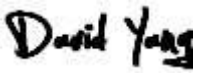
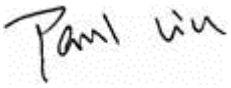
Test Report issued under the responsibility of:

TEST REPORT
IEC 60745-2-3
Hand-held motor-operated electric tools - Safety
Part 2: Particular requirements for grinders, polishers and disk-type sanders

Report Number. .....:	6055395.50B
Date of issue .....:	2020-07-29
Total number of pages	18 pages
Applicant's name.....:	LEE YEONG INDUSTRIAL CO., LTD.
Address .....:	No.2, Kejia Rd., Douliu City, Yunlin County 64057, Taiwan
Test specification:	
Standard .....:	IEC 60745-2-3:2006 (Second Edition) + A1:2010 + A2:2012 to be used in conjunction with IEC 60745-1:2006 (Fourth Edition)
Test procedure.....:	CB Scheme
Non-standard test method.....:	N/A
Test Report Form No.....:	IEC60745_2_3D
Test Report Form(s) Originator.....:	CQC
Master TRF .....:	Dated 2014-01

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description .....:	Drywall Sander
Trade Mark .....:	AGP
Manufacturer.....:	LEE YEONG INDUSTRIAL CO., LTD. No.2, Kejia Rd., Douliu City, Yunlin County 64057, Taiwan
Model/Type reference .....:	SB9; 9SB; SB225; 225SB; AGHOST; 626000; SB9L; 9SBL; SB225L; 225SBL
Ratings .....:	See part 1

Testing procedure and testing location:		
☒ **CB Testing Laboratory:**	DEKRA Testing and Certification (Shanghai) Ltd.	
Testing location/ address .....:	3F #250 Jiangchangsan Road Building 16 Headquarter Economy Park Shibei Hi-Tech Park, Jing'an District, Shanghai 200436, China	
☐ **Associated CB Testing Laboratory:**		
Testing location/ address .....:		
Tested by (name + signature) .....:	David Yang	
Approved by (name + signature) .....:	Paul Liu	
⊟ ~~**Testing procedure: TMP**~~		
~~**Testing location/ address .....:**~~		
~~**Tested by (name + signature) .....:**~~		
~~**Approved by (name + signature) .....:**~~		
⊟ ~~**Testing procedure: WMT**~~		
~~**Testing location/ address .....:**~~		
~~**Tested by (name + signature) .....:**~~		
~~**Witnessed by (name + signature) ....:**~~		
~~**Approved by (name + signature) .....:**~~		
⊟ ~~**Testing procedure: SMT**~~		
~~**Testing location/ address .....:**~~		
~~**Tested by (name + signature) .....:**~~		
~~**Approved by (name + signature) .....:**~~		
~~**Supervised by (name + signature) ..:**~~		

List of Attachments (including a total number of pages in each attachment):

See part 1

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
See part 1	See part 1

Summary of compliance with National Differences

List of countries addressed:

See part 1

Copy of marking plate

See part 1

Test item particulars.....:	
Classification of installation and use.....:	Angle grinder
Supply Connection.....:	Type Y attachment with plug
.....:	
Possible test case verdicts:	
- test case does not apply to the test object.....:	N/A
- test object does meet the requirement.....:	P (Pass)
- test object does not meet the requirement.....:	F (Fail)
Testing.....:	
Date of receipt of test item .....:	2020-06-08
Date (s) of performance of tests.....:	2020-06-08 to 2020-07-08

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a comma is used as the decimal separator.

This Test Report Form is intended for the investigation of grinders, polishers and disk-type sanders in accordance with IEC60745-2-3. It can only be used together with the IEC 60745-1 Test Report.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :

☐ **Yes**
☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).....: See part 1

General product information:

