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Test Report

財團法人自行車暨健康科技工業研究發展中心 檢測實驗室 2024-10-21 Cycling & Health Industry R&D Center Testing Laboratory

Contract No	: 24091005W-2
Issue Date	: Oct. 21, 2024
Applicant	: New Allied Corporation
Address	: No.67, Aly. 121, Ln. 516, Sec. 2, Xinan Rd., Wurih Dist., Taichung City 414, Taiwan
Product	: Bariatric Attendant Shower Commode Chair
Model No	: CM6176ABHD-4B
Test Standard	: As shown in the test report.
Test Results	: As shown in the test report.

Note: (1) The test sample(s) is provided by the applicant and the CHC test result(s) are shown below.
(2) This test report refers only to the test result(s) of the sample(s) tested, and the measurement uncertainty will not be considered. The above content follows regulations from corresponding authorities.
(3) There is a total of 10 pages in this report which shall not be abstracted and partially copied.
(4) There is only one test report for the applicant.

Approved by : Chih-yen, Lin Tested by : Chen-Hua, Hsu

FORM NO：RI20-08

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Sample Received Date : 2024.09.19 Testing Date(s) : 2024.09.24~2024.10.08 Environmental Conditions : 24.0~25.3℃, 40~66% RH

1. Test sample :
   1.1 Test sample appearance normal is shown in Fig. 1.
   1.2 Test sample features and specifications is shown in Tab. 1.

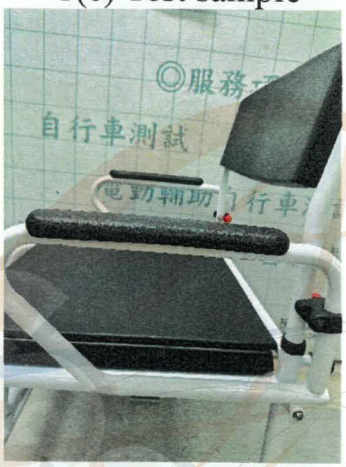

1(a) Test sample


1(b) Test sample


1(c) Test sample


1(d) Test sample


1(e) Back support


1(f) Arm support


1(g) Front wheel


1(h)Rear wheel

1(i) Weight (18.84 kg)

Fig. 1 Test sample

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Tab. 1 Specification of the sample

Sample	Features and Specifications			Remark
Bariatric Attendant Shower Commode Chair (CM6176ABHD-4B)	Sample characteristics ✓= Configuration ×= No configuration	Back support	✓	---
		Arm support	✓	---
		Seat	✓	---
	Tire pressure (psi)	Front tire	Solid tire	---
		Rear tire	Solid tire	---
	Weight(kg)	18.84 kg		Fig.1(i)
	Maximum user mass (kg)	300 kg		Data source: The manufacturer declares the maximum user weight of the product.

2. Test standard :
   CNS 17966 (2018) Assistive products for personal hygiene that support users — Requirements and test methods.
3. Test machine (instrument) name:
   (1).EM-13 Electronic platform scale.
   (2).EE-02 Static stability tester.
   (3).BE-02 Sport equipment test machine.
   (4).EE-19 Static stability tester.
4. Test items and results : As shown in Tab. 2.

Table.2 CNS 17966 (2018) Assistive products for personal hygiene that support users —Requirements and test methods test results

No.	Test items	Requirement	Method	Result
1	16.4.2.2 Static strength of an arm support downw-ards	During and after the static strength tests no parts of the APPH shall: — become unstable; — exhibit any cracking; — have any loose connections; — have visible deformations or gaps disturbing the function — become detached.	Calculate downward force to be applied to an arm support using the formulae in Table 6.Each arm support is loaded for a minimum of 60 s in a point 50 mm from the front edge. $F=(M_d \times S \times g)/(2 \times \cos 15^\circ)$ $F=(300\ kg \times 1.5 \times 9.807)/(2 \times \cos 15^\circ)=2283\ N$ (MAX.950 N) With the APPH standing on the horizontal test plane, attach the maximum load determined by the formula or any greater load specified by the manufacturer, so that its line of action intersects the support surface of the arm support as shown in CNS 17966 Figure 18 and 19. Before commencing the test set-up, the means to prevent the assistive product from tipping and the means to prevent the assistive product from moving backwards and forwards are applied. If there are two arm supports half the load shall be applied to each of the arm supports simultaneously or one at a time individually. Slowly increase the load until the force F reaches the value specified in the formula or the greater value specified by the manufacturer.	Pass (Fig. 2)

