



EUROPEAN COMMISSION
DG Competition

Case M.8286 - RHI / MAGNESITA REFRATARIOS

Only the English text is available and authentic.

**REGULATION (EC) No 139/2004
MERGER PROCEDURE**

Article 6(1)(b) in conjunction with Art 6(2)
Date: 28/06/2017

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EUROPEAN COMMISSION

Brussels, 28.6.2017
C(2017) 4596 final

In the published version of this decision, some information has been omitted pursuant to Article 17(2) of Council Regulation (EC) No 139/2004 concerning non-disclosure of business secrets and other confidential information. The omissions are shown thus [...]. Where possible the information omitted has been replaced by ranges of figures or a general description.

PUBLIC VERSION

To the notifying party:

**Subject: Case M.8286 – RHI / Magnesita Refratarios
Commission decision pursuant to Article 6(1)(b) in conjunction with
Article 6(2) of Council Regulation (EC) No 139/2004¹ and Article 57
of the Agreement on the European Economic Area²**

Dear Sir or Madam,

- (1) On 5 May 2017, the European Commission received notification of a proposed concentration pursuant to Article 4 and following a referral pursuant to Article 4(5) of the Merger Regulation by which the undertaking RHI AG ('RHI', Austria) intends to acquire within the meaning of Article 3(1)(b) of the Merger Regulation sole control of the whole of the undertaking Magnesita Refratários S.A. ('Magnesita', Brazil) by way of a purchase of shares³. (RHI is hereinafter referred to as the 'Notifying Party' while RHI and Magnesita are hereinafter collectively referred to as the 'Parties'.)

¹ OJ L 24, 29.1.2004, p. 1 (the 'Merger Regulation'). With effect from 1 December 2009, the Treaty on the Functioning of the European Union ('TFEU') has introduced certain changes, such as the replacement of 'Community' by 'Union' and 'common market' by 'internal market'. The terminology of the TFEU will be used throughout this decision.

² OJ L 1, 3.1.1994, p. 3 (the 'EEA Agreement').

³ Publication in the Official Journal of the European Union No C 150, 13.5.2017, p. 7.

1. THE PARTIES

- (2) **RHI** is an Austrian public company, engaged in the supply of refractory products, systems and services globally. RHI is active on all steps along the value chain, from the mining of its own raw materials to the removal and recycling of consumed refractory products and operates over 30 production facilities and more than 70 sales offices worldwide.
- (3) **Magnesita** is a Brazilian public company engaged in the mining, production and marketing of refractory materials and various services. Magnesita operates mining and production sites in Brazil, Argentina, U.S., Germany, Belgium, France, Taiwan and China, and sales offices in various locations around the world.

2. THE OPERATION AND THE CONCENTRATION

- (4) Magnesita's sellers and RHI signed a sale and purchase agreement on 5 October 2016 (the 'SPA'). According to the SPA, the Transaction will be implemented in two steps. As a first step, RHI will, through RHI Bidco, which is a wholly-owned indirect subsidiary of RHI, acquire between 46% and 50% plus one share of the shares in Magnesita from the sellers (the 'Initial Acquisition'). Following completion of the Initial Acquisition, RHI will launch a mandatory tender offer for the remaining shares in Magnesita.
- (5) Prior to completion, RHI will undertake an internal reorganisation. The reorganisation will be implemented through the incorporation of two wholly-owned direct subsidiaries (RHI Austria and RHI Netherlands), whereby RHI Netherlands will become the ultimate holding company of the RHI Group with the shareholders of RHI ceasing to hold shares in RHI and instead holding shares in RHI Netherlands.
- (6) As a result of the Transaction, RHI Netherlands will thus have sole control over Magnesita within the meaning of Article 3(1)(b) of the EU Merger Regulation.

3. UNION DIMENSION

- (7) The concentration does not meet the turnover thresholds set in Article 1 of the Merger Regulation. On 1 December 2016, however, as the concentration was capable of being reviewed under the national competition laws of at least three Member States, the Notifying Party requested the referral of the case to the Commission pursuant to Article 4(5) of the Merger Regulation.
- (8) The Commission transmitted the submission to all Member States on 1 December 2016. The Member States competent to examine the concentration did not within 15 working days express their disagreement to the request for referral. The Transaction is therefore deemed to have a Union dimension.

