DESIGN ANALYSIS FOR THE PRODUCTION OF PLATE HANDLES FOR CAR WINDSHIELDS

Toshkoziyeva Zulfiya Eraliyevna
Senior Lecturer Fergana Polytechnic Institute
toshquziyeva.zulfiya@gmail.com
Mukhtorov Sherzodjon Sobirjon oglu
Assistant Fergana Polytechnic Institute
muxtorovsherzod1995@gmail.com

Abstract. The plate handles attached to the windshield of the car can hold the mirror, ie a load of more than 2.7 kg, in the window and in any conditions without changing the position, there are appropriate proposals for the design.
Keywords: plate holder, vacuum envelope, 3M structural bonding tape.

Аннотация. Ручки-тарелки, крепящиеся к лобовому стеклу автомобиля, могут удерживать зеркало, т.е. груз более 2,7 кг, в окно и в любых условиях без изменения положения, есть соответствующие предложения по конструкции.
Ключевые слова: пластинодержатель, вакуумная оболочка, лента для структурного склеивания 3M.

Annotatsiya. Avtomobilning old oynasiga biriktirilgan plastinka tutqichlari oynani, ya'ni 2,7 kg dan ortiq yukni oynada va har qanday sharoitda pozitsiyani o'zgartirmasdan ushlab turishi mumkin, dizayn bo'yicha tegishli takliflar mavjud.
Kalit so'zlar: Plita ushlagichi, vakuumli konvert, 3M konstruktiv biriktiruvchi lenta.

The role of the plate holder in the manufacture of car windshields is that the plate holder is installed and glued to the specified place after leaving the vacuum envelope. The worker then places the worker in a horizontal position on the pneumatic press. Squeeze the pneumatic press with the bottom and top cups and fasten the plate to the windshield. The windshield comes out of the vacuum converter at a temperature of 12 degrees. Therefore 3M glued to the plate

the structural bonding tape adheres well when hot.

Vacuum envelope: A tape envelope that sucks air between two layers of windshield. And it is ready to fasten the plate holder to the mirror.

3M Structural Binding Tape: The tape that connects the plate handles to the windshield. 3M structural bonding tape is used in the production of two different types of automobiles. 3M hermetic and tape types are used for the plate holder.

Plate holder service function

It is a part that attaches to the windshield of the car and attaches the mirror to the windshield to see the driver's body at a 60 ° angle.

Min and max values for load capacity (kg) of the plate holder.

1.The procedure of attaching the mirror button to a piece of tempered glass using the recommended application and treatment method. Exposure the connected assembly to the specified environmental conditions, then install the glass in a vertical position in the holder. Attach the clamp to the window button; have a 70 mm handle on the bottom of the clamp button. Place the handle on the pull device continuously and hold the handle at a speed of (2.5 mm / min). When the button is broken, record the value when the window is empty. There is a 5.5 cm^2 stainless steel button for these tests. 2. 25.7 mm wide, 12.7 mm overlapped, E-coated metal coupons. Treat the bond at 140 ° C for 20 min. Expose the connected assembly to the specified environmental conditions. Measurements are made on top of each other on a speed tester at a speed of 5 mm / min.

3. Attach the mirror button to the layered mirror using the recommended application and treatment procedure. Attach the mirror bracket assembly and set the assembly to the glass position (inverted at a 45 ° angle) with the bracket weighing 2.7 kg. Open the linked items,measuring collection and failure times in

accordance with specified environmental conditions.