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No.	Test items	Requirement	Method	Result
2	16.4.2.3 Static strength of seat and back support	During and after the static strength tests no parts of the APPH shall: — become unstable; — exhibit any cracking; — have any loose connections; — have visible deformations or gaps disturbing the function — become detached.	Set up the APPH according to manufacturer's instructions. The APPH shall be secured so that it does not move during testing in a way that does not affect the test. Static strength of seat : For the static strength test of the seat, apply the maximum load, using a loading pad as specified in CNS 17966 4.8.12.4 for 20 min to the part of the APPHs seat support surface according to CNS 17966 Figure 16. $F_1=M\times S\times g$ $F_1=300\ kg\times 1.5\times 9.807=4414\ N$ If the APPH has a seat lid, the load shall be placed on the upper surface of the lid due to foreseeable misuse. Static strength of back support For the static strength test of the back support, apply the maximum load, using a loading pad as specified in CNS 17966 4.8.12.3 for 20 min to the part of the APPH's back support surface according to CNS 17966 Figure 16. $F_2=0.5\times M\times g$ $F_2=0.5\times 300\ kg\times 9.807=1472\ N$ If there are any brakes, they shall be activated and the APPH shall not be able to tilt during the test. The test shall be done with the back support in the most adverse position if it has an adjustable recline function.	Pass (Fig. 3~4)
3	16.4.2.4 Static strength of foot supports	During and after the static strength tests no parts of the APPH shall: — become unstable; — exhibit any cracking; — have any loose connections; — have visible deformations or gaps disturbing the function — become detached.	Before commencing the test set-up, the means to prevent the APPH from tipping and the means to prevent the APPH from moving backward and forward are applied. Calculate downward forces to be applied to the foot support. With the APPH standing on the horizontal test plane, apply the forces, "Static force on foot support downward"(F_1) and "Static force on foot support remaining gap" (F_2), or any greater force specified by the manufacturer, at the foot support locations illustrated in CNS 17966 Figure 17. $F_1=M_d\times g$ $F_1=300\ kg\times 9.807=2943\ N$ (MAX. 1200N) $F_2=0.125\times M_d\times g$ $F_2=0.125\times 300\ kg\times 9.807=368\ N$ (MAX. 200N) Use a convex loading pad (see Figure 3) to apply the load on flat foot supports and foot supports consisting of two or more tubes and use a concave cylindrical loading pad (see CNS 17966 Figure 2) on foot supports consisting of a single tube. If foot supports are of an open construction so that a standard loading pad cannot transmit load to the structure, fit a suitable rigid plate to the foot support so that load is carried by the parts of the foot support nearest to the loading point. If two separate foot supports are used apply half of the load to each foot support in turns.	Pass (Fig. 5~6)
4	16.5.2.1 Durability of the arm support	During and after the durability tests no parts of the APPH shall: — become unstable; — exhibit any cracking; — have any loose connections; — have visible deformations or gaps disturbing the function; — become detached.	With the APPH standing on the horizontal test plane, apply the force ± 3 % determined by the formula in Table 6, or any greater force specified by the manufacturer, so that its line of action intersects the support surface of the arm support as shown in CNS 17966 Figure 18 and 19 using the concave loading pad selected as specified in CNS 17966 4.8.12.1. adverse position if it has an adjustable recline function. $F=(M_d\times g)/(2\times\cos 15^\circ)$ $F=(300\ kg\times 9.807)/(2\times\cos 15^\circ)=1518\ N$ (MAX.635 N±3%) The cyclical application of the load may be applied to both arm supports simultaneously or one at a time. The cycling shall be done in a smooth manner. Slowly increase the load until the force F reaches the value specified in formula in CNS 17966 Table 6, or the greater value specified by the manufacturer. After the test remove the load. number of test cycles: $n_{TC}=u_{UC}\times u_{TD}\times 365\times t_{DL}$ u_{UC} : uses per user cycle u_{TD} : typical uses per day t_{DL} : designed life time, in years(3 years) $n_{TC}=2\times 10\times 365\times 3=21{,}900$ number of test cycles	Pass (Fig. 7)