4. RELEVANT MARKETS

- (9) The Transaction concerns the refractory materials industry. It creates horizontal overlaps in various refractory materials both on an EEA-wide and worldwide basis. These are (i) basic shaped fired refractory products from magnesite

('BSRM fired'), (ii) basic shaped unfired refractory products from magnesite ('BSRM unfired'), (iii) basic shaped refractory products from dolomite ('BSRD'), (iv) basic unshaped refractory products from magnesite ('BURM'), (v) basic unshaped refractory products from dolomite ('BURD'), (vi) non-basic shaped refractory products ('NBSR'), and (vii) non-basic unshaped refractory products ('NBUR').

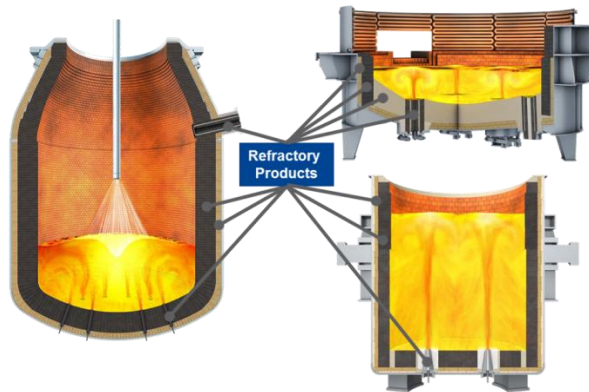
- (10) The Parties' activities also overlap with regard to mining, treatment and sale of raw materials for refractories, but those activities do not give rise to horizontally affected markets.
- (11) In addition, vertically affected markets arise through the Parties' mining activities for various input products upstream and the production of refractory materials downstream.

4.1. Relevant product markets

4.1.1. Refractory materials

- (12) Refractory materials are inorganic non-metallic materials that are able to withstand very high temperatures and corrosive and/or chemically aggressive environments without undergoing physical or chemical changes. They are employed, for instance, as heat buffers or linings in kilns, furnaces and ovens in the steel, cement, non-ferrous metals and glass industries.

Figure 1 – Refractory Products Usage Illustration



Source: The Notifying Party

4.1.1.1. Basic and non-basic refractory products

- (13) The Commission has previously considered that refractories can be segmented according to their chemical composition into basic and non-basic refractories.⁴
- (14) The Notifying Party submits that the distinction is appropriate also for the assessment of the present Transaction. The Notifying Party explains that basic refractories mainly consist of either magnesium oxide (MgO) or calcium oxide

⁴ M.4961 – Cookson / Foseco, paragraphs 10–17. Similarly in M.8130 – Imerys / Alteo certain assets, paragraphs 76–77

(CaO). The designation ‘basic’ refers to the specific chemical behaviour; the oxides whose compounds with water have basic (alkaline) characteristics are called ‘basic’. Basic refractories remain relatively stable when exposed to basic environments but could be damaged due to chemical reactions in acid environments. The opposite is true for non-basic refractories. Such refractories are primarily made of acidic minerals, such as bauxite, and they remain relatively stable when exposed to acidic environments.

- (15) Respondents to the Commission's market investigation confirm that from a demand-side perspective, basic and non-basic refractories are not substitutable or only substitutable in limited situations.⁵ Customers indicated that non-basic materials are not able to withstand the high temperatures present in the steel-making and cement-making environment. A large steel producer specified that ‘...there is no substitutability with regards to lining exposed to hot steel whereas there might be substitutability with regards to parts not in direct contact with hot steel.’⁶ Another major steel producer also noted that ‘Substitution is not completely impossible, but requires substantial production process changes, testing and certification and will also have an impact on the range of steel grades that can be produced as well as the process efficiency.’⁷ In addition, cement producers noted that such substitution would damage the lime with alumina contamination.⁸ Moreover, from a supply-side perspective, basic and non-basic refractory products are produced on separate production lines.
- (16) Therefore, in line with its past practice, the Commission considers that basic and non-basic refractories belong to separate product markets.

