Chapter
5

INVESTIGATION OF RING, COMPACT AND MAGNETIC COMPACT YARN PRODUCTION SYSTEMS

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Introduction

Despite the emergence of new yarn systems in the textile sector, Ring spinning is still considered as the most important method of short fiber spinning and, thanks to its continuous development, it maintains its place in the first place in order to increase production. Ring yarns have long been a quality measure in the evaluation of other yarns. It is referenced in comparison of parameters such as strength, break elongation, smoothness, yarn structure. While the view that Ring spinning has now reached its technical limit has become widespread, a new variation of ring spinning, the compact ring spinning system, has been developed in order to increase competition against New spinning direction(1).

Compact yarns are obtained by intensifying the dashed fiber with the help of an air intake system after the final shot and before the twist is given, reducing the spinning triangle as much as possible and joining the fiber ends as much as possible into the yarn mass. In this way, it is aimed to improve yarn properties (increase strength, decrease hairiness and smoothness). Thus, it is stated that the bending can be reduced in these yarns and that the advantages such as a soft key, brightness, low Pilling tendency and performance increase can be achieved in the fabric production stages(2).

The production of magnetic compact yarn has led to serious changes in the yarns produced thanks to the new spinning triangle. In the production system, production is carried out through cylinders. However, the disadvantage of the

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In the magnetic compact yarn production system, the spinning triangle is eliminated compared to the other two yarn production systems and the spinning process is carried out with a magnetic field. Thus, the cost of air intake system is eliminated. With this system, the profitability rates were increased by minimizing the cost increases experienced in the production process.

Keywords: Ring, Compact, Magnetic, Yarn, Fabric

References

1. Çelik, P. **(2002)**: "Kopakt İplik Eğirme Makinesinde Uzun Stapelli Liflerin Eğrilmesi ve İplik Özellilerinin Klasik Ring Eğirme Tekniği ile Karşılaştırılması", *Yüksek Lisans Tezi*, Ege Üniversitesi Fen Bilimleri Ensititüsü, İzmir, Türkiye, 11-34.
2. Özgüney, A.T. vd. Taşkın,C.; Kretzschmar, D. S., "Kompakt ve Konvansiyonel Ring İpliklerden Dokunan ve Örülen Kumaşların Boya-Baskı İşlemleri Öncesi ve Sonrası Özelliklerinin Karşılaştırılası", *Proje No: Tam 2003-04*, Türk Tekstil Vakfı, Türkiye Tekstil Sanayii İşverenleri Sendikası, İzmir, Türkiye, Mart **(2005)** 1-10.
3. Altaş, S.; "Kompakt İplik Eğirme Sistemleri ve Kompakt İplik Özelliklerinin İncelenmesi", *Tekstil Maraton Dergisi*, Kasım – Aralık 6 / **(2008)** 67-72
4. Yılmaz, D. **(2004)**; "Farklı Kompakt Ring İplik Eğirme Sistemlerinin ve Elde Edilen İpliklerin Özelliklerinin Karşılaştırılması", *Yüksek Lisans Tezi* SDÜ. Tekstil Mühendisliği Anabilim Dalı, Isparta, Türkiye, 3-60
5. Yılmaz AYKUL, S. (**2010**); "Konvansiyonel Ring ve Kompakt İpliklerden Dokunmuş Kumaşlarda Dikiş Performansının Değerlendirilmesi", *Yüksek Lisans Tezi* Marmara Üniversitesi Tekstil Eğitimi Anabilim Dalı, İstanbul, Türkiye, 4-8.
6. Kadoğlu, H., "Ring İplik Sınırlayıcı Faktörler", *Tekstil ve Konfeksiyon Dergisi,* E.Ü. Tekstil Mühendisliği Bölümü **(1/ 1997)** 17-21
7. http://tekstilkutuphane.blogspot.com/2011/03/manyetik-kompakt-iplik-uretim-sistemi.html?m=1 Erişim Tarihi: 17.10.2019