

MINUTES OF ANNUAL MEETING OF STOCKHOLDER
OF
BIGELOW-LIPTAK CORPORATION
Held on April 25, 1984

Pursuant to the waiver of notice which appears on the preceding page of this book of minutes, the annual meeting of the stockholder of Bigelow-Liptak Corporation was held at the principal office of the company, 1250 Maplelawn Drive, Troy, Michigan, on the 25th day of April, 1984 at 9:00 o'clock in the forenoon, E.S.T. in lieu of being held on the second Thursday of April, as provided in Article II, Section I of the By-laws as amended.

Mr. Robert E. McIntosh, Director of the Company, presided at the meeting and Mr. Edsel G. Poe, Secretary of the Company, acted as Secretary thereof. Also present at the meeting was Mr. John Anderson, Director and President of the Company.

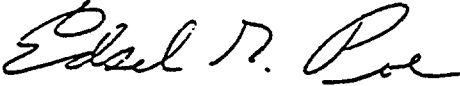
A. P. Green Refractories Co., a Delaware corporation, holder of all of the issued and outstanding stock of the Company, was represented at the meeting by Mr. Robert E. McIntosh, its President.

Reading of the minutes of the previous meeting of the stockholder was, upon motion, waived.

The election of the directors to serve for the ensuing year then came before the meeting. Upon vote being duly taken, the following were elected directors to serve until the next annual meeting of the stockholder and until their successors are elected:

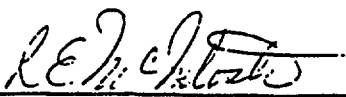
John Anderson
Howard R. Copeland
William Crum
Robert W. Jones
Robert E. McIntosh
Fred L. Metz
Harry M. Stover

There being no further business to come before the meeting, the same was, upon motion, duly adjourned.


Secretary

Minutes approved.

A. P. GREEN REFRACTORIES CO.

BY 
President



It was then proposed that officers be elected to serve pursuant to the By-Laws of the Company. Upon motion duly made, seconded and unanimously passed, the following were elected as officers of the Company:

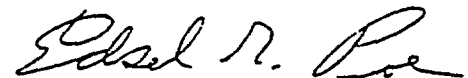
Chairman	Harry M. Stover
Vice-Chairman	Robert E. McIntosh
President	John Anderson
Vice-President	John J. Balabon
Vice-President	William Crum
Vice-President	Robert W. Jones
Vice-President & Treasurer	Fred L. Metz
Assistant Treasurer	David G. Binder
Secretary	Edsel G. Poe
Assistant Secretary	Michael R. Helton
Assistant Secretary	Katherine R. Stover

Thereupon followed a discussion of the operation of the Company for the year ended December 31, 1983 and the three months ended March 31, 1984, as well as proposed operations for the balance of 1984. For this discussion John J. Balabon joined the meeting.

Mr. Anderson then brought up the matter of paying a dividend during the current year and reminded the Board that this Corporation has already made a partial payment of a dividend to the sole stockholder. After a discussion and upon motion duly made, seconded and passed, it was,

RESOLVED, That this Corporation shall pay a dividend for this calendar year in an amount which will be determined by the sole stockholder.

There being no further business to come before the meeting, the same was, upon motion, duly adjourned.



Secretary