

Analysis of the Impact of Vyurok's Various Speed Ratios On Thread Quality Indicators Used In Modified Assembly Mode

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Annotation. One factor that affects the quality of the threads collected in modified ring collection mode is the vyurok speed. To determine the speed of the alternative vyurok, the ratio of the vyurok speed to the speed of the ringed assembly machine has been studied. Speed ratio is 0.99; When it was 0.89 and 0.81, the quality of the threads collected was compared comparatively. According to the results, the quality indicators of the threads collected at a speed of 0.89 were found to be good.

Key words: Modification, warp, spun yarn, speed ratio, yarn quality, false twist, tension, hairiness, breaking strength, elongation at break

Today, counterfeit twisting installations are being introduced to produce new types of threads [1-3]. This, in turn, has become more complicated in the state of the cooking triangle. At the same time, conducting research to reduce the rotation of threads through a false twisting installation and studying its effect on thread tension is a topical issue of the recommended modified assembly method [4-6].

In modified assembly mode, the introduction of a false buram installation and its speed change the dimensions of the cooking triangle and greatly affect the scattering forces of the fiber in the thread and the increase in the migration of fibers, which can lead to improved modified thread structure and properties [7-10].

Theoretical research. The resulting embryo was allowed to produce nutrients and then inserted into her womb, where it implanted. Therefore, it is intended to study the speed of the vyurok, an additional addition of the modified assembly method.

The intermolecular entity used by Jehovah's Witnesses in your country is a legal entity used by Jehovah's Witnesses in your country. In the proposed modified assembly method, a thread formed using a vyurok will be able to have the same amount of buram in the cooking triangle, resulting in the vyurokka being given the necessary amount of speed to ensure that the scattering of the tomatoes in the cooking triangle is permanent.

Experimental studies. To assist individuals desiring to benefit the worldwide work of Jehovah's Witnesses through some form of charitable giving, a brochure entitled Charitable Planning to Benefit Kingdom Service Worldwide has been prepared.

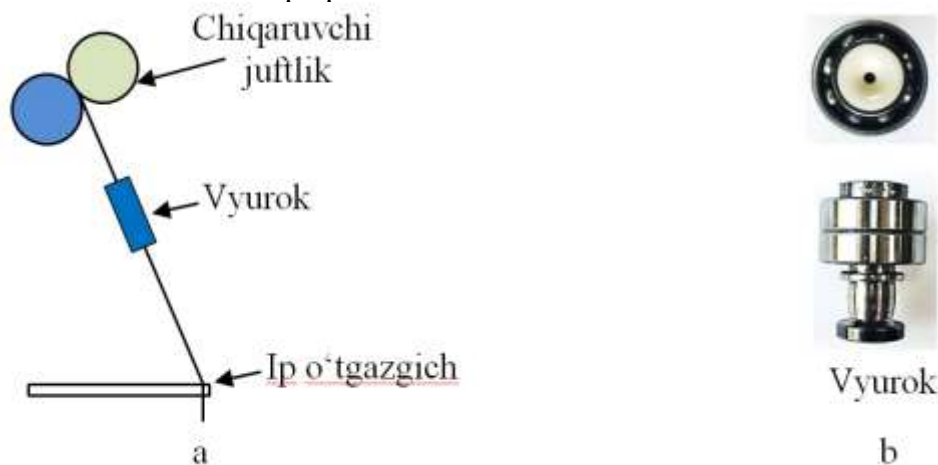


Figure 1. The appearance of a-vyurok installation in the machine, b-vyurok.

In parallel with the direction of thread formation, a Zinser 350 ring assembly machine was installed in the training laboratory of the Department of Collection Technology at the Tashkent Institute of Textile and Chemical Engineering.