4.1.1.2. Shaped and unshaped refractory products

- (17) The Commission has also previously considered that refractories can be segmented on the basis of their form or shape into shaped and unshaped refractories.⁹
- (18) The Notifying Party agrees with the distinction between shaped and unshaped refractories. Shaped refractories are produced in a specific shape, mainly as bricks. Shaped products normally have a denser structure than unshaped products. They tend to be more expensive per tonne than unshaped refractory products, primarily due to their relatively more energy-intensive manufacturing process. Shaped refractories are generally used as structural components to build arches and walls. Unshaped refractories, on the other hand, are powder-based products used for linings and are usually cured in place to form monolithic structures after application.

⁵ See replies to questions 7 and 8 of Q2 – Questionnaire to Customers.

⁶ See replies to question 8.1 of Q2 – Questionnaire to Customers.

⁷ See replies to question 7.1 of Q2 – Questionnaire to Customers.

⁸ See replies to question 7.1 of Q2 – Questionnaire to Customers.

⁹ M.4961 – *Cookson / Foseco*, paragraphs 10–17. Similarly in M.8130 – *Imerys / Alteo certain assets*, paragraphs 76–77

Figure 2 - Product type Illustrations



Source: The Notifying Party

- (19) The results of the Commission's market investigation support this distinction. A large majority of respondents to the market investigation confirmed that shaped and unshaped refractories are not substitutable, or only substitutable in limited situations.¹⁰ According to customers of refractory products, shaped and unshaped refractory products are used for different purposes. For example, unshaped products are used where the geometry of the application such as the surface area of a kiln is complex and for repairs.¹¹ A major steel customer specified that even if substitution was technically possible, it would not be practical in terms of installation. In particular, *'it would need moulds to cast any upright structure such as a wall.'*¹² Also, in terms of product quality, customers noted that unshaped products generally have lower refractoriness.¹³ With regard to supply-side considerations, the production process and the equipment needed for the production of shaped and unshaped refractory products differ. For example, a competitor active in the refractory industry specified that *'in order to start shaped refractory production, the company would [need to] make full investment into all the facilities necessary: dedicated mixers, press machines, dryers and kilns.'*¹⁴
- (20) Therefore, in line with its past practice, the Commission considers that shaped and unshaped basic refractories belong to separate product markets.

4.1.1.3. Dolomite-based and magnesite-based refractory products

- (21) With regard to basic refractories, the Commission has not in its past practice considered a narrower market segmentation based on the material used for the production of basic refractories. In Cookson/Foseco, the transaction did not raise competition concerns in any sub-segments of basic refractories regardless of the product market definition.
- (22) In the present case, the Notifying Party submits that basic refractory products are predominantly made from magnesite and dolomite, and that the markets for basic refractories should be further sub-segmented, according to their main raw material, into basic refractories manufactured from magnesite and from dolomite.

