

UNITED STATES OF AMERICA  
BEFORE FEDERAL TRADE COMMISSION

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In the Matter of	)	
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<b>RHI AG,</b>	)	<b>Docket No. C-4005</b>
a corporation.	)	

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**COMPLAINT**

The Federal Trade Commission (“Commission”), having reason to believe that RHI AG has agreed to acquire Global Industrial Technologies, Inc., both corporations subject to the jurisdiction of the Commission, in violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the Federal Trade Commission Act (“FTC Act”), as amended, 15 U.S.C. § 45; and it appearing to the Commission that a proceeding in respect thereof would be in the public interest, hereby issues its Complaint, stating its charges as follows:

**I. RESPONDENT**

1. Respondent RHI AG (“RHI”) is a corporation organized, existing and doing business under and by virtue of the laws of Austria with its principal executive offices located at Mommsengasse 35, A-1040 Vienna, Austria.

2. Respondent is engaged in, among other things, the research, development, manufacture, sale, and distribution of refractory bricks used in structures and equipment related to the production of steel.

3. For purposes of this proceeding, Respondent is, and at all times relevant herein has been, engaged in commerce as “commerce” is defined in Section 1 of the Clayton Act, as amended, 15 U.S.C. § 12, and is a corporation whose business is in or affecting commerce as “commerce” is defined in Section 4 of the FTC Act, as amended, 15 U.S.C. § 44.

## **II. THE ACQUIRED COMPANY**

4. Global Industrial Technologies, Inc. (“Global”) is a corporation organized, existing and doing business under and by virtue of the laws of Delaware with its office and principal place of business located at 2121 San Jacinto Street, Suite 2500 Dallas, Texas, 75201.

5. Global is engaged in, among other things, the research, development, manufacture, sale, and distribution of refractory bricks used in structures and equipment related to the production of steel.

6. For purposes of this proceeding, Global is, and at all times relevant herein has been, engaged in commerce as “commerce” is defined in Section 1 of the Clayton Act, as amended, 15 U.S.C. § 12, and is a corporation whose business is in or affecting commerce as “commerce” is defined in Section 4 of the FTC Act, as amended, 15 U.S.C. § 44.

## **III. THE ACQUISITION**

7. Pursuant to an Agreement and Plan of Merger dated July 12, 1999, RHI will acquire, by a cash tender offer, all of the outstanding shares of Global at a price of \$13 per share, valued at approximately \$300 million.

## **IV. REFRACTORY BRICKS FOR STEEL PRODUCTION**

8. Refractory bricks for steel production include, among other things, basic refractory bricks and high-alumina refractory bricks. Basic refractory bricks for steel production include magnesia-carbon (“mag-carbon”) refractory bricks for basic oxygen furnaces (“BOFs”), mag-carbon refractory bricks for electric arc furnaces (“EAFs”), mag-carbon refractory bricks for BOF steel ladles, and magnesia-chrome (“mag-chrome”) refractory bricks for steel degassers. High-alumina refractory bricks used in steel production include high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars.

9. Mag-carbon refractory bricks for BOFs are non-metallic insulating bricks and shapes composed predominantly of magnesia and containing at least 8% carbon. Mag-carbon refractory bricks for BOFs are designed and manufactured to withstand the extreme temperature and mechanical and chemical pressures that exist in BOFs during the steel-making process. Specifically, in addition to its heat-resistant qualities, magnesia is resistant to slag—a non-acidic (“basic”) substance formed by chemical action during the high-temperature steel-making process—and has low vulnerability to chemical attack by iron oxide and alkalis, all by-products of the steel-making process. Carbon prevents slag from entering the pores of the brick, further improving the ability of the mag-carbon refractory brick to withstand chemical attack from the

slag. Mag-carbon bricks for BOFs are manufactured into specific sizes and shapes unique to BOFs, further strengthening the refractory and improving its ability to withstand heat as well as chemical and mechanical attack, and ultimately enabling the steel-making process to take place by protecting the BOF from these extreme pressures.

10. Mag-carbon refractory bricks for EAFs are non-metallic insulating bricks and shapes composed predominantly of magnesia and containing at least 8% carbon. Mag-carbon refractory bricks for EAFs are designed and manufactured to withstand the extreme temperature and mechanical and chemical pressures that exist in EAFs during the steel-making process, and possess the same chemical properties as mag-carbon bricks for BOFs that make them especially suited to resist the slag and other by-products of the steel-making process. Mag-carbon bricks for EAFs are manufactured into specific sizes and shapes unique to EAFs, further strengthening the refractory and improving its ability to withstand heat as well as chemical and mechanical attack, and ultimately enabling the steel-making process to take place by protecting the EAF from these extreme pressures.