In the study work, the ringed assembly machine focused on the speed of the hit and the speed of the vyurok, collecting threads modified in different proportions. The speed ratio (TN) is found by the ratio of vyurok speed to pumpkin speed 1.1-formula.

$$TN = \frac{V_t}{U_t} \quad (1.1)$$

Here, TN is the speed ratio,

V_t – vyurok speed,
 – pumpkin speed. U_t

$$V_t = \left(\frac{M_d}{V_d}\right) \cdot M_t \quad (1.2)$$

Here, — the outer diameter of the engine shaft, M_d
 – the outer diameter of the vyurok, V_d
 – motor speed. M_t

A 20-tectonic thread was collected for knitting products through a fake twister installation of a modified assembly method installed on the Zinser 350 ring assembly machine. In this case, 100% cotton cylinders with 711 teaspoons were used. The cooking coefficient of the rope is 0.99 with a frequency ratio of 3.6; A rope was collected at 0.89 and 0.81. The difference in speed ratios not only affects the physical properties of modified threads, but also leads to the presence of a cooking triangle in different shapes. Samples of collected threads were identified in the testing laboratory of the Minister Tex LLC thread collection company.

The installation of Uster ZWEIGLE TWIST TESTER 5-SA found the number of burrows of threads collected at different speed ratios and its insignity.

In Figure 2, the number of burrows of the thread collected at a speed of 0.81 is greater than the number of burrows collected at the remaining two speed ratios. While the number of burrows has increased as the speed has decreased, the variation coefficient of the yarn burrow collected at a speed of 0.89 is high. Based on the "Uster Statistics 2023" indicators, the number of burrows of the thread collected at a speed of 0.99 and the variation coefficient of the buram are included in the 50 quality classes.

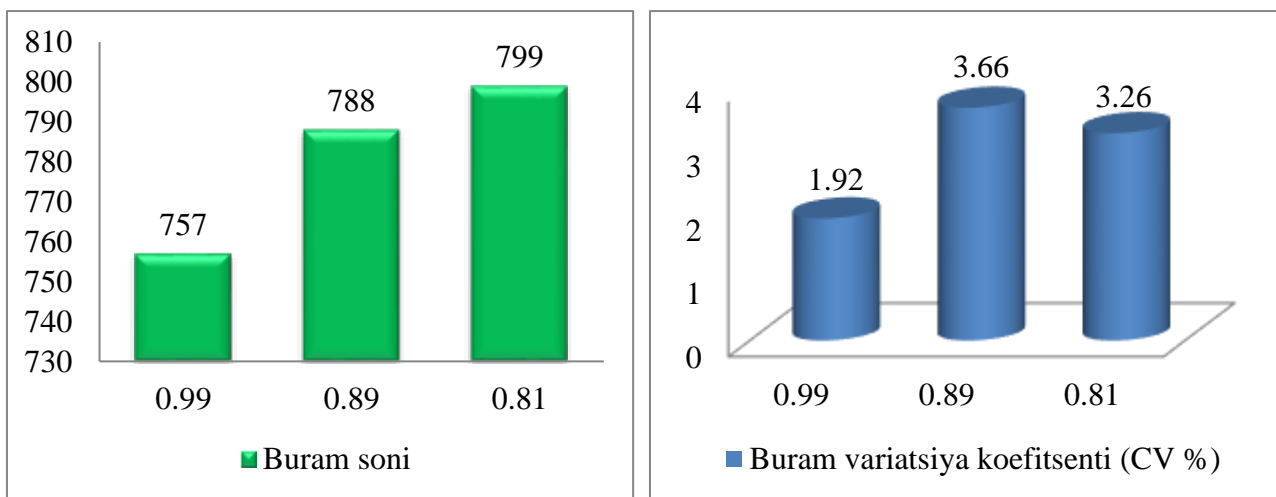


Figure 2. The

number of burrows of the thread collected in different speed ratios and its variation coefficient.

The USTER TENSOJET 4 installation found an extension of the threads collected at different speeds (Elongation (%), the disconnection power (Tenacity (cN/tex), and their insertion. Figure 3 shows that the thread collected at a speed of 0.89 speeds is the most sent and is the lowest pointer in terms of variation coefficient. Based on the "Uster Statistics 2023" indicators, the length of the thread collected in all speed ratios and its variation coefficient are included in the 50 quality class. But the quality indicator of the thread collected at a speed of 0.89 is better than that of the remaining threads.