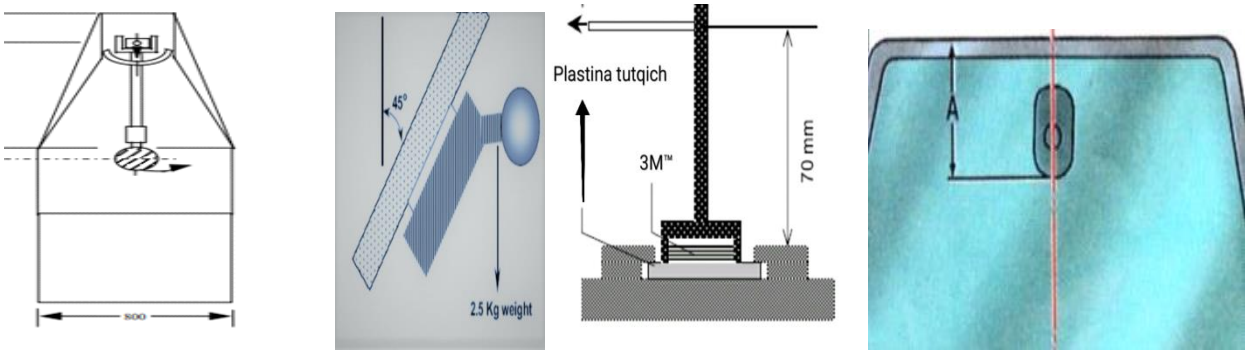

Figure 1. 3M Structural Binding Tape Schematic of the load-bearing capacity of a plate-mounted plate holder.

After recording the results of this laboratory, an arithmetic mean of 5 values is obtained. We can also determine the results graphically. We draw a graph of time as a function of mass and place the values to see the change in time. Fasten the windshield to the test rig at a 45-degree angle and secure the plate holder to the windshield using 3M structural bonding tape. These results also allow you to carry additional elements that increase the comfort of driving.

Time (T) mass (kg)	1 hour / 3 kg	2- hour /2.5kg	3- hour /2 kg	4- hour /2 kg
Changes and results	No change	No change	Decline	Decline
	3kg	2.5 kg	2.3 kg	2 kg

Table 1 **Material for making plate holder**

Stainless corrosion resistant steels.

Corrosion-resistant steels are high-alloy steels with a chromium content of Cr>13%. Chrome provides a damping protective film on the metal surface. These films are classified according to their structure. The films are formed after the material is heated to high temperature and cooled in air (after normalization):

martensite, martensite-ferrite (ferrite content not less than 10%), ferrite, austenite-ferrite (ferrite content 10) not less than%), austenitic, austenite-martensitic (GOST 5632-72) structures. The combined effects of ferrite and austenite are represented by chromium equivalents (Crekv) and nickel equivalents (Niekv):

Crekv=Cr+2Si+1,5Mo+5V+5,5Al+1,75Nb+1,5Ti+0,75W.

Niekv=Ni+ 0,5Mn+30C+30N+0,3Cu.

Symbols indicate the mass fraction of alloying elements in steel, and numbers indicate their activity coefficient. Chromium-corrosive steels should have as low a carbon content as the alloy's corrosion resistance is stable in a single-phase structure. An increase in carbon leads to the formation of carbides, which causes the structure to become uneven. But carbon heating greatly increases efficiency. Currently, several groups of low-carbon high-nitrogen corrosion-resistant steels have been developed. Nitrogen is the best alloying element to increase the strength of steel and reduce body cost. Nitrogen is an alloying element that produces excellent austen and enhances strength. Nitrogen is released from steel during heat treatment and welding. Nitrogen liquefaction in liquid steel significantly increases chromium, which is an essential element for corrosion-resistant steels.

References

1. Eraliyevna, T. Z. (2020). Development trends in the building complex in Uzbekistan. ACADEMICIA: An International Multidisciplinary Research Journal, 10(6), 1702-1705.
2. Mamajonovich, K. A., Eraliyevna, T. Z., & Mukhtaraliyevna, R. M. (2020). Box curve (curl) of fan casing. ACADEMICIA: An International Multidisciplinary Research Journal, 10(5), 604-607.
3. Eraliyevna, T. Z., & Shavkatbekovna, G. E. (2021). History, concept and origin of architectural art. ACADEMICIA: An International Multidisciplinary Research Journal, 11(6), 714-716.