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No.	Test items	Requirement	Method	Result
5	16.5.2.2 Durability of seat surface	During and after the durability tests no parts of the APPH shall: — become unstable; — exhibit any cracking; — have any loose connections; — have visible deformations or gaps disturbing the function; — become detached.	The APPH shall be positioned horizontally on the test plane. Apply the load as specified in CNS 17966 Table 6vertically to the seat surface, according to CNS 17966 Figure 16. $F=M_d \times g$ $F=300\ kg \times 9.807 = 2943\ N$ Use a suitable loading pad (see CNS 17966 4.8.12.4) to apply the load. A test dummy according to ISO 7176-11 may also be used. The number of cycles shall be calculated as specified in the formula in CNS 17966 16.3 and in CNS 17966 Table 7 and Table 8 regarding the intended area of use. After the test remove the load. number of test cycles: $n_{TC} = u_{UC} \times u_{TD} \times 365 \times t_{DL}$ u_{UC} : uses per user cycle u_{TD} : typical uses per day t_{DL} : designed life time, in years(3 years) $n_{TC}=1\times10\times365\times3=10,950$ number of test cycles	Pass (Fig. 8)
6	16.6.2.1 Static strength of foot supports	After performing the tests in 16.6.2 the following requirements shall be fulfilled. a) No component shall be fractured or have become detached, with the following exceptions: — readjustment of postural supports is allowed; — retightening, readjusting or refitting of components that are identified in the manufacturer's instructions for use as operator-adjustable components is allowed; components identified as operator adjustable may require the use of tools, which shall be provided with the assistive product; — retightening, readjusting or refitting of any other component is not allowed. b) Cracks in surface finishes, such as paint, that do not extend into the structural material do not constitute a failure. c) No externally visible electrical cable shall be abraded or crushed. No externally visible electrical connector shall be crushed or disconnected. d) All parts intended to be removable, folding or adjustable shall operate as described by the manufacturer. e) All power-operated systems shall operate as described by the manufacturer. f) No elements of the APPH shall become loose, fractured or present any hazard. g) Handgrips shall not be displaced. h) No component or assembly of parts shall exhibit deformation, free play or loss of adjustment that adversely affects the function of the APPH.	This test applies to products where the back support height is 320 mm or greater above the seat. The measurement of the 320 mm is taken from the upper surface of the seat base at an angle of 90° from the centre of the seat. For back supports that have a pivot that allows them to align freely with the back of the user as shown in CNS 17966 Figure 21, position the back support impact test pendulum (see CNS 17966 4.8.13) with the bar vertical so that the mass is touching the back support on a horizontal line passing through the back support pivot. For products with other types of back supports, position the impact test pendulum with the bar vertical so that the mass is touching the centre line of the back support at a point 30 mm below the top of the back support as shown in Figure 22. Apply the brakes (if any). Position a rigid stopper (see 4.8.8) against the rear wheels/legs of the product and attach a loose restraint that is just long enough to prevent the APPH from tipping backwards beyond the balance point. Support the pendulum so that the rigid bar is at an angle of 30° ± 2° to the vertical as shown in Figure 22, and then allow it to fall freely one time and strike the back support. If the manufacturer claims that the product exceeds the minimum requirements, use the angle claimed by the manufacturer ± 2° for the test. If the back support is height adjustable the test shall be performed in worst case position. For products where the back support is mounted on two supporting members repeat the test twice with the pendulum repositioned so that it strikes the centre line of each back support 20 mm below the top of the back support. For products where the back support is mounted on a single central support repeat the test with the pendulum positioned to strike the back support at points located 0,4 times the back support maximum width from each side of its centre line.	Pass (Fig. 9)

