	-	-	-	-	-

This information is based on our survey, as of September 2023.

***The names of these standards are based on JIS standards. Refer to ＊3 and ＊4 for the names of standards other than JIS standards.**

****JIS：Japan Industrial Standard、ISO：International Organization for Standardization、DIN：Deutsche Normen、VDI：Verein Deutscher Ingenieure、BS：British Standards、NF：Norme Franaise、ANSI/ASME：American National Standards Institute/American Society of Mechanical Engineers、Federal：Federal Specifications and Standards、NBR：Brazilian National Standards、GB/T、JJG、JJF：Chinese National Standard、 JB/T：Chinese Industrial Standard、IS：Indian Standard**

＊1: For IS (Indian Standard), we noted the year of establishment.

＊2: The names of these standards are based on ISO standards.

＊3: The names of these standards are translated into English by Mitutoyo Corporation.

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	Norm	Japan		International		Germany				U.K.		France		U.S.A.		Brazil		China				India	
	Nomenclature*	JIS**		ISO**		DIN**		VDI**		BS**		NF**		ASTM**		NBR**		GB/T, JB/T**		JJG, JJF**		IS** ＊1	
39	Plastics－Instrumented micro-indentation test for hardness measurement ＊2	-	-	ISO/TS 19278	2019	-	-	-	-	PD ISO/TS 19278	2019	-	-	-	-	-	-	-	-	-	-	IS 13360-5	2018
40	Testing method for barcol hardness of glass fiber reinforced plastics	JIS K 7060	1995	-	-	DIN EN 59	2016	-	-	BS EN 59	2016	-	-	-	-	-	-	GB/T 3854	2017	-	-	-	-
41	Testing methods for fracture toughness of fine ceramics at room temperature	JIS R 1607	2015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Plastics erasers	JIS S 6050	2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Methods of test for woods	JIS Z 2101	2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 1941	2009	-	-	-	-
44	Testing Method of Maximum Hardness in Weld Heat－Affected Zone	JIS Z 3101	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	Method of Hardness Test for Deposited Metal	JIS Z 3114	1990	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46	Method of Taper Hardness Test in Weld Heat－Affected Zone	JIS Z 3115	1973	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47	Methods for the calibration of vibration and shock pick-ups－Basic concepts	JIS B 0908	1991	ISO 16063-1	2016	-	-	-	-	-	-	ISO 16063-1	2016	-	-	-	-	GB/T 20485.1	2008	-	-	-	-
48	Methods for the calibration of vibration and shock transducers－Part 11: Primary vibration calibration by laser interferometry ＊2	-	-	ISO 16063-11	1999	-	-	-	-	BS ISO 16063-11	1999	-	-	-	-	-	-	GB/T 20485.11	2006	-	-	-	-
49	Methods for the calibration of vibration and shock transducers－Part 21: Vibration calibration by comparison to a reference transducer ＊2	-	-	ISO 16063-21	2003	DINI ISO 16063-21	2016	-	-	BS ISO 16063-21	2003	-	-	-	-	-	-	GB/T 20485.21	2007	-	-	-	-
50	Methods for the calibration of vibration and shock transducers－Part 22: Shock calibration by comparison to a reference transducer ＊2	-	-	ISO 16063-22	2005	DINI ISO 16063-22	2015	-	-	BS ISO 16063-22	2005	-	-	-	-	-	-	GB/T 20485.22	2008	-	-	-	-
51	Methods for the calibration of vibration and shock transducers－Part 16: Calibration by Earth's gravitation ＊2	-	-	ISO 16063-16	2014	DINI ISO 16063-16	2015	-	-	BS ISO 16063-16	2014	-	-	-	-	-	-	GB/T 20485.16	2018	-	-	-	-
	Methods for the calibration of vibration and shock transducers－Part 17: Primary calibration by centrifuge ＊2	-	-	ISO 16063-17	2016	-	-	-	-	BS ISO 16063-17	2016	-	-	-	-	-	-	GB/T 13823.14	1995	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 8: Primary calibration by dual centrifuge ＊2	-	-	ISO 5347-8	1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Methods for the calibration of vibration and shock transducers－Part 31: Testing of transverse vibration sensitivity ＊2	-	-	ISO 16063-31	2009	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 20485.31	2011	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 12: Testing of transverse shock sensitivity ＊2	-	-	ISO 5347-12	1993	-	-	-	-	BS ISO 16063-31	2009	-	-	-	-	-	-	GB/T 13823.9	1994	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 13: Testing of base strain sensitivity ＊2	-	-	ISO 5347-13	1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Methods for the calibration of vibration and shock transducers－Part 32: Resonance testing－Testing the frequency and the phase response of accelerometers by means of shock excitation ＊2	-	-	ISO 16063-32	2016	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 13823.12	1995	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 15: Testing of acoustic sensitivity ＊2	-	-	ISO 5347-15	1993	-	-	-	-	BS ISO 16063-32	2016	-	-	-	-	-	-	GB/T 13823.17	1996	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 16: Testing of mounting torque sensitivity ＊2	-	-	ISO 5347-16	1993	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 13823.5	1992	-	-	-	-
	Methods for the calibration of vibration and shock transducers－Part 34: Testing of sensitivity at fixed temperatures ＊2	-	-	ISO 16063-34	2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Methods for the calibration of vibration and shock pick-ups－Part 18: Testing of transient temperature sensitivity ＊2	-	-	ISO 5347-18	1993	-	-	-	-	BS ISO 16063-34	2019	-	-	-	-	-	-	GB/T 13823.15	1995	-	-	-	-
	Methods for the calibration of vibration and shock transducers－Part 33: Testing of magnetic field sensitivity ＊2	-	-	ISO 16063-33	2017	-	-	-	-	BS ISO 16063-33	2017	-	-	-	-	-	-	GB/T 20485.33	2018	-	-	-	-
52	Methods for the calibration of vibration and shock transducers－Part 12: Primary vibration calibration by the reciprocity method ＊2	-	-	ISO 16063-12	2002	-	-	-	-	BS ISO 16063-12	2002	-	-	-	-	-	-	GB/T 20485.12	2008	-	-	-	-
53	Methods for the calibration of vibration and shock pick-ups－Part 22: Accelerometer resonance testing－General methods ＊2	-	-	ISO 5347-22	1997	-	-	-	-	-	-	-	-	-	-	-	-	GB/T 13823.20	2008	-	-	-	-
54	Balancing machines	JIS B 7737	1995	ISO 21940-21	2022	DIN ISO 21940-21	2013	-	-	BS ISO 21940-21	2012	-	-	-	-	-	-	-	-	JJF1570	2016	-	-

This information is based on our survey, as of September 2023.

***The names of these standards are based on JIS standards. Refer to ＊3 and ＊4 for the names of standards other than JIS standards.**

****JIS：Japan Industrial Standard、ISO：International Organization for Standardization、DIN：Deutsche Normen、VDI：Verein Deutscher Ingenieure、BS：British Standards、NF：Norme Franaise、ANSI/ASME：American National Standards Institute/American Society of Mechanical Engineers、Federal：Federal Specifications and Standards、NBR：Brazilian National Standards、GB/T、JJG、JJF：Chinese National Standard、 JB/T：Chinese Industrial Standard、IS：Indian Standard**

＊1: For IS (Indian Standard), we noted the year of establishment.

＊2: The names of these standards are based on ISO standards.

＊3: The names of these standards are translated into English by Mitutoyo Corporation.