multiply by one hundred percent. Thus, the degree of user activity in the distribution and evaluation of content is analyzed.

Conclusion. We analyzed the strengths and weaknesses of the promotion of chemical Instagram accounts. Recommendations were formulated for the promotion of secondary education institutions through this social network. Well-organized work with social networks will solve several important tasks for any educational institution: increasing the audience (attracting new students), increasing the recognition of an educational institution that was not previously familiar with it, increasing loyalty among the existing audience, feedback from the target audience.

It should be noted that the organization of feedback from subscribers is important in order for publications to get into the popularity ratings of the network. The number of subscribers is not important, their activity is needed: likes and comments under the post. The comments are of particular value. Polls, contests, posts, the content of which ends with a question, contribute to the growth of engagement.

1. Belokhvostov, A.A. Continuous methodological provision of chemistry teacher training to work under conditions of information technology penetration in education: from theory to practice / A.A. Belokhvostov, E.Y. Arshansky // University Pedagogical Journal. 2021; 2:24 – 29 p. Russian.

2. Belokhvostov, A.A. Mobile learning based on the use of messengers / A.A. Belokhvostov, E.Y. Arshansky // Chemistry at school. – 2019. – No. 8. – P. 19–24. Russian. URL: https://rep.vsu.by/handle/123456789/23792 (date accessed: 12.09.2022).

3. Global Digital [Electronic resource]. – Access mode: https://www.globdig.com/. – Access date 09/01/2022.

4. Teryaeva, E. Engagement rate (ER): calculation and values of indicators [Electronic resource] / E. Teryaeva. – Access mode: https://www.calltouch.ru/blog/engagement-rate-er-raschet-i-znacheniya-pokazatelej. – Access date 08/31/2022.

FINDING EFFECTIVE USE OF TEXTILE WASTE OF CARPET PRODUCTION

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Keywords: textile waste, recycling efficiency, secondary raw materials.

Environmental protection and rational use of waste is one of the important tasks solved by textile enterprises of Belarus at the present stage. The technological processes of textile enterprises have always been characterized by the formation of a large amount of waste from the main production. Their use and disposal are often a big problems for the enterprises.

Besides, some kinds of waste represent valuable secondary raw materials, not only for the textile enterprise, but also for many other branches of industry. The problem of limited resources is one of the global problems of mankind. Therefore, the rational use of waste has been raised to the national level in the Republic of Belarus.

In order to preserve the maximum production value of waste it is necessary to properly organize the collection, storage and sale of secondary raw materials.

The aim of the work is to find effective ways of using textile waste from carpet production.

Material and methods. The normative and technical documentation of open joint stock company "Vitebsk carpets", as well as publications on the subject of the research [1–4] were used as the research material. Research methods: analysis and synthesis.

Findings and their discussion. At the open joint-stock company "Vitebsk carpets" the types of waste, which are formed at the main stages of the production of embroidered (tafted) carpets have been analyzed (Table 1).

Essentially, textile waste consists of valuable chemical fibers and threads: polypropylene film threads forming the ground fabric itself, pile of polyamide or polypropylene threads, polypropylene or polyester nonwoven fabric as a substrate [1].

All of the above-mentioned fibre wastes are non-recyclable. The traditional handling of these types of textile waste is as follows: they are bagged or baled, a very small portion is sold to the public and other businesses. A large part of this waste is taken to landfill sites, polluting the environment with non-rotting synthetic waste. Or it is incinerated which leads to atmospheric pollution with toxic products of combustion. And yet these are valuable secondary raw materials – chemical fibres and yarns.

Table 1 – Main steps in the production of stitched carpet products and the types of waste that are generated during these steps

The stages of production	Type of waste
Forming a severe stitched carpet	Cross cutting of primer fabric, ends of
product	polyamide and polypropylene yarns
Printed pattern on a carpet product on a	Cross cutting of harsh carpet products
printing machine	
Applying an applicator compound to	Cross cutting of harsh carpet products,
the carpet.	edge trimmings of ground cloth and
Gluing the duplicating material	duplicating material
Final finishing	Cutting and weighted flap of stitched
	carpet products

As part of the search for sustainable use of these types of waste, the works [1–4] were studied and analyzed. As a result, it has been established that the most perspective directions of carpet wastes utilization are

- obtaining of nonwoven textile materials by knitting and stitching method;

– obtaining nonwoven textile materials by hot-pressing method.

These nonwovens can be used in the apparel and construction industries. For example, as insulation and soundproofing materials. However, in this case the textile waste requires careful pretreatment and special equipment.

In addition, these types of waste are recommended to be used (and without pretreatment) to reinforce earth embankments in earthworks, for fencing areas, in fruit and vegetable farms. **Conclusion.** Thus, the proper collection, preparation and sale of textile waste can provide additional profit for the company and prevent the environmental impact of incinerating textile waste or depositing it in a landfill.

1. Zimina, E.L. Technologies for processing chemical fiber waste of carpet production / E.L. Zimina, N.V. Skobova, L.E. Sokolov, S.S. Grishanova // Fibre Chemistry. – 2019. – \mathbb{N}_{2} 1. – P. 23–25.

2. Zimina, E.L. Development of technology for production of sound insulation materials from waste / E.L. Zimina, N.V. Ul'yanova, O.D. Vashchenko // Fibre Chemistry. – 2022. – № 1. – P. 10–13.

3. Zimina E.L. Technological and theoretical bases of obtaining materials using textile wastes: monograph / E.L. Zimina, A.G. Kogan, V.I. Olshansky. – Vitebsk: Vitebsk State Technological University, 2019. - 230 p.

4. Zimina, E.L. Practical application of nonwoven materials from textile waste obtained by thermofixation / E.L. Zimina, A.G. Kogan, S.M. Goryacheva // Research and development in the field of design and technology: materials of the All-Russian scientific-practical conference, Kostroma, April 4, 2019 / Kostroma State University. – Kostroma, 2019. – P. 274–277.