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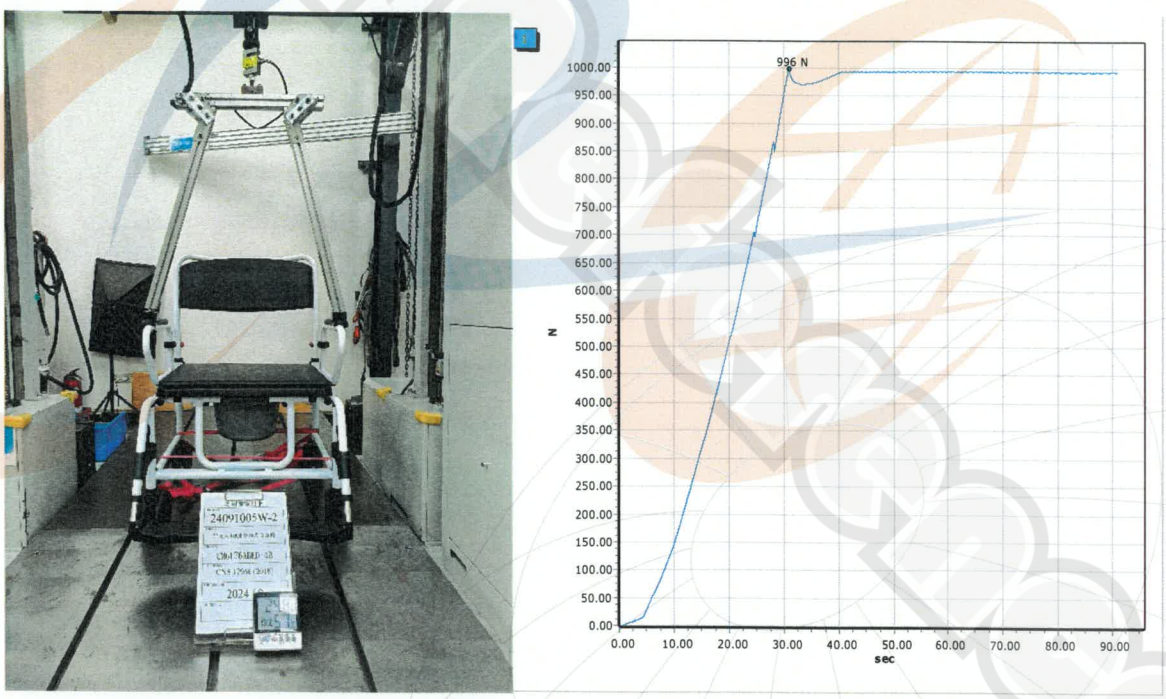
No.	Test items	Requirement	Method	Result
7	17 Stability (forward, backward and sideways)	During the stability test, a mobile and static APPH loaded with the maximum load shall not lose its equilibrium (balance) at a 10° angle forward and backwards, and at a 5° angle sideways.	The tests shall be carried out in the forward, backward and sideward directions as specified by the manufacturer on the inclined test plane (4.8.7) according to the required angle for each test. If for mobile APPHs, there is more than one intended direction of travel (forwards) they shall all be regarded as forwards. For mobile APPHs, the base is positioned in the travelling position as indicated by the manufacturer. The APPH shall be secured against slipping on the inclined surface by the means of stoppers (see 4.8.8 and Figure 1). Apply the maximum load distributed as indicated in Figure 14 for APPHs with a lying support surface. For APPHs with a sitting surface the centre of gravity of the load shall be placed according to Figure 16,force F_1, but not more than 350 mm from the front edge of the seat. F_1=M×S×g F_1=300 kg×1.5×9.807=4414 N	Pass (Fig. 10~ 11) Forward:23.45° Backward:23.60° Left sideway:21.60° Right sideway :21.70°

5. Appendix：



(If there are two arm supports half the load shall be applied to each of the arm supports simultaneously or one at a time individually.)