10 See replies to questions 9 and 10 of Q2 – Questionnaire to Customers.

11 See replies to question 10.1 of Q2 – Questionnaire to Customers.

12 See replies to question 9.1 of Q2 – Questionnaire to Customers.

13 See replies to question 9.1 of Q2 – Questionnaire to Customers.

14 See replies to question 11 of Q1 – Questionnaire to Competitors.

- (23) According to the Notifying Party, magnesite- and dolomite-based refractories are, to a very large extent, not substitutable from a demand-side perspective. This is primarily because magnesite-based products can resist higher temperatures, more corrosive substances and hydration, and they are also more expensive than dolomite-based refractories. As to the supply-side, the Notifying Party submits that while some substitutability is theoretically possible, in practice the production of magnesite- and dolomite-based refractories typically takes place on separate production lines and switches are uncommon. Switching production from one material to another would require adjustments to the production process, thorough cleaning of all production facilities and machines resulting in an interruption of the production process. Therefore, the Notifying Party states that it usually does not make commercial sense for a refractory producer to switch between the production of basic refractory products from dolomite and magnesite on the same production line.
- (24) The replies of market participants within the Commission's market investigation largely support the Notifying Party's submissions. A majority of market participants confirmed that there is only limited substitutability between magnesite- and dolomite-based refractories.¹⁵ More specifically, from a demand-side perspective, majority of customers indicated that, due to different properties of magnesite and dolomite based refractories, with magnesite-based refractories having a higher refractoriness, they are not substitutable except for limited applications.¹⁶
- (25) The different properties and reactions due to the different raw materials also mean that magnesite- and dolomite-based refractories are more suited in different industrial applications. For instance, a cement producer indicated that dolomite-based refractories are not suitable for the cement industry. The limited use of dolomite-based refractories in cement industry application was also highlighted by large cement producers. In particular, dolomite-based products could only be used in the kiln sections that have '*easy burning conditions*'.¹⁷ Moreover, a glass manufacturer noted that '*refractories based on dolomite are not technically suitable for glass production*'.¹⁸ In addition, dolomite-based refractories are also unsuitable for copper industry applications. One customer explained: '*Only magnesite based refractory products are suitable for chemical processes occurring in the copper smelting and refining furnaces*'.¹⁹ Dolomite-based refractories are used in stainless steel production, because '*the cost of magnesite-based refractory products is considerably higher while performance remains the same*'.²⁰ Carbon steel customers use both types of refractories, however as dolomite-based products cannot withstand certain more demanding operating environments, there are applications where substitutability between magnesite- and dolomite-based refractories is not possible.²¹ More generally, even for those

15 See replies to questions 13 and 14 of Q2 – Questionnaire to Customers.

16 See replies to question 14 of Q2 – Questionnaire to Customers.

17 See replies to question 14.1 of Q2 – Questionnaire to Customers.

18 See Minutes of a conference call with a Customer of 24.March.2017, paragraph 6.

19 See replies to question 14.1 of Q2 – Questionnaire to Customers.

20 See replies to question 13 of Q2 – Questionnaire to Customers.

21 See replies to question 14 of Q2 – Questionnaire to Customers.

limited applications in relation to which substitution is technically possible, it would not be commercially feasible due to the considerably higher price of magnesite-based refractories. For example, a company active in lime, dolime and mineral products business indicated that *'dolomite carbon could be substituted by fired magnesia bricks in shaft kilns. [However,] price will be multiplied by 2 or 3.'*²² Similarly, a steel producer noted that *'technically it [substitution] is feasible, but magnesite-based refractories are more expensive.'*²³

- (26) With regard to the supply-side, the Commission finds, on the basis of its market investigation, that there is a limited substitutability. In particular, a majority of refractory producers indicated that, while it is theoretically possible to switch production from magnesite-based refractories to dolomite-based refractories and vice-versa in a given production facility,²⁴ such switching is subject to the availability of raw materials and entails costs. The scale of the investment required for a switch depends on a number of factors such as the type of facility, production line and whether it produces shaped or unshaped magnesite- or dolomite-based products.²⁵ Moreover, such switching takes time, requires stopping of the production process and thorough cleaning of the facilities and manufacturing equipment. The Commission's market investigation shows that indeed not all suppliers supply both magnesite- and dolomite-based refractory products.
- (27) Therefore, in line with the submission of the Notifying Party and of the outcome of its market investigation, the Commission concludes that, for the purposes of the Transaction, dolomite-based and magnesite-based basic refractories belong to separate product markets.

4.1.1.4. Shaped fired and shaped unfired refractory products

- (28) With regard to basic shaped refractories, the Commission has previously not considered a further market segmentation into fired and unfired refractory products, based on the type of thermal treatment that shaped refractories undergo.
- (29) All shaped refractories, both from magnesite and dolomite, are thermally treated. However, depending on the desired properties for the targeted end applications, they can either be tempered or fired. Tempering is a process of drying the refractory material and strengthening its resistance through the application of heat of up to 350 degrees Celsius in a tempering kiln. The final product is referred to as tempered or unfired refractory product.
- (30) Firing, instead, refers to a process of burning refractory products at higher temperatures. Firing takes place in a special firing tunnel kiln, which burns the refractory brick at temperatures of up to 1850 degrees Celsius. Firing increases the material's strength and refractoriness.
- (31) The Notifying Party acknowledges that customers may consider the substitutability of fired and unfired refractory products to be limited due to a