See part 1

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
8	**MARKING AND INSTRUCTIONS**		
8.1	Tool also marked with the following:		P
	- rated speed in revolutions per minute ..... :	n:1000-1600 /min or n: 780-1250 /min	P
	- rated capacity in mm ..... :	Ø225 mm	P
	- tool provided with a threaded spindle marked with spindle thread size..... :		N/A
	"  WARNING Always wear eye protection", or sign M004 of ISO 7010, or appropriate safety sign	M004 of ISO 7010	P
	The eye protection symbol, optionally, modified by adding other personal protective equipment such as ear protection, dust mask, etc. ..... :		N/A
8.6	If units or technical data are expressed by symbols then "n" is used for rated speed		P
8.12.1	For the following safety instructions specified in 8.12.1.101 to 8.12.1.107, terms such as grinding/grinder, sanding/sander, wire brushing/wire brush, polishing/polisher, or cutting off/cut-off tool selected as recommended by the manufacturer	sanding	P
	These terms in the warnings and headings are consistently used or deleted based on the selected operations		P
	The "and"/"or" conjunctions, optionally, used as appropriate		P
	If the power tool is recommended only for one of the listed operations, the heading of that section is to be used for all warnings		P
8.12.1.101	Safety instructions for all operations		P
	a) This power tool is intended to function as a grinder, sander, wire brush, polisher or cut-off tool. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury		P
	b) Operations, such as grinding, sanding, wire brushing, polishing or cutting-off are not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury		P

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Do not use accessories, which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation		P
	d) The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart		P
	e) The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled		P
	f) Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange. Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control		P
	g) Do not use a damaged accessory. Before each use, inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time		P
	h) Wear personal protective equipment. Depending on application, use a face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or work piece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss		P
	i) Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of work piece or of a broken accessory may fly away and cause injury beyond immediate area of operation		P

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	j) Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock		P
	k) Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory		P
	l) Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control		P
	m) Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body		P
	n) Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards		P
	o) Do not operate the power tool near flammable materials. Sparks could ignite these materials		P
	p) Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock		P
8.12.1.102	Kickback prevention is addressed by providing precautions a) to e), or equivalent		P
	a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken		P
	b) Never place your hand near the rotating accessory. Accessory may kickback over your hand		P
	c) Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging		P
	d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback		P

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Clause	Requirement + Test	Result - Remark	Verdict
	e) Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control		P
8.12.1.103	Additional safety instructions for grinding and cutting-off operations		N/A
	a) Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe		N/A
	b) The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip. An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected		N/A
	c) The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel and sparks that could ignite clothing		N/A
	d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter		N/A
	e) Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges		N/A
	f) Do not use worn down wheels from larger power tools. Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst		N/A
8.12.1.104	Additional safety instructions for cutting-off operations		N/A
	a) Do not “jam” the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage		N/A
	b) Do not position your body in line with and behind the rotating wheel. When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you		N/A