Fig. 2 Sec. 16.4.2.2 Static strength of an arm support downwards test status

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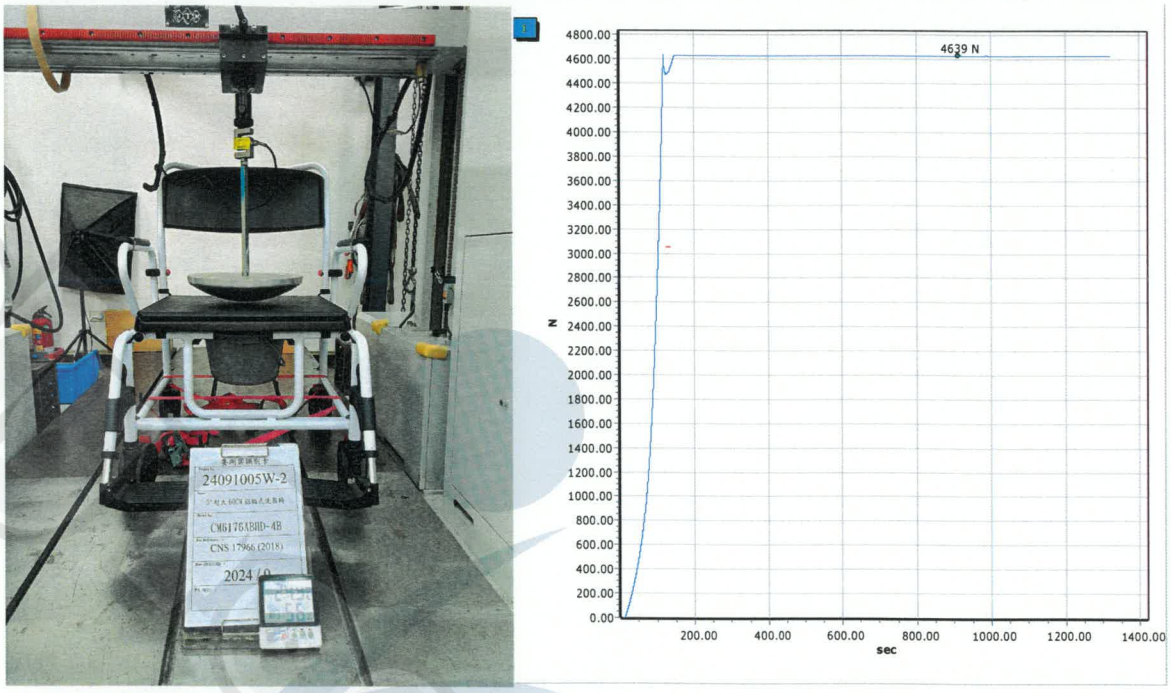