22 See replies to question 13.1 of Q2 – Questionnaire to Customers.

23 See replies to question 13.1 of Q2 – Questionnaire to Customers.

24 See replies to question 15 of Q1 – Questionnaire to Competitors.

25 See replies to question 15.1 of Q1 – Questionnaire to Competitors

combination of technical and economic factors. On the one hand, structural requirements of a given area of application often make it preferable from a technical point of view to choose a fired product with a higher refractoriness over an unfired product, or vice-versa. On the other hand, the production costs per product of fired refractories are higher than for unfired, affecting the customers' choice even where technical interchangeability between fired and unfired products may be possible. However, the Notifying Party considers fired and unfired basic shaped refractory products to be generally substitutable from a supply side perspective. It describes that the production of fired refractories has only one separate production step, namely the burning of the products in a tunnel kiln. According to the Notifying Party, the installation of a tunnel kiln is a one-off investment of reasonable scope. In addition, the Notifying Party submits that most of the Parties' major competitors produce both fired and unfired refractories. Despite providing information on fired and unfired refractory products, a narrower segmentation of shaped refractories into fired and unfired refractory products is not suggested by the Notifying Party.

- (32) Based on the results on the market investigation, the Commission finds that the substitutability of fired and unfired products is limited, particularly as regards magnesite based products.
- (33) From the demand-side perspective, a very large majority of customers of refractory products considers fired shaped refractory products not to be substitutable with unfired shaped refractory products, or only substitutable in limited situations.²⁶
- (34) In particular, regarding magnesite-based shaped refractory products, the different properties of fired and unfired shaped refractory products make them suited for different applications. For instance, fired products are more resistant to heat and can be used at higher temperature environments than unfired, such as for the manufacture of cement. This is in line with purchasing trends by industry: for instance, when looking at sales made by both Parties, customers from industries other than steel, such as cement manufacturers, purchase almost exclusively fired magnesite products.²⁷
- (35) Steel customers are the only ones to purchase both unfired and fired magnesite-based shaped products. However, even among these customers, substitutability between them is considered limited. Carbon steel customers' responses, in particular, indicate that for operations and applications where fired shaped refractories are used, they cannot be substituted by unfired products.²⁸ This is due to the fact that fired shaped refractory products have greater strength, withstand higher temperatures and are more durable than unfired products.
- (36) Fired refractory products tend to be more expensive than unfired. This is due to the fact that, unlike tempering, the production process for fired refractories requires burning the material at considerably higher temperatures for a longer period of time, approximately three days, thus consuming more energy and

26 See replies to question 11 of Q2 – Questionnaire to Customers.

27 See accompanying annexes to confidential annex 8.5 submitted with the Form CO.

28 See replies to question 11 of Q2 – Questionnaire to Customers.

adding costs. Therefore, although fired products are regarded by customers as superior to unfired because they offer better performance and greater refractoriness, and could in principle replace unfired refractories in certain applications, customers do not consider such substitution appropriate due to commercial considerations. In this regard, customers stated, for example that in some cases substitution is possible, *'but at a higher price'*. Others do not consider such substitution a real option *'due to the higher price'* and because *'costs would be very inefficient'*.²⁹

- (37) With regard to supply-side substitutability, the market investigation revealed that not all suppliers can offer both fired and unfired shaped refractory products. For example, some suppliers may only have a tempering kiln and thus, can only produce unfired bricks.³⁰ Market participants confirmed that a significant financial investment is needed if a producer would like start the production of fired refractories, due to the high costs for the installation of a firing kiln.³¹ In addition to the financial investment, market suppliers refer to the considerable time that is required for starting the production of fired refractory products, which some competitors estimate to be of 2 years or more.³² Moreover, respondents also point at specific know-how required if a supplier wishes to begin new production of fired or unfired products.³³
- (38) In conclusion, on the basis of the results of the market investigation, the Commission finds that, for the purposes of the present Transaction, magnesite-based unfired shaped refractories form a separate product market from magnesite-based fired shaped refractories.
- (39) The considerations as to the limited substitutability of fired and unfired shaped refractory products also apply to dolomite-based shaped products. However, with regard to dolomite-based shaped refractory products the question as to the exact product market definition can be left open, as the Transaction raises serious doubts regardless of whether the market for shaped dolomite products is sub-segmented into fired and unfired products. To the effect of the competitive assessment of the Transaction, the Commission will accordingly consider the supplies of both the fired and unfired shaped dolomite-based refractory products combined and separate as if these constituted separate markets.

