

Assessment Report No. 7191273309-MEC21/02-DA
dated 07 Feb 2022

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ASSESSMENT OF LEVER HANDLE WITH REFERENCE TO
TÜV SÜD PSB TEST REPORT 7191273309-MEC21/01-MHA DATED 16-DEC-2021

Assessed for:

d line as
Roskildevej 22
2620 Albertslund
Denmark

Date submitted:

16 Dec 2021

Purpose:

To assess the lever handle with reference to TÜV SÜD PSB test report 7191273309-MEC21/01-MHA dated 16 Dec 2021 in meeting the requirements of BS EN 1906 : 2012, Building hardware – Lever handles and knob furniture.

The prototype lever handle was tested at TÜV SÜD PSB's fire test laboratory located at No. 10, Tuas Avenue 10, Singapore 639134.



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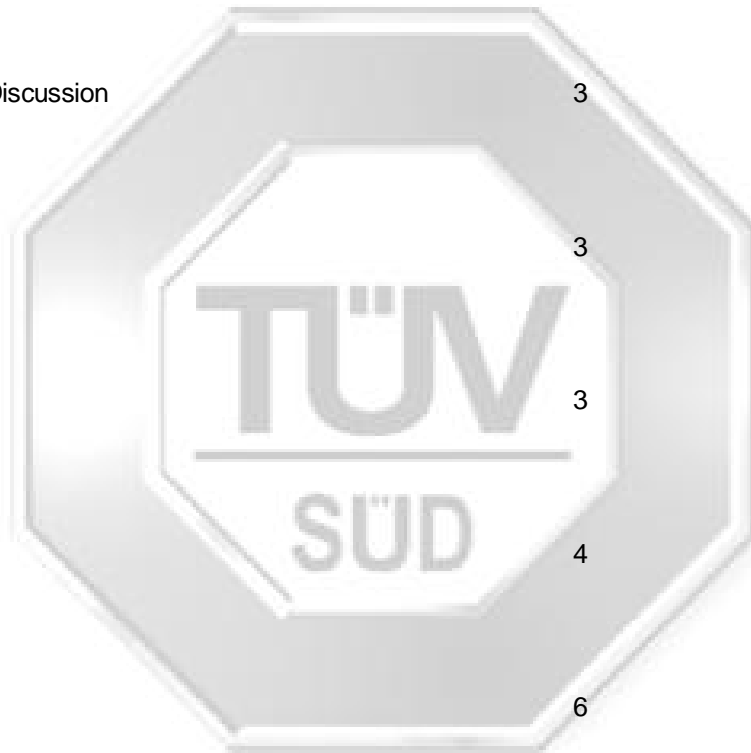
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M. P. Hing *David*



Introduction :

1. This assessment is for appraisal of lever handle as listed in appendix A, meeting the requirements of BS EN 1906 : 2012, Building hardware – Lever handles and knob furniture.
2. The details of the prototype tested lever handle tested to BS EN 1906 : 2012, “d Line” U19, are as described in TÜV SÜD PSB test report no. 7191273309-MEC21/01-MHA dated 16 Dec 2021.
3. The photos of the verified specimens are in Appendix B of this report and the dimensioned drawings and bill of materials for the use of assessment were given by d line as in the email dated 16-Dec-2021 and are in Appendix C of this report.

Assessment and discussion:

4. The list of lever handles to be assessed are in Appendix A of this report.
5. It was declared by d line as, as of their declaration dated 07-Feb-2022, that apart from the design of the handle, the critical constructions and material of the lever handles remained the same as the prototype tested lever handle.
6. The lever handles were verified for similarity of important design criteria.