Fig. 3 Sec. 16.4.2.3 Static strength of seat test status

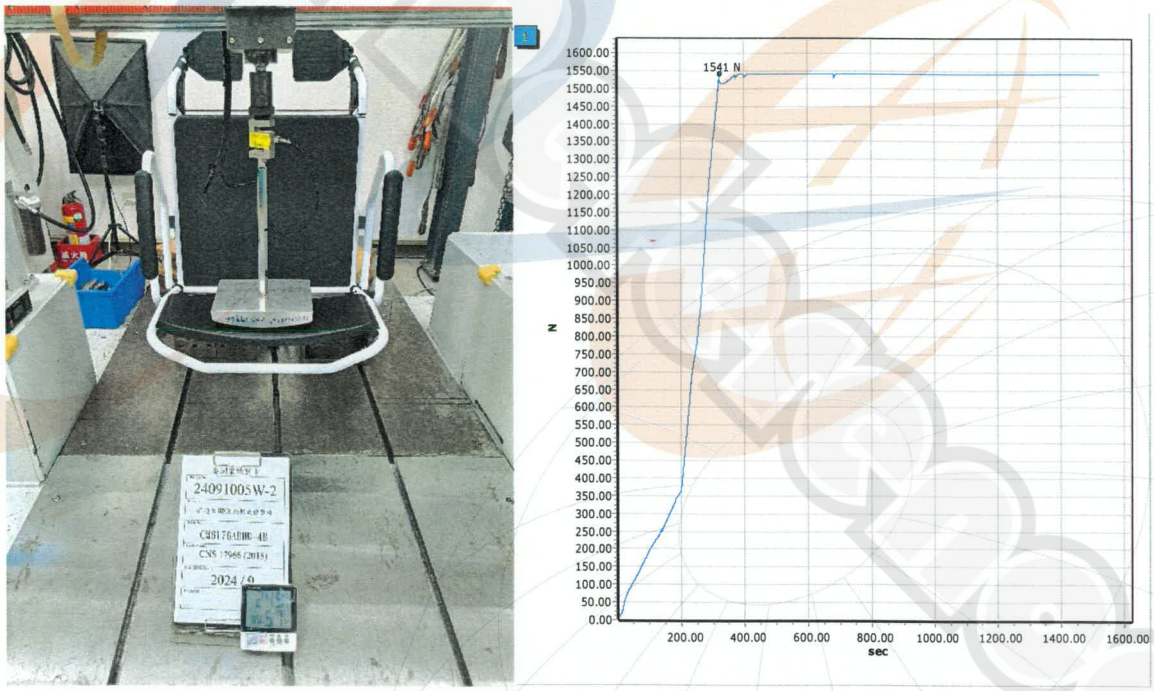

Fig. 4 Sec. 16.4.2.3 Static strength of back support test status

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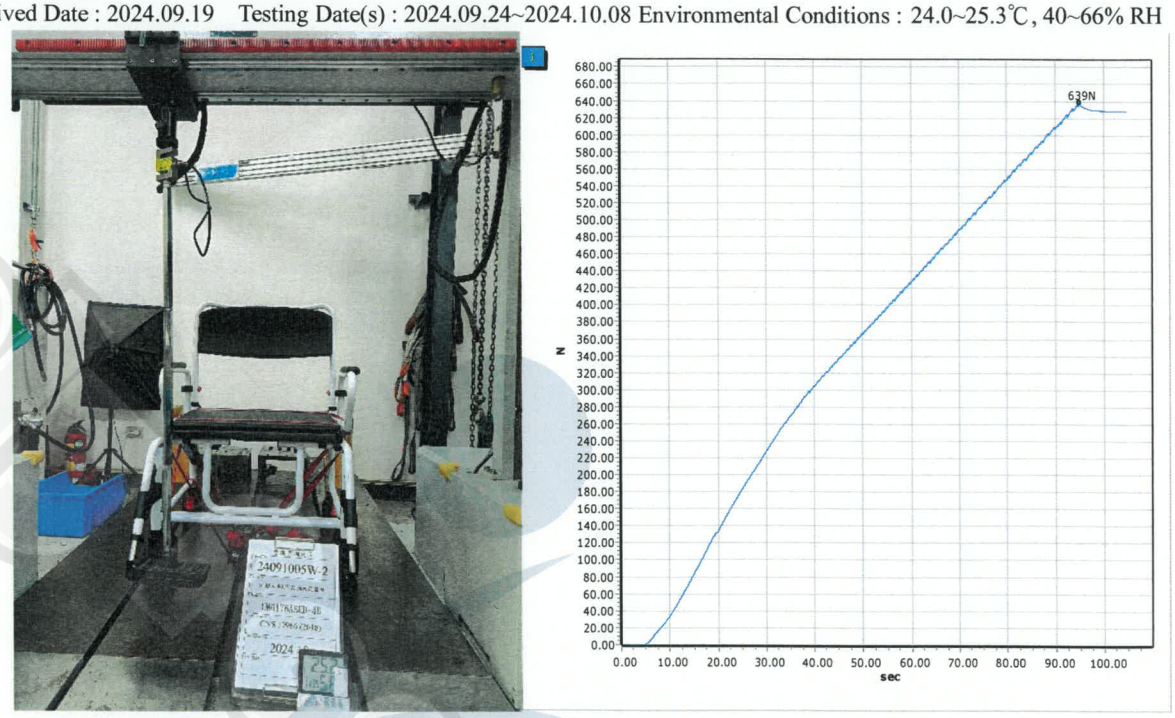
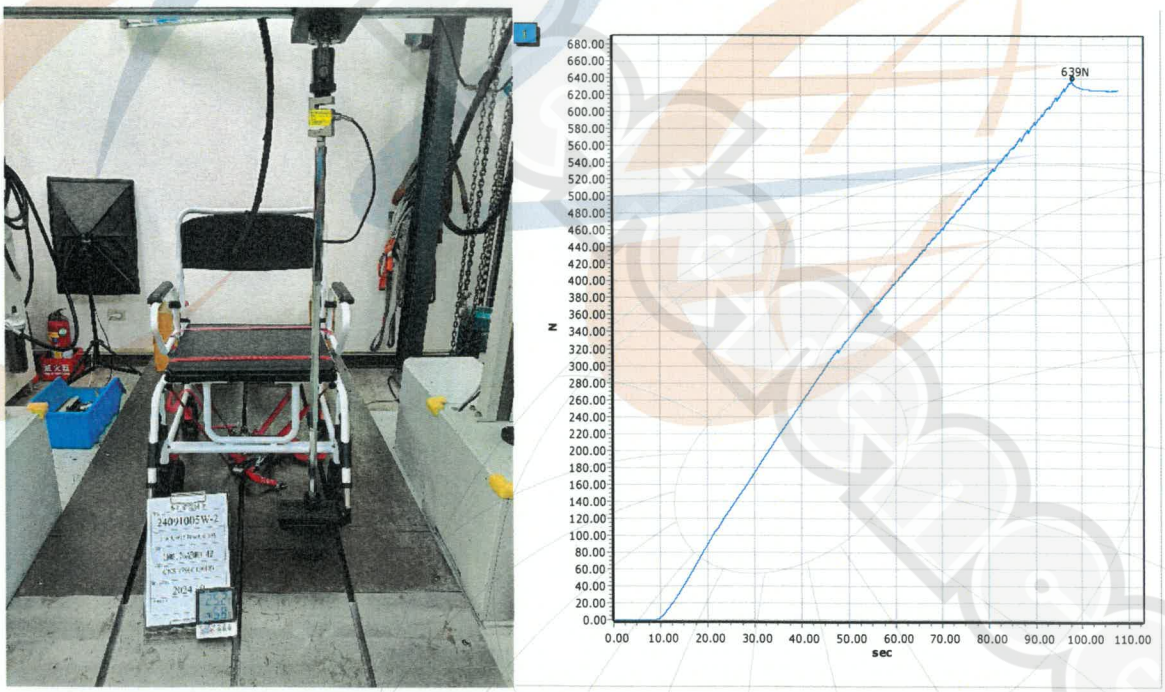


(If two separate foot supports are used apply half of the load to each foot support in turns.)

Fig. 5 Sec. 16.4.2.4 Static strength of foot supports(Right) test status



(If two separate foot supports are used apply half of the load to each foot support in turns.)