From Figure 4, we can see that the combined strength of the thread, which is 0.89 and 0.81 speeds, is close to one another in the land and is 9 percent better than the 0.99 tes ratio, and the speed of 0.89 The thread breakage power accumulated in the ratio is 0.5 percent better than the thread notation collected at a speed of 0.81 and 1.6 percent better than the thread collected at 0.99 speeds. Based on the "Uster Statistics 2023" indicators, the disconnection power of the thread collected in all speed ratios is included in class 5 quality, and its variation coefficient is included in the 50 quality class.

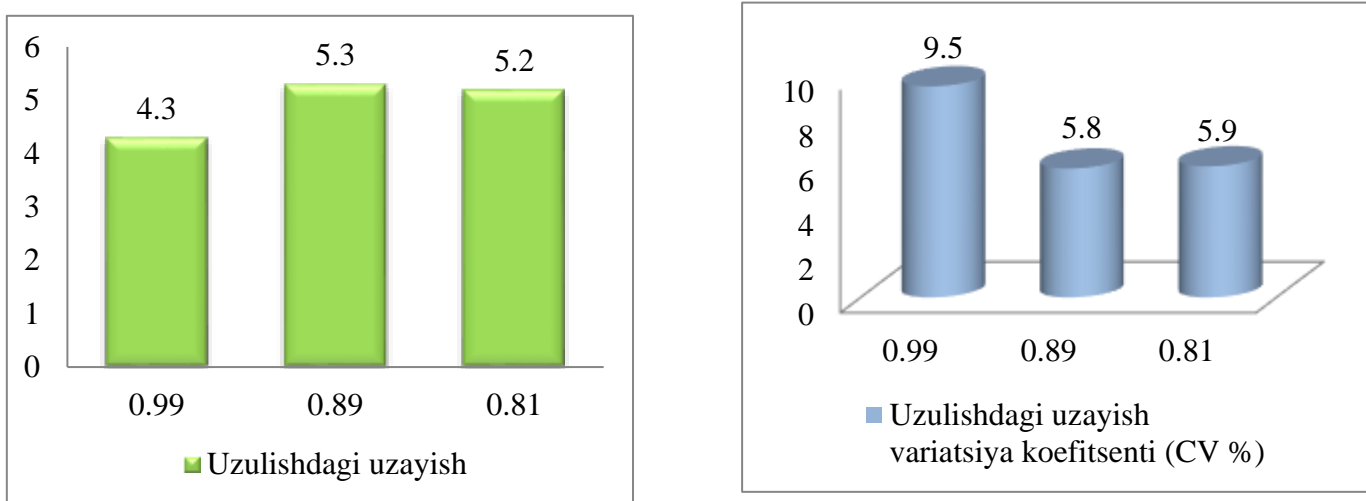


Figure 3. The length of the thread collected in different speed ratios and the variation coefficient.

