2. Bayer Process

This section includes five significant areas:

1. Bayer Process Design. This first area includes the fundamental principles of Bayer process design as well as the history of the development of the Bayer process. The basic process has not changed but the development of its application for more than a century is truly remarkable. What is even more remarkable is that significant further improvement is feasible.

2. Physical Data. Contains much of the materials and liquor data needed to prepare flow sheets and heat and material balances.

3. Calcium Chemistry. Included are papers that discuss the effects and use of lime in the process as well as using lime to re-causticize (react) sodium carbonate back to sodium hydroxide.

4. Silica Chemistry. These papers discuss the dissolution of bauxite silica during digestion and the subsequent reaction that forms solid sodium aluminum silicate (desilication product).

5. Organic Removal. These papers deal with the important subject of removing accumulated sodium organates (originating from organic carbon compounds in the bauxite) from Bayer liquor to enhance alumina product quality and to improve process productivity of alumina.

Equally good papers in the list of recommended readings could not be included as published papers because of the limitation on the size of the book.

Fred Williams