11. BOF steel ladles are used to collect and transport molten steel from the BOF to the area of the steel plant where the molten steel is poured into molds. Slag is less dense than steel, and collects in a BOF steel ladle above the molten steel (the “slag line”). For the same reasons mag-carbon bricks are used to line BOFs and EAFs, mag-carbon bricks are used to line the area of a BOF steel ladle above the slag line in order to protect the ladle itself from the corrosiveness of the slag. Mag-carbon refractory bricks for BOF steel ladles are manufactured into specific sizes and shapes unique to BOF steel ladles.

12. Steel degassers are refractory-lined chambers used to rid molten steel of oxygen and hydrogen that is absorbed during the steel-making process. The steel degassing process causes violent turbulence in the chamber. This turbulence requires the utilization of refractories with high resistance to mechanical wear, and, because of the presence of slag, high resistance to the corrosiveness of the slag. Mag-chrome refractory bricks for steel degassers are specifically designed to withstand the pressures that exist within the degasser chamber. Mag-chrome refractory bricks for steel degassers are manufactured into specific sizes and shapes unique to steel degassers.

13. High-alumina refractory bricks are designed to protect the BOF steel ladle below the slag line from the corrosive forces of molten steel, which is chemically acidic in nature. High-alumina refractory bricks for BOF steel ladles are manufactured into specific sizes and shapes unique to BOF steel ladles.

14. Torpedo cars are used to transport molten iron from a blast furnace to a BOF to further the steel-making process. Molten iron is chemically acidic in nature, with little basic slag. High-alumina refractory bricks are designed to protect the torpedo cars from the corrosive forces of molten iron. High-alumina refractory bricks for torpedo cars are manufactured into specific sizes and shapes unique to torpedo cars.

## V. THE RELEVANT MARKETS

15. One relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of mag-carbon refractory bricks for BOFs. There are no economic substitutes for mag-carbon bricks for BOFs to which customers would switch in response to a small but significant price increase in mag-carbon bricks for BOFs.

16. Another relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of mag-carbon bricks for EAFs. There are no economic substitutes for mag-carbon bricks for EAFs to which customers would switch in response to a small but significant price increase in mag-carbon bricks for EAFs.

17. Another relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of mag-carbon refractory bricks for BOF steel ladles. There are no economic substitutes for mag-carbon bricks for BOF steel ladles to which customers would switch in response to a small but significant price increase in mag-carbon bricks for BOF steel ladles.

18. Another relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of mag-chrome refractory bricks for steel degassers. There are no economic substitutes for mag-chrome refractory bricks for steel degassers to which customers would switch in response to a small but significant price increase in mag-chrome refractory bricks for steel degassers.

19. Another relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of high-alumina refractory bricks for BOF steel ladles. There are no economic substitutes for high-alumina refractory bricks for BOF steel ladles to which customers would switch in response to a small but significant price increase in high-alumina refractory bricks for BOF steel ladles.

20. Another relevant line of commerce within which to analyze the likely effects of the proposed Acquisition is the research, development, manufacture and sale of high-alumina refractory bricks for torpedo cars. There are no economic substitutes for high-alumina refractory bricks for torpedo cars to which customers would switch in response to a small but significant price increase in high-alumina refractory bricks for torpedo cars.

21. For purposes of this Complaint, the relevant geographic area in which to analyze the effects of the proposed Acquisition on competition in mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles,

and high-alumina refractory bricks for torpedo cars, is North America. These kinds of refractory bricks produced outside North America are not economic substitutes because of customers' need for local sales and technical service support, because the delays and uncertainties inherent in long-distance shipping are unacceptable to customers in an industry that requires just-in-time delivery, because of the high shipping costs associated with a relatively low-value, heavy product, and because of the storage and warehousing costs that would have to be borne by customers of product purchased from foreign sources.

## **VI. MARKET STRUCTURE**

22. The North American market for mag-carbon refractory bricks for BOFs is highly concentrated, whether measured by the Herfindahl-Hirschman Index (“HHI”) or other measures of concentration. RHI and Global are the two largest sellers of mag-carbon refractory bricks for BOFs, controlling approximately 95 percent of North American sales. The proposed Acquisition thus represents a virtual merger to monopoly in mag-carbon bricks for BOFs.

23. The North American market for mag-carbon refractory bricks for EAFs is highly concentrated, whether measured by the HHI or other measures of concentration. RHI and Global are the two largest sellers of mag-carbon refractory bricks for EAFs, controlling approximately 65 percent of North American sales. The proposed Acquisition would increase concentration as measured by the HHI by 2,000 points to over 5,100 points.