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	c) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding		N/A
	d) Do not restart the cutting operation in the work piece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the work piece		N/A
	e) Support panels or any oversized work piece to minimize the risk of wheel pinching and kickback. Large work pieces tend to sag under their own weight. Supports must be placed under the work piece near the line of cut and near the edge of the work piece on both sides of the wheel		N/A
	f) Use extra caution when making a “pocket cut” into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback		N/A
8.12.1.105	Safety instructions for sanding operations are provided, if these operations are recommended by the manufacturer		P
	a) Do not use excessively oversized sanding disc paper. Follow manufacturer’s recommendations, when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback		P
8.12.1.106	Safety instructions for polishing operations are provided, if these operations are recommended by the manufacturer		N/A
	a) Do not allow any loose portion of the polishing bonnet or its attachment strings to spin freely. Tuck away or trim any loose attachment strings. Loose and spinning attachment strings can entangle your fingers or snag on the work piece		N/A
8.12.1.107	Safety instructions from a) and b) for wire-brushing operations are provided, if these operations are recommended by the manufacturer		N/A
	a) Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush. The wire bristles can easily penetrate light clothing and/or skin		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard. Wire wheel or brush may expand in diameter due to workload and centrifugal forces		N/A
8.12.2 a)	101) Types of accessories in accordance with 8.12.1.101 a)..... :		P
	102) Thickness and diameter of grinding wheels..... :		N/A
8.12.2 b)	The Instruction Manual provided with the Operating Instructions		P
	101) Instruction on the proper use of blotters, when they are provided with the bonded abrasive product		N/A
	102) Information about the specific flanges to be used with all wheel types in accordance with 8.12.2 a) 101)		N/A
	Instruction on the mounting of accessories and the use of the correct flanges		N/A
	For reversible flanges, instruction on the correct method of fitting the flanges		N/A
	103) For all wheels specified in accordance with 8.12.2 a) 101), instruction on their proper use		N/A
	For grinding and cut-off wheels, instruction on their use for side grinding and peripheral grinding applications		N/A
	For Type 27 and 28 wheels, the recommended angle to the work surface		N/A
	104) For all operations listed in accordance with 8.12.1.101 a), where the use of a guard is required, instruction for the proper type of guard to be used		P
	105) Instruction for the mounting and securing of the guard identifying allowable adjustments to ensure maximum protection of the operator		N/A
	106) Instruction on proper support for the work piece		P
	107) In case of cup-wheels, cones or plugs with a threaded hole intended to be mounted on the machine spindle, critical dimensions and other data shall be given in order to prevent the spindle end from touching the bottom of the mounting hole of the abrasive product		N/A
	108) For disk-type sanders exclusively intended for sanding wooden floors, an instruction stating how to connect the external dust collection equipment where applicable		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.12.2 c)	The Instruction Manual provided with instructions regarding Maintenance and Servicing: 101) Storage and handling of recommended accessories		P
8.101	Tool marked with an indication of direction of rotation of the spindle, indicated by an arrow, raised or sunk, or by any other means no less visible and indelible		P
12	**HEATING**		P
12.4	The tool operated at rated input or rated current for 30 minutes; the temperature rises measured at the end of the 30 min		P
18	**ABNORMAL OPERATION**		N/A
18.10.4	During the tests, the speed of the spindle did not exceed 120 % of the rated speed (Rev min $^{-1}$) ..... :		N/A
	The accessory in accordance with 8.12.2 a) 101) resulting in the maximum speed installed		N/A
19	**MECHANICAL HAZARDS**		P
19.4	Tools with a rated capacity exceeding 100 mm have at least two handles		P
19.101	Grinders with a rated capacity exceeding 55 mm provided with at least one wheel guard to protect the user during normal use against the following events:		N/A
	– accidental contact with the abrasive product		N/A
	– ejection of fragments of the abrasive product		N/A
	– sparks and other debris		N/A
	If the tool is supplied with one or more accessories, the wheel guard(s) supplied shall be appropriate for the supplied accessory (ies).		N/A
	The wheel guard is, optionally, removable either with the aid of a tool or by fulfilling the following requirements:		N/A
	– two separate and dissimilar actions required to remove the guard(e.g., pushing a lever and turning the guard)		N/A
	– For removal, the guard is turned to a position that does not occur in normal operation.		N/A
	- the guard is designed so that in case of a wheel burst, the guard reduces the risk of injury to the operator and remains attached to the grinder and comply with the test of 20.101		N/A
	-facilitate the change of the abrasive wheel without the need to remove the guard		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	- the risk of an accidental contact between the operator and the wheel during normal use is minimized		N/A
	To prevent the installation of an oversized wheel, the clearance between the inside of the guard and the periphery of a new abrasive product according to 8.12.2 a) 101) is 8 mm max. in at least one location for tools with a rated capacity ≥ 130 mm (mm) ..... :		N/A
	10 mm maximum for tools with a rated capacity exceeding 130 mm (mm) ..... :	-	N/A
	For wheel Type 1 (grinding wheels) and wheel Types 41 and 42 (cutting-off wheels), the guard covers at least 175° of the abrasive wheel periphery and both sides of the wheel		N/A
	The front curtain is designed to facilitate easy replacement of the wheel		N/A
	Enclosure of the spindle end, nut, and the locking flange not required (Fig 101)		N/A
	For wheel Types 27, 28 and 29, the guard shall cover the abrasive wheel periphery and the backing flange side for at least 175°. The guard periphery shall have a lip on the outer edge that curls inward for at least 3 mm from the intersect line of the top surface of the thickest wheel and largest wheel diameter, as specified in accordance with 8.12.2 a) 102), with the inner surface of the guard to the inner edge of the lip, measured radially.		N/A
	The face of the thickest recommended wheel shall be at least 2 mm axially from the inner surface of the lip. The ends of the lip protruding the thickest recommended wheel may be chamfered by not more than 45°. See Figure 102.		N/A
	For diamond cutting-off wheels, one of the two guards above is provided ..... :		N/A
	For wheel Types 6 and 11 (straight and flaring cup wheels), the guard covers at least 240° of the abrasive wheel periphery (Figure 103); the guard is adjustable axially to compensate for the wear of the largest permitted wheel and to restrict the axial exposure of the wheel to less than 3 mm		N/A
	The guard coverage angle is measured with the vertex at the centre of the spindle and extended to the guard periphery	-	—
19.102	The tool is designed so as to prevent the abrasive product coming loose under normal use		N/A