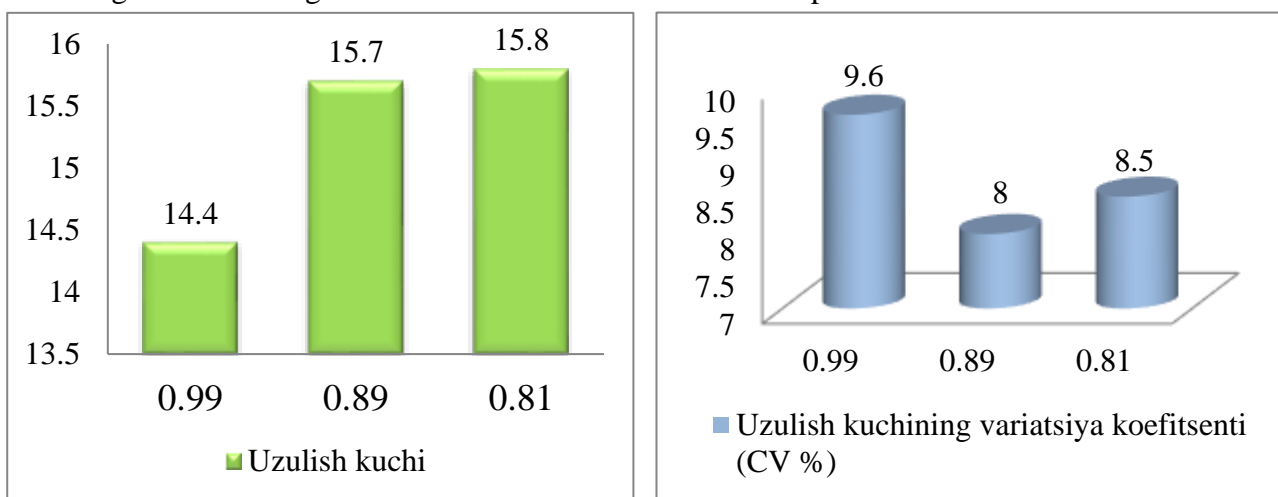


Figure 4. The breakage power and variation coefficient of the thread collected in different speed ratios.

The Uster TESTER 6 installation found the Hairiness of threads collected at different speed ratios and their variation coefficient (CV%).

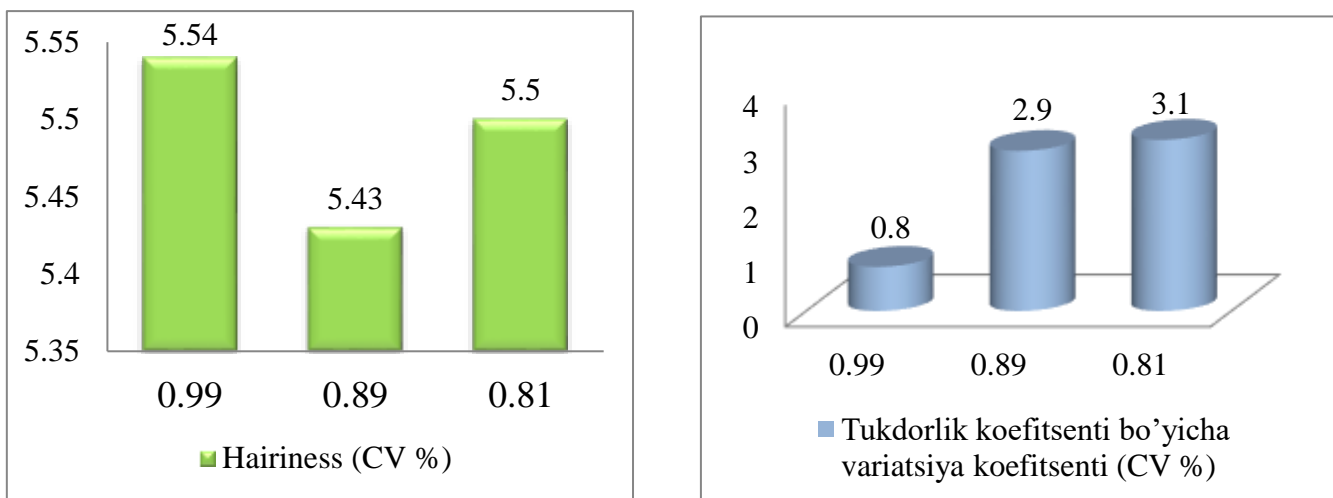


Figure 7. Hair coefficient (CV) of thread collected in different speed ratios and variation coefficient cv%

In Figure 7, we can see that the feathery indicators of the thread collected at a speed ratio of 0.89 are better than those of other options. Based on the Uster Statistics 2023 indicators, the hair yield of the thread collected in all speed ratios is included in the 50 quality class, and its variation coefficient is included in the 25 quality class.

Summary. From the data in the aforementioned images, you can say that the hairiness of the modified thread (hairiness) collected when the speed ratio is 0.89 is lower than the other two speed ratios and this is good. The length (elongation) of the thread collected at a speed ratio of 0.89 is higher. The threads collected at different speed ratios mentioned above will result in a decrease in the value of the speed ratio, respectively, an increase in the number of burrows of the threads collected.

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