4.1.1.5. Conclusion on product market definition

- (40) In conclusion, for the purposes of the assessment of the present Transaction, the Commission finds that the relevant product markets are:
- (a) The market for basic unshaped refractories from dolomite ('BURD');
 - (b) The market for basic unshaped refractories from magnesite ('BURM');

29 See replies to question 12.1 of Q2 – Questionnaire to Customers.

30 See Minutes of a conference call with a Competitor of 20 March.2017, paragraph 11.

31 See replies to question 13.2 of Q1 – Questionnaire to Competitors.

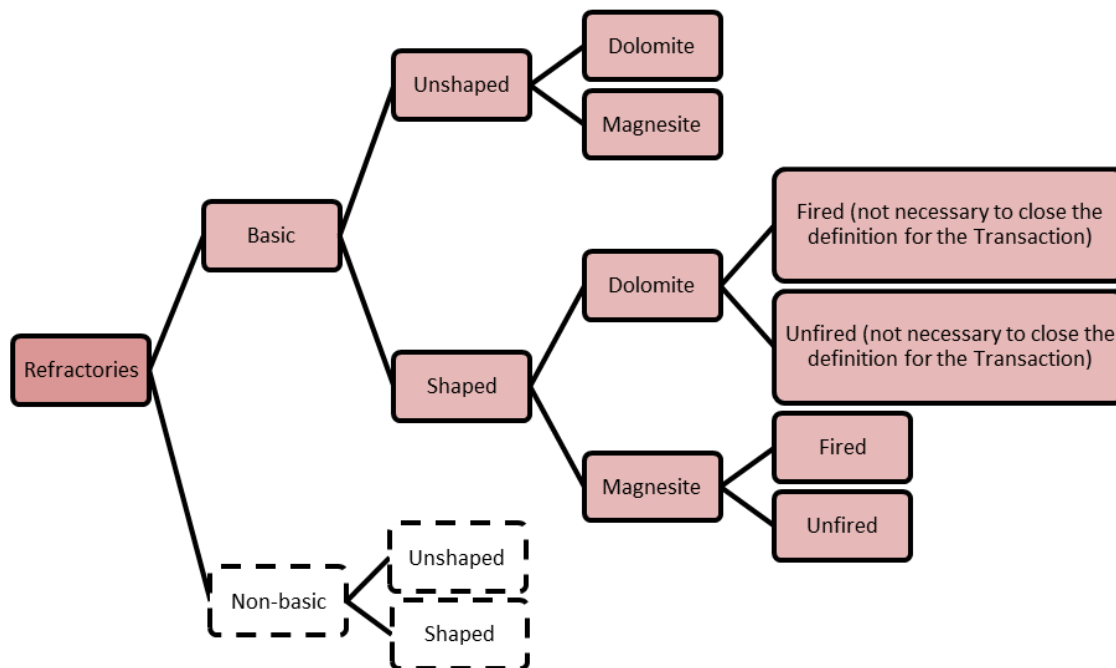
32 See replies to question 13.1 of Q1 – Questionnaire to Competitors.

33 See replies to question 13.3 of Q1 – Questionnaire to Competitors.

- (c) The market for basic shaped refractories from dolomite ('BSRD'), irrespective of the distinction between fired and unfired products ('BSRD fired' and 'BSRD unfired');
- (d) The market for basic shaped fired refractories from magnesite ('BSRM fired');
- (e) The market for basic shaped unfired refractories from magnesite