



US005702247A

United States Patent [19] Schoof

[11] Patent Number: **5,702,247**
[45] Date of Patent: **Dec. 30, 1997**

- [54] **KILN LINING AND METHOD**
- [75] Inventor: **William H. Schoof**, Peach Springs, Ariz.
- [73] Assignee: **Chemical Lime Company**, Fort Worth, Tex.
- [21] Appl. No.: **659,443**
- [22] Filed: **Jun. 6, 1996**
- [51] Int. Cl.⁶ **F27B 7/28**
- [52] U.S. Cl. **432/103; 432/118; 432/119**
- [58] Field of Search **432/103, 105, 432/110, 111, 118, 119**

5,040,973 8/1991 Matter et al. 423/103
 5,460,518 10/1995 Mosci 432/103

Primary Examiner—Henry A. Bennett
Assistant Examiner—Gregory Wilson
Attorney, Agent, or Firm—Charles D. Gunter, Jr.; Grady K. Bergen

[57] ABSTRACT

A rotary reactor is shown having an improved internal lining including a lifter section which extends along an interior surface of the reactor chamber for lifting material from a lower portion of the chamber to an upper portion thereof as the chamber rotates. The lifter section is formed as a monolithic casting of a refractory material having a polygonal cross-section which includes a series of blunt faces alternating with a series of slanted faces. The slanted faces are aligned with a direction of rotation of the reactor such that the slanted faces of the refractory material first contact the material being lifted.

- [56] **References Cited**
U.S. PATENT DOCUMENTS
 3,445,099 5/1969 Olsen et al. 263/33
 3,807,936 4/1974 Vering 432/103

14 Claims, 2 Drawing Sheets

