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STUDY OF THE EFFECT OF THE SPINDLE SPEED ON THE PROPERTIES FOR THE BAKED SIRO YARN, WHICH MADE FROM COTTON AND POLYESTER FIBRES

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ABSTRACT

In this article, it has been determined experimentally the effect of the spindle speed on the properties of the spun yarn "Siro" which produced by the comparative break strength to the experimental results. When the mathematical equations were tested using the Fisher and Student criteria, their index were considered significant. The possibility of mathematical analysis of the equation based on indicators was determined by experimental results. In order to do this, yarns with numbers 20 and 29 tex were produced in 5 different spindle speeds from 9000 to 13000 min -1. The results determined that when the spindle speed was 9000 min -1, the quality of the baked Siro yarns was improved and the fluff elaborate, and thus it became stronger more. According

to the results of the analysis, the speed of spinning was one of the main factors that could be changed in the producing of baked Siro yarn. More clearly if ring-spin machine choose spindle speed correctly Siro yarn's strengthen will improve, asperity from structural circumstance will be normal and configuration of yarn will be improved.

KEYWORDS: *Baked Siro Yarn, Cotton, Polyester Fibres, Spindle Speed, Manufactured Product.*

REFERENCES

1. Resolution of the President of the Republic of Uzbekistan No. PK-4186 of February 12, 2019 "On measures to further deepen the reform of the textile and clothing industry and expand its export potential." Available at: https://cis-legislation.com/
2. Resolution of the President of the Republic of Uzbekistan No. PK-4453 of September 16, 2019 "On measures to further develop the light industry and stimulate the production of finished products." Available at: https://cis-legislation.com/
3. Tulaganova M, Isaqulov V, Murodov T, Yarashov S. Manufacture of" Siro "yarn from cotton and melange cotton fibers. состоявшейся 5 декабря. 2020. Penza.
4. Subramaniam V, Natarajan KS. Frictional properties of siro spun yarns. Textile Research Journal, 2000;60(4):234-239.
5. Chu SP, Cheng SKP. Siro-spun vs two-ply. Textile Asia, 2005;26(5):48-57.
6. Isakulov VT, Burnashev RZ, Technology of new types of yarn production GKNT. Tashkent; 2001.
7. Onarboev BO, Dzhuraev AD, Tulaganova MT, Isakulov VT. Improving the sealing protection of equipment in spinning machines. International journal of advanced research in Science engineering and technology. 2019;6(6):9571-9576.
8. Ruziboev NN, Isaqulov VT. Comparative analysis of the properties of siro yarn spinned by natural and chemical fibers. ACADEMICIA: An International Multidisciplinary Research Journal, 2021;11(4):1819-1826.
9. Ruziboev NN, Isaqulov VT. Technology of mixed fiber yarn production by "Siro" method. International scientific-practical conference "Development trends in the textile industry: problems and solutions. Termez. 2021-23-April.
10. Ruziboev NN, Isaqulov VT. Investigation of Factors Influencing the Properties of Spun Siro Strip. International Journal of Advanced Research in Science, Engineering and Technology. 2020;7(9):14864-14867.
11. Xalimaxan A, Eshanqulovich GA, Nasimjonovna NN, Davronovna AX. Patent UZIAP04347. A method of producing bicomponent yarn from mixed fibers. 2008.
12. Ruzibaev NN, Yarashov SN, Isakulov VT. Physical and mechanical properties of yarn spun from natural fibers. Cotton ginning, textile, light industry, printing in the context of integration of science, education, production Current problems of innovative production technologies and their solutions. Tashkent; 2020.

13. Ruziboev NN, Isakulov VT, Yarashov SN, Ruziboev RN. Republican online scientific-practical conference "Physical and mechanical properties of natural and chemical fibers Siro spun yarns" Innovative approaches to the further development of the textile and clothing industry and training. Namangan; 2020.