Celebrating a Century: Continuous Bleaching with Hydrogen Peroxide

Introduction by Brian C. Francois

“The key to good dyeing is preparation.” This was a statement heard early and often in my career. The statement itself is quite vague, but the meaning is clear. “Preparation,” in this context, referred to the bleaching and scouring of the fabrics before they were ready—or “prepared”—for dyeing.

As we celebrate the 100th anniversary of AATCC and we look back to significant milestones in textile chemistry and applications that have helped shape our industry, it is only appropriate to start with the introduction of continuous bleaching and scouring of cotton and cotton-rich fabrics. The chemistry of peroxide bleaching of cotton has been used commercially now for more than one hundred years.

The first patents relating to the continuous peroxide bleaching of textiles were filed in 1932 by Clark and Smolens while working for Buffalo Electro-Chemical Co. and in 1939 by Campbell and Fennell while working for E.I. du Pont de Nemours & Co. World War II and its demands on the textile industry seems to have slowed the introduction of the new technology; but in early 1944, Campbell presented his work during a Rhode Island AATCC sectional meeting.

His presentation, along with the subsequent question and answer period, are captured in the July 3, 1944 edition of American Dyestuff Reporter (ADR). The article is an excellent example of the practical application of textile chemistry—and the fundamentals shown are still applicable to even the most modern equipment we find in our factories today.

Procedure and Equipment for Bleaching Cotton Goods with Peroxide by the Continuous Method
(D.J. Campbell, ADR July 3, 1944)

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