Conclusion:

It is in our opinion that the lever handles stated in Appendix A, will also **meet the requirements of BS EN 1906 : 2012, Building hardware – Lever handles and knob furniture and can be classified as follows:**

Category of use	Durability	Door mass	Fire resistance	Safety	Corrosion resistance	security	Type of operation
3	7	-	0	0	0	0	U

Validity:

7. Since this assessment is based on current available test data and information, its validity need to be reviewed in 5 years' time from 16 Dec 2021 or at a time when the standard is revised, whichever is earlier.
8. If an actual test is conducted using the assessed construction, this assessment will be invalidated and the actual test data will take precedence. This assessment report will then be unconditionally withdrawn.


Min Htet Aung
Higher Associate Engineer


David Ang
Assistant Vice President
Fire Testing
Mechanical Centre



APPENDIX A

List of lever handles to be assessed

(Product information declared by test sponsor)

Brand / Model	Material	Country of manufacture
Brand: D LINE Model: 19L	Refer to bill of material	Lithuania

The assessment and discussion on the lever handles are as follows:

A1 : It is proposed that the lever handles to be assessed if tested to BS EN 1906 : 2012, will also meet the requirements of BS EN 1906 : 2012, Building hardware – Lever handles and knob furniture.

A1.1 The details of the prototype tested lever handle tested to BS EN 1906 : 2012, “d Line” U19, are as described in TÜV SÜD PSB test report no. 7191273309-MEC21/01-MHA dated 16 Dec 2021. The prototype tested lever handle was of the unsprung type with solid handle.

A1.2 The lever handle to be assessed is similar in design with the prototype tested lever handle. The assessed lever handle is also of the rose type and unsprung with solid handle.

A1.3 One model of the lever handle was verified with results tabulated in the following tables.:

A1.3.1 Axial strength of lock or latch furniture and fastening elements

Descriptions	Results of assessed model		Requirements
	19L	-	
Test force applied	800N	-	Test force to be applied and maintained for 60s. <input type="checkbox"/> Grade 1 : 300N <input type="checkbox"/> Grade 2 : 500N <input type="checkbox"/> Grade 3 : 800N <input type="checkbox"/> Grade 4 : 1000N
Functionality	Compliant	-	There shall be no failure of any component and lever handles or knob shall still operate after the test.
Deformation	1.6 mm	-	Permanent deformation at the reference point 75mm from the axis of rotation shall not increase by more than 2mm.

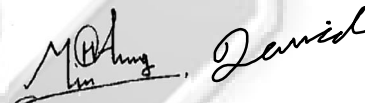
M. David

A1.4.2 Rotational strength

Descriptions	Results of assessed model		Requirements
	19L	-	
Torque applied	40 Nm	-	<input type="checkbox"/> Grade 1 : 20 Nm <input type="checkbox"/> Grade 2 : 30 Nm <input type="checkbox"/> Grade 3 : 40 Nm <input type="checkbox"/> Grade 4 : 60 Nm
Torque holding time	60 sec	-	Torque to be maintained for 60s
Permanent deformation	0.9 mm	-	Permanent deformation shall be ≤5mm

A1.5 It was declared by the manufacturer, as of their email dated 07 Feb 2021 that for the lever handles to be assessed the materials are identical to the prototype tested in report no. 7191273309-MEC21/01-MHA dated 07 Feb 2021.

A1.6 It is also in consideration that the results of the assessed lever handles can meet the test requirements and are similar in construction with the prototype tested, hence if tested to BS EN 1906 : 2012 it is expected to also meet the requirements of BS EN 1906 : 2012, Building hardware – Lever handles and knob furniture.