4. Eraliyevna, T. Z. (2021). History of architecture city and ferghana cities in the region. CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY, 2(2), 11-15.
5. Хусанбоев, А. М., Тошкузиева, З. Э., & Нурматова, С. С. (2020). Приём деления острого угла на три равные части. Проблемы современной науки и образования, (1 (146)).
6. Toshqo'zieva, Z. E., Nurmatova, S. S., & Madaminov, J. Z. (2020). FEATURES OF USING INNOVATIVE TECHNOLOGIES TO IMPROVE THE QUALITY OF EDUCATION. Theoretical & Applied Science, (5), 213-217.
7. Mukhtorov Sherzodjon Sobirjon ugli, & Srojidinov Jurabek Ravshanjon ugli. (2022). DISTRIBUTION OF THE NUMBER OF FAULTS AND TIME OF RESTORATION OF ELEMENTS OF SEWER NETWORKS. Galaxy International Interdisciplinary Research Journal, 10(1), 448–454. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/1053
8. Mukhtorov Sherzod Sobirjon ugli, & Srojidinov Jurabek Ravshanjon ugli. (2022). ANALYSIS OF THE IMPACT OF EARTHQUAKES ON THE RELIABILITY OF UNDERGROUND PIPELINES. Galaxy International Interdisciplinary Research Journal, 10(1), 436–441. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/1051
9. Mukhtorov Sherzodjon Sobirjon oglu. (2022). ANALYSIS OF CAR PLATE HOLDER CONSTRUCTIONS. Galaxy International Interdisciplinary Research Journal, 10(1), 442–447. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/1052
10. Mukhtorov Sherzodjon Sobirjon ugli. (2022). IMPROVING THE STRENGTH OF DETAILS BY CHROMING THE SURFACES. Galaxy International Interdisciplinary Research Journal, 10(1), 455–461. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/1054
11. Mukhtorov Sherzodjon Sobirjon ogli. (2022). GASEOUS NITROGENATION. Galaxy International Interdisciplinary Research Journal, 10(1), 462–467. Retrieved from https://internationaljournals.co.in/index.php/giirj/article/view/1055
12. Todjiboyev R.K., Ulmasov A.A., & Muxtorov Sh. (2021). 3M structural bonding tape 9270. Science and Education, 2 (4), 146-149.

13. Sherzod Sobirjon O'G'Li Muxtorov, & Islombek Ikromjon O'G'Li Qoxxorov (2022). Issiqlik almashuvchi qurulmalar va ularda jarayonni intensivlash usullari tahlili. Science and Education, 3 (5), 370-378.
14. Арзиев, С. С., & Тохиров, И. Х. Ў. (2021). ФАЗОВИЙ ФИКРЛАШНИНГ БЎЛАЖАК МУҲАНДИС ВА АРХИТЕКТОРЛАР ИЖОДИЙ ФАОЛИЯТИДА ТУТГАН ЎРНИ. Scientific progress, 2(2), 438-442.
15. Kholmurzaev, A. A., & Polotov, K. K. (2020). METHODS OF USING MEDIA EDUCATION IN THE LEARNING PROCESS. Theoretical & Applied Science, (5), 205-208.
16. Kholmurzaev, A. A., & Tokhirov, I. K. (2021). The active participation of students in the formation of the educational process is a key to efficiency. ACADEMICIA: An International Multidisciplinary Research Journal, 11(4), 435-439.
17. Polotov, K. K. (2020). FEATURES OF TEACHING ENGINEERING AND COMPUTER GRAPHICS. Theoretical & Applied Science, (6), 573-576.
18. Tokhirov, I. K. U. (2021). SELECTION OF THE MANUFACTURING PROCESS OF THE PART. Oriental renaissance: Innovative, educational, natural and social sciences, 1(10), 698-704.
19. Abdullayev, B. X., & Rahmankulov, S. A. (2021). Movement of Variable Flow Flux Along the Path in a Closed Inclined Pipeline. CENTRAL ASIAN JOURNAL OF THEORETICAL & APPLIED SCIENCES, 2(12), 120-126
20. Xolmurzayev, A. A., & Toxirov, I. X. (2021). TALABALARNING O'QUV JARAYONINI SHAKILLANTIRISHDA KOMPYUTERLI O'QITISH TEXNOLOGIALARINI O'RNI. Oriental renaissance: Innovative, educational, natural and social sciences, 1(11), 283-288.
21. Axmadbek Maxmudbek o'g'li Turg'unbekov, & Abdumajidxon Murodxon o'g'li Muxtorov (2021). Theoretical Studies Of The Technological Process Of Machining Parts With Concave Surfaces Of Complex Forms On Cnc Milling Machines. Journal of Innovations in Social Sciences 1(1) ,90-97.
22. Turg'unbekov Axmadbek Maxmudbek o'g'li (2021). THEORETICAL STUDIES OF THE TECHNOLOGICAL PROCESS OF MACHINING PARTS WITH CONCAVE SURFACES OF COMPLEX FORMS ON CNC MILLING MACHINES. 1(8), 122-128. https://doi.org/10.5281/zenodo.5710406
23. Alisher Axmadjon o'g'li Botirov, & Axmadbek Maxmudbek o'g'li Turg'unbekov. (2021). EXPERIMENTAL STUDIES OF THE