Fig. 6 Sec. 16.4.2.4 Static strength of foot supports(Left) test status

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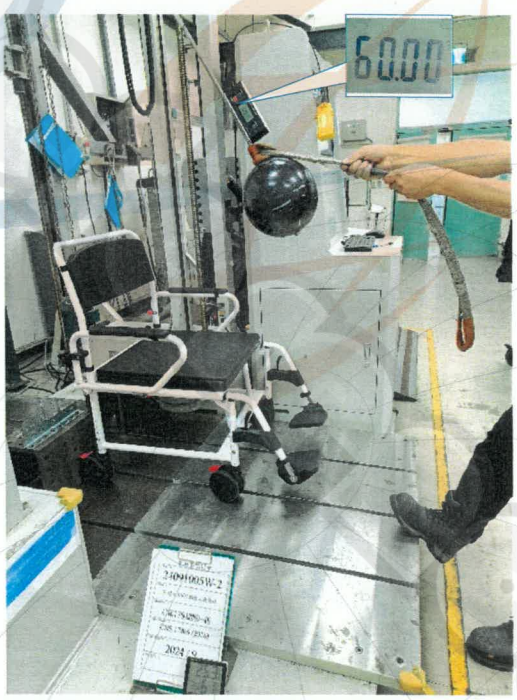
Fig. 7 Sec. 16.5.2.1 Durability of the seat arm support test status

Fig. 8 Sec. 16.5.2.2 Durability of the surface test status



Test angle:90°(angle gauge vertical angle)- 30°(test angle)=60°(display angle)

Fig. 9 Sec. 16.6.2.1 Test method for a back support (Right and Left) test status

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Fig. 10 Sec. 17 Stability (Forward and Backward) test status

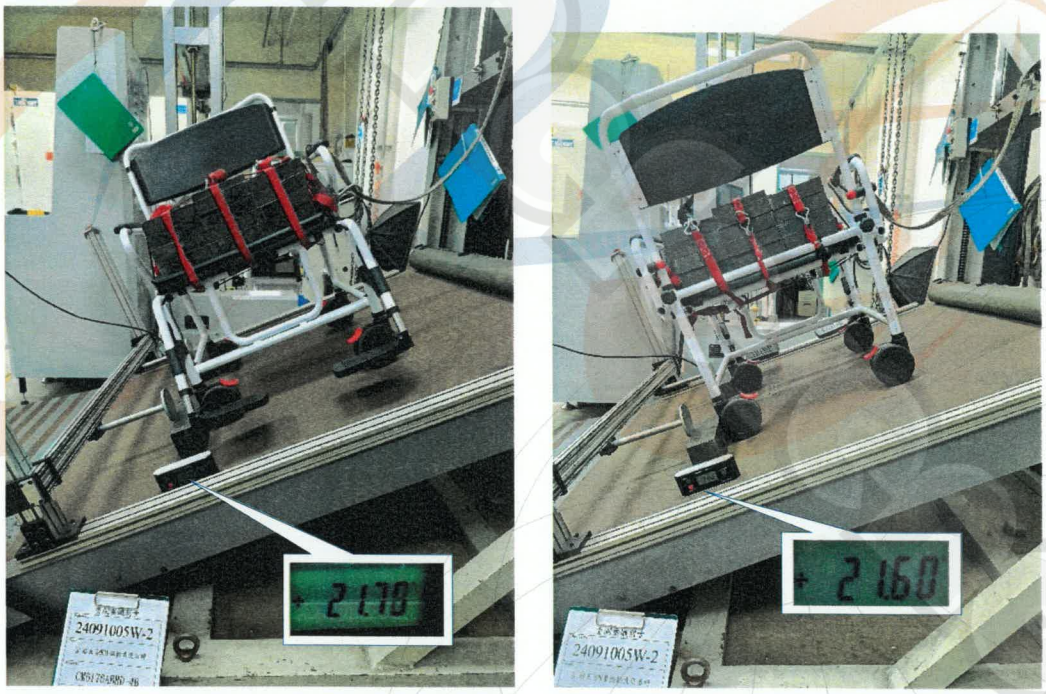

Fig. 11 Sec. 17 Stability (Right side and Left side) test status

End of this report.