APPENDIX B

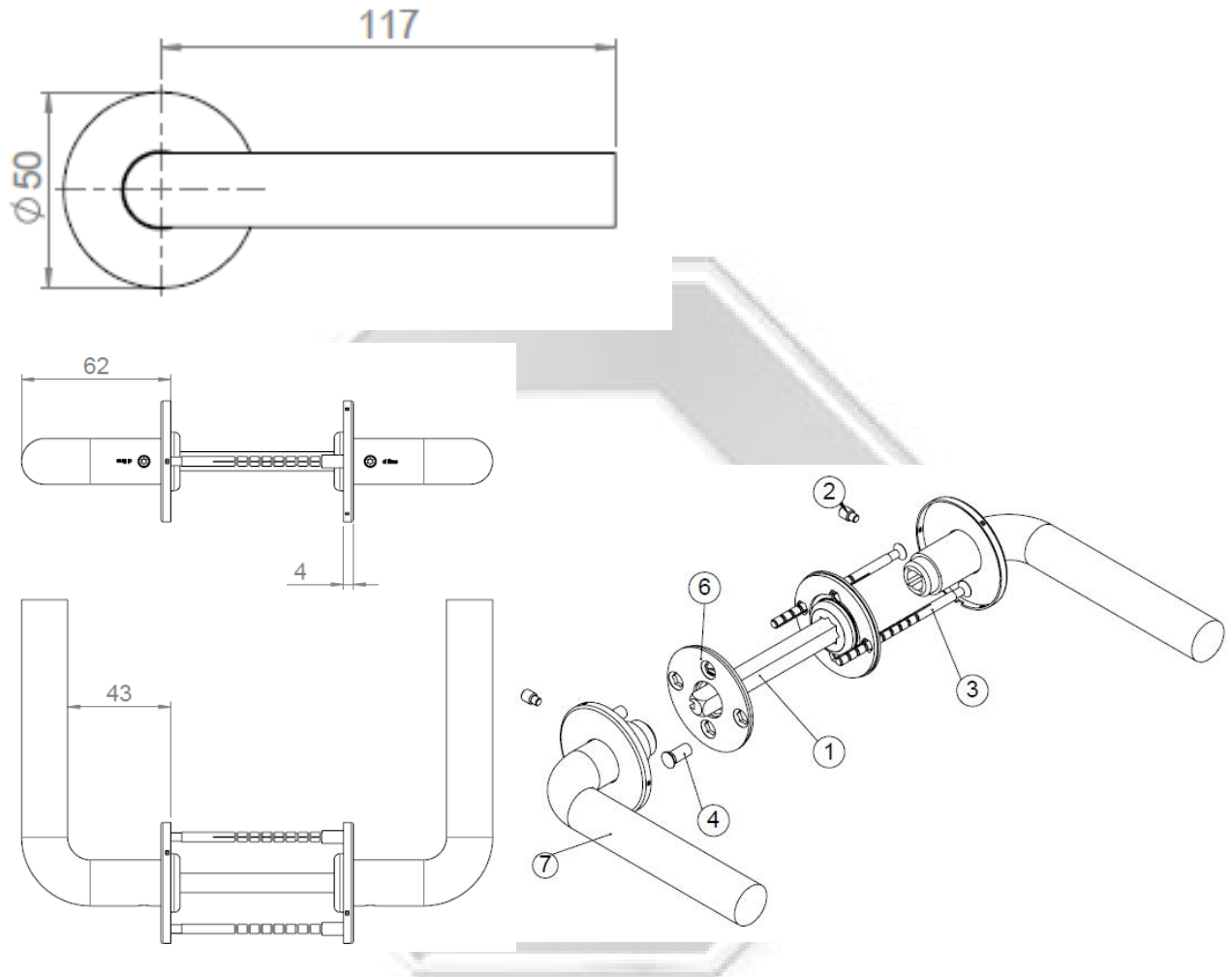
Photographs of verified lever handle – 19L



M. Wang, David

APPENDIX C

Dimensioned drawing and bill of material of lever handle – 19L
(All dimensions in mm)



Item	Material
1	AISI 316 stainless steel
2	AISI 316 stainless steel
3	AISI 316 stainless steel
4	AISI 316 stainless steel
5	AISI 316 stainless steel
6	AISI 316 stainless steel
7	AISI 316 stainless steel

Note: handle diameter of 19mm
: Spindle of 8mm x 8mm

M. David



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Effective 26 January 2021