TECHNOLOGICAL PROCESS OF PROCESSING CONCAVE SURFACES OF COMPLEX SHAPES. Eurasian Journal of Academic Research, 1(8), 222–231. https://doi.org/10.5281/zenodo.5727625

24. Botirov, Alisher Akhmadjon Ugli , & Turgunbekov, Akhmadbek Makhmudbek Ugli (2021). INVESTIGATION OF PRODUCTIVITY AND ACCURACY OF PROCESSING IN THE MANUFACTURE OF SHAPING EQUIPMENT. Oriental renaissance: Innovative, educational, natural and social sciences, 1 (11), 435-449.
25. Abdullayeva, Donoxon Toshmatovna, & Turg‘Unbekov, Axmadbek Maxmudbek O‘G‘Li (2021). ПРОДЛЕНИЕ СРОКА ХРАНЕНИЯ ЛИСТОВЫХ ДЕТАЛЕЙ ПРОКАТНОГО ОБОРУДОВАНИЯ. Oriental renaissance: Innovative, educational, natural and social sciences, 1 (11), 1035-1045.
26. I. O. Ergashev, R. J. Karimov, A. M. Turg’Unbekov, & S. S. Nurmatova (2021). ARRALI JIN MASHINASIDAGI KOLOSNIK PANJARASI BO’YICHA OLIB BORILGAN ILMIY TADQIQOTLAR TAHLILI. Scientific progress, 2 (7), 78-82.
27. Ахмадбек Махмудбек Ўғли Турғунбеков (2021). НОТЕХНОЛОГИК ЮЗАНИНГ ТЕШИКЛАРИГА ИШЛОВ БЕРИШДА ДОРНАЛАШ УСУЛИНИ ТАДБИҚ ЭТИШ. Scientific progress, 2 (1), 4-10.
28. Abdumajidxon Murodxon O‘G‘Li Muxtorov, & Axmadbek Maxmudbek O‘G‘Li Turg‘Unbekov (2021). VAKUUM XALQALARI UCHUN SILIKON MATERIALLARNI TURLARI VA ULARNING TAHLILI. Scientific progress, 2 (6), 1503-1508.
29. Усманов, Д. А., Умарова, М. О., Абдуллаева, Д. Т., & Рустамова, М. М. (2021). Исследование процесса очистки и хранения тонковолокнистого хлопка от сорных примесей. *Бюллетень науки и практики*, *7*(3), 212-217.
30. Усманов, Д. А., Холмурзаев, А. А., & Умарова, М. О. (2020). Исследование эффективности очистки тонковолокнистых сортов хлопка-сырца. *Проблемы современной науки и образования*, (1 (146)).
31. Мадаминов, Ж. (2021). Бўлажак муҳандисларни лойиҳалаш компетенцияларини компьютер графикаси воситасида ривожлантириш методикасини такомиллаштириш. *Общество и инновации*, *2*(8/S), 462-469.