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Grinders provided with at least backing flange(s) and locking flange(s) for mounting the type of grinding wheels that are intended to be used with the guard supplied with the grinder		N/A
	The flanges meet the requirements of 19.104 and 19.105, or		N/A
	The flanges are one of the following designs:		N/A
	− non-reusable plate mount or threaded nut affixed to the wheel by the manufacturer		N/A
	− threaded hole or modified cup wheels		N/A
19.103	Spindles designed to provide or aid in securing and driving the abrasive products designed for the tool		N/A
	The direction of spindle threads or the design of the equivalent securing means is such that any clamping device or wheels with threaded hole tends to tighten during working		N/A
	In order to limit the unbalance of any rotating accessory, the eccentricity of the spindle is less than 0,1 mm (mm) ..... :		N/A
	For tools that provide for mounting of the accessory through the flange or similar device, the total eccentricity of the combination of the spindle, the diameter of the flange bore and the diameter of the part of the flange is less than the allowed maximum		N/A
	Total eccentricity and rated speeds (mm), (min^{-1}) ... :		—
	The eccentricity is measured as the difference between the minimum and the maximum reading of the indicator.		—
	For tools with flanges, the eccentricity of the flange in the worst off-centre position allowed by the mounting procedure measured..... :		N/A
19.104	Flanges required by 19.102 designed so that they secure and locate the abrasive products to grinder		N/A
	At least one of the flanges is keyed, screwed, shrunk or otherwise secured to prevent rotation relative to the tool spindle		N/A
	Flanges are flat and have no sharp edges		N/A
	The flanges have the dimensions specified in 19.104.1 and 19.104.2 and illustrated in Figure 104 (i.e., D is the outside diameter of the abrasive wheel, G and W are the dimensions of the recess and D f is the outside diameter of the flange clamping surface)		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	If the clamping surface of the locking flange is chamfered, the bevel angle, measured from the clamping surface, shall be at least 45° and the non-clamping surface outside diameter of the flange may be increased by not more than 4 mm		N/A
	Flanges for wheels under 55 mm diameter are, optionally, not recessed		N/A
	For wheels of any diameter with threaded inserts or projecting studs, the flanges are not recessed (i.e., G = 0)		N/A
	The backing and the locking flange have the same diameter D f , or the overlap of the backing and locking flange bearing surfaces are at least equal to dimension C		N/A
	The locking flange and/or nut do not extend beyond the plane defined by the lip of the guard when mounted with the thickest recommended Type 27, 28 or 29 wheel		N/A
19.104.1	The flange dimensions for wheel Type 1 is $D_f \geq 0{,}33\ D$ ..... :		N/A
	The flange diameter for wheel Types 6, 11, 27, 28, 29, 41 and 42 are as follows:		N/A
	- D_f = (20 ± 1) mm for 55 mm ≤ D < 80 mm..... :		N/A
	- D_f = (20 ± 1) mm for 80 mm ≤ D < 105 mm for wheels with a bore dia. of 10 mm (3/8 in UNC)..... :		N/A
	- D_f = (29 ± 1) mm for 80 mm ≤ D < 105 mm for wheels with a bore dia. of 16 mm (5/8 in UNC)..... :		N/A
	- D_f = (41 ± 1) mm for 105 mm ≤ D ≤ 230 mm..... :		N/A
	For wheel Type 41, the Df dimension, optionally, exceeds the above values for backing and locking flanges (mm)..... :		N/A
	For all other wheel types, the diameter Df, optionally, exceeds the above values for backing flanges only (mm) ……..:		N/A
19.104.2	The dimensions C, G, and W in Figure 104		N/A
	C ≥ 3 mm (mm) ..... :		N/A
	W ≥1 mm, G ≥ 1 mm for D_f < 50 mm (mm)..... :		N/A
	W ≥1 mm, G ≥ 1.5 mm for D_f ≥ 50 mm (mm) ..... :	-	N/A
	The cross-section of the recess need not be rectangular		N/A
19.105	Flanges required by 19.102 are designed so that they are of adequate strength		N/A