24. The North American market for mag-carbon refractory bricks for BOF steel ladles is highly concentrated, whether measured by the HHI or other measures of concentration. RHI and Global are two of the largest sellers of mag-carbon refractory bricks for BOF steel ladles, controlling approximately 40 percent of North American sales. The proposed Acquisition would increase concentration as measured by the HHI by 750 points to more than 2,500 points.

25. The North American market for mag-chrome refractory bricks for steel degassers is highly concentrated, whether measured by the HHI or other measures of concentration. RHI and Global are two of the largest sellers of mag-chrome refractory bricks for steel degassers, controlling approximately 46 percent of North American sales. The proposed Acquisition would increase concentration as measured by the HHI by 896 points to more than 3,900 points.

26. The North American market for high-alumina refractory bricks for BOF steel ladles is highly concentrated, whether measured by the HHI or other measures of concentration. RHI and Global are the two largest sellers of high-alumina refractory bricks for steel ladles, controlling approximately 70 percent of North American sales. The proposed Acquisition would increase concentration as measured by the HHI by 2,250 points to more than 5,200 points.

27. The North American market for high-alumina refractory bricks for torpedo cars is highly concentrated, whether measured by the HHI or other measures of concentration. RHI and

Global are the two largest sellers of high-alumina refractory bricks for torpedo cars, controlling approximately 52 percent of North American sales. The proposed Acquisition would increase concentration as measured by the HHI by 960 points to more than 3,600 points.

28. Entry into the relevant markets requires significant sunk costs and would not be timely, likely and sufficient to deter or offset reductions in competition resulting from the proposed Acquisition. Development of the specialized refractories described above, including determination of the proper chemical composition, as well as manufacturing techniques to ensure, among other things, the proper porosity, is time consuming and costly and requires an extremely high level of expertise. Because there is a trend in the steel industry to customers' seeking single sources of supply for their refractory needs, a new entrant would need to have the expertise and financial capability to be able to develop and supply a full line of refractories for BOFs, EAFs and ladles. Furthermore, because the refractory bricks at issue are used to control processes and substances at extremely high temperatures, the failure of the products can be catastrophic, sometimes causing the loss of human life. Consequently, customers are extremely resistant to change, and any new entrant would have to undergo months of laboratory testing, followed by field testing that may take years in the case of some products, prior to acceptance of product for use in BOF and EAF steel-making applications.

## **VII. EFFECTS OF THE ACQUISITION**

29. The effect of the Acquisition may be substantially to lessen competition and to tend to create a monopoly in the relevant markets in violation of Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the FTC Act, as amended, 15 U.S.C. § 45, in the following ways, among others:

- a. It will eliminate actual, direct and substantial competition between RHI and Global in the relevant markets for mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars;
- b. It will substantially increase the level of concentration in the relevant markets for mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars;
- c. It will increase the likelihood that the firm created by the merger of RHI and Global will unilaterally exercise market power in the relevant markets for mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks

for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars;

- d. It will increase the likelihood that purchasers of mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars, in the relevant geographic market, will be forced to pay higher prices;
- e. It will increase the likelihood that technical and sales services provided to purchasers of mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars, in the relevant geographic market, will be reduced;
- f. It will increase the likelihood that innovation in the development of mag-carbon refractory bricks for BOFs, mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for BOF steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars will be reduced;
- g. It will significantly enhance the likelihood of coordinated interaction in the relevant geographic market among the competitors in the production and sale of mag-carbon refractory bricks for EAFs, mag-carbon refractory bricks for steel ladles, mag-chrome refractory bricks for steel degassers, high-alumina refractory bricks for BOF steel ladles, and high-alumina refractory bricks for torpedo cars; and
- h. It will increase barriers to entry in the relevant markets.

30. All of the above increase the likelihood that the Acquisition would result in increased prices or reduced services in the near future and in the long term in the relevant markets.

## **VIII. VIOLATIONS CHARGED**

31. The acquisition agreement between RHI and Global described in paragraph 7 violates Section 5 of the FTC Act, as amended, 15 U.S.C. § 45.

32. The proposed Acquisition of Global by RHI, if consummated, would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. § 18, and Section 5 of the FTC Act, as amended, 15 U.S.C. § 45.

33. The proposed Acquisition of Global by RHI, if consummated, would allow RHI to monopolize the United States market for mag-carbon bricks for BOFs in violation of Section 5 of the FTC Act, as amended, 15 U.S.C. § 45.

WHEREFORE, THE PREMISES CONSIDERED, the Federal Trade Commission on this twenty-first day of March, 2001, issues its Complaint against said Respondent.

By the Commission.

Donald S. Clark  
Secretary

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