32. Azim o'g'li, V. D., & Nosirjonovich, O. Z. (2022). A Method of Calculating the Depth of Cut in A Lathe After Rolling on A Rough Part. *Eurasian Journal of Engineering and Technology*, *3*, 6-11.

33. Muxtoralievna, R. M., Nosirjonovich, O. Z., & Zafarjonovich, M. J. (2020). Use of graphics computer software in the study of the subject" Drawing and engineering graphics". *ACADEMICIA: An International Multidisciplinary Research Journal*, *10*(5), 83-86.

34. . Валихонов, Д. А. Ў., Ботиров, А. А. Ў., Охунжонов, З. Н., & Каримов, Р. Х. (2021). ЭСКИ АСФАЛЬТО БЕТОННИ КАЙТА ИШЛАШ. *Scientific progress*, *2*(1), 367-373.

35. 35. Muxtoralievna, R. M., Nosirjonovich, O. Z., & Zafarjonovich, M. J. (2020). Use of graphics computer software in the study of the subject" Drawing and engineering graphics". ACADEMICIA: An International Multidisciplinary Research Journal, 10(5), 83-86.

36. Турғунбеков, Аҳмадбек Махмудбек Ўғли, & Сирожидинов, Жўрабек Равшанжон Ўғли (2022). ДЕТАЛ ЮЗАЛАРИНИ АЗОТЛАШ УСУЛИ ОРҚАЛИ МУСТАҲКАМЛИГИНИ ҲАМДА ИШЛАШ УНУМИНИ ОШИРИШ. Oriental renaissance: Innovative, educational, natural and social sciences, 2 (2), 847-856.

37. Muxtorov, Abdumajidxon Murodxon O'G'Li, Turg'Unbekov, Axmadbek Maxmudjon O'G'Li, & Maxmudov, Abdulrasul Abdumajidovich (2022). AVTOMOBIL OLD OYNAKLARINI VAKUUMLASH JARAYONIDA VAKUUMLASH TEXNOLOGIYASINING AHAMIYATI. Oriental renaissance: Innovative, educational, natural and social sciences, 2 (3), 93-102.

38. Мухторов А.М., Тургунбеков А.М. Исследование работоспособности дорожных фрез в условиях эксплуатация // Universum: технические науки : электрон. научн. журн. 2022. 5(98). URL: https://7universum.com/ru/tech/archive/item/13633 (дата обращения: 07.05.2022).

39. Ahmadbek M. o. biyomekanik modellashtirishni tanlash usuli. // Universum: texnik fanlar: elektron. ilmiy. journe. 2022. 5(98). Pochta manzili: <URL> https://7universum.com/ru/tech/archive/item/13722 (murojaat sanasi: 17.05.2022).

40. Turg'unbekov A. M., Mamatqulova D. N. yo'llarni sovuq melioratsiya qilish uchun frezani loyihalash va ish jarayoni. // Universum: texnik fanlar: elektron.

ilmiy. journe. 2022. 5(98). Pochta manzili: <URL> https://7universum.com/ru/tech/archive/item/13808 (murojaat sanasi: 23.05.2022

41. Ergashev Ilhomjon Olimjonovich, & Mahmudov Nasimbek Odilbekovich. (2022). Calculation of Carrier and Interchangeable Element Combination. *Eurasian Journal of Engineering and Technology*, *5*, 68–73. Retrieved from https://www.geniusjournals.org/index.php/ejet/article/view/1162
42. 8. Fayzimatov Shukhrat Nomonovich, Ergashev Ilhomjon Olimjonovich, & Valikhonov Dostonbek Azim o'g'li. (2022). Effects Of Crushing on Cutting and Cleaning of Surface Facilities in Cutting and Processing of Polymer Materials. *Eurasian Research Bulletin*, *4*, 17–21. Retrieved from https://www.geniusjournals.org/index.php/erb/article/view/353