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Torques for testing flanges (Nm) ..... :		—
19.6	The tool is designed so as to prevent excessive speed under normal use		P
	Speed of the tool did not exceed the rated speed under any operating condition (Rev min -1) ..... :	n: 1600 /min 1530 /min n: 1250 /min 1196 /min	P
	The speed measured after the tool operated for a period of 5 min, and the recommended accessory producing the maximum speed was installed		P
	A tool provided with a load sensitive speed control was not supplied with an accessory to load the tool to find maximum speed		N/A
20	**MECHANICAL STRENGTH**		P
20.5	All wheel guards specified in accordance with 8.12.2 b) 104) have sufficient mechanical strength to prevent the wheel fragments from being ejected towards the operator in the event of the wheel breakage		N/A
20.101	All wheel guards specified in accordance with 8.12.2 b) 104) have sufficient mechanical strength to prevent the wheel fragments from being ejected towards the operator in the event of the wheel breakage		N/A
	Three samples of any recommended guard subjected to test in Cl. 20.101.1 to 20.101.4 ..... :		N/A
20.101.1	The guard securely mounted and fixed to the grinder in accordance with the instructions of 8.12.2 b) 105)		N/A
	Adjustable guard positioning (Figs. 106a and 106b)		N/A
	Maximum thickness grinding wheel recommended by the manufacturer with a diameter equal to the rated capacity of the grinder mounted to the spindle		N/A
	The grinder operated at rated voltage and no-load for a minimum of 5 minutes, and the speed of the wheel measured (Revolutions min $^{-1}$)..... :		N/A
20.101.2	Selected wheels notched into 4 segments with the extend of the notches such as to cause the wheels to disintegrate at the higher of speed established in 20.101.1 or 90 % of the rated speed (n/min)..... :		—
20.101.3	A mass of 1 kg mounted at the midpoint of the switch handle and a mass of 0,5 kg mounted at the midpoint of a side handle installed on each side of the grinder (see Figure 107)		N/A

IEC 60 745-2-3			
Clause	Requirement + Test	Result - Remark	Verdict
	The grinder suspended at the midpoint of the gripping zone on each side handle and at the midpoint of the switch handle		N/A
	For grinders without side handles, a mass of 1 kg attached at the midpoint of the switch handle		N/A
	An adaptor with simulated side handles as means of suspension and weight attachment of 0,5 kg at each side shall be provided for the test		N/A
	The adaptor have a mass as small as possible and be located at the midpoint of the front gripping zone for straight grinders (see Figure 109) and less than half the rated capacity distance behind the output spindle for angle and vertical grinders		N/A
	Mass and distance (kg, mm)..... :		—
	The suspension point and weight attachment on the left and right side of the tool located at a distance from the centre of the spindle which is equivalent to rated capacity and at 90° to the centre line through the length of the tool.		N/A
	The three suspension ropes anchored to a single point, and the tool positioned inside a test box (Figs. 110a - 110b)		N/A
	The test box, preferably with a hexagonal, octagonal or round shape, approximately 1 m in interior diameter and approximately 1 m deep, have an outer shell capable of restraining the disintegrating wheel segments and the interior walls, lined with 25 mm to 35 mm of modelling clay, backed by an additional 25 mm to 35 mm thick layer of cork (see Figures 110a and 110b)		N/A
	An angle and vertical grinder with the mounted guard and the notched wheel facing down in the horizontal plane positioned with the wheel approximately in the centre and 300 mm from the bottom of the box (see Figure 110a)		N/A
	The two side handles secured to the box with less than 5 N to align the grinder inside the box and to prevent the grinder from twisting during the wheel's acceleration		N/A
	For straight grinders, the test box turned on its side (i.e., axis of the box was horizontal)		N/A
	Grinder positioned with the wheel approximately in the centre of the box, with the plane of the wheel perpendicular to the clay walls of the box (Fig. 110b)		N/A
	The switch handle secured with less than 5 N to the box to restrain the grinder from excessive movement during the wheel's acceleration, such that, the movement of the midpoint of the switch handle did not exceed 30 mm from side to side		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Alternatively, a high-speed camera was used to fix the position of the tool just prior to the wheel burst		N/A
20.101.4	The wheel speed monitored with a tachometer, the voltage to the tool gradually increased until the speed specified in 20.101.2 is achieved and the wheel disintegrate (otherwise the length of the pre-cuts increased and test repeated until bursts)		N/A
	Dust and minor fragments remaining in the guard are ignored while the clay wall captured most of the four major segments. If any of the major segments rebound from the clay, the segment's impression has been identified		N/A
20.101.5	The guard and the fasteners or the guard's mounting hardware remained in place		N/A
	As a result of the wheel's disintegration, the guard did not rotated in the direction of the wheel rotation by more than 90°		N/A
	The impression of the impact in the clay wall from the major segments was within the fragment zone		N/A
21	**CONSTRUCTION**		P
21.18.1	The angle and vertical grinders with a rated capacity exceeding 100 mm and straight grinders with a rated capacity exceeding 55 mm, have a switch of momentary contact type		N/A
	A lock-on device is provided and two dissimilar actions are necessary to lock the switch in the "on" position and only a single motion to the switch is required to automatically return to the "off" position		N/A
21.18.2	The grinder or the disc type sander has a rated capacity greater than 55 mm diameter and its switches are such that inadvertent operation is unlikely to occur during lifting or carrying		P
	It is not possible to start the tool when a sphere with a diameter of (100 ± 1) mm is applied to the switch perpendicularly to the tool's surface where the switch is mounted; and		P
	- the grasping surface immediately in front of or behind the switch is minimum of 70 mm; or		P
	- the switch has two separate and dissimilar actions before the motor is switched on	Press ON button (standby) and press motor-ON button	P
21.32	Not applied to polishers and disk-type sanders not intended to be used as grinders per instructions in accordance with 8.12.2		P

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Clause	Requirement + Test	Result - Remark	Verdict
24	**SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS**		N/A
24.4	The angle grinder with rated capacity greater than 155 mm, or the straight grinders with rated capacity greater than 130 mm, has supply cords not lighter than heavy polychloroprene-sheathed flexible cable (code 60245 IEC 66) or equivalent		N/A
29	**RESISTANCE TO HEAT, FIRE AND TRACKING**		P
29.3	The grinder, or the disk-type sander, was subjected to severe duty conditions		P
ANNEX K	**BATTERY TOOLS AND BATTERY PACKS**		N/A
ANNEX L	**BATTERY TOOLS AND BATTERY PACKS PROVIDED WITH MAINS CONNECTION OR NONISOLATED SOURCES**		N/A

20.101A	**TABLE: mechanical strength of wheel guards – Sample 1 (guard with front lip for surface grinding)**			N/A
Initial angle position for adjustable guard 1 (°).....:				
Final angle position for adjustable guard 1 (°) .....:				
Bust speed (min^{-1}).....:				
Grinder with no load operation				
Grinder voltage (V) :		Grinder wheel speed (min^{-1}) :		
Grinder with notched wheel				
Wheel Type ..... :				
Width of notch 1 (mm) ..... :		Pre-cut length (mm)..... :		
Width of notch 2 (mm) ..... :		Pre-cut length (mm)..... :		
Width of notch 3 (mm) ..... :		Pre-cut length (mm)..... :		
Width of notch 4 (mm) ..... :		Pre-cut length (mm)..... :		
Voltage (V) applied	Wheel speed (min^{-1})	Comments		
Supplementary information:				

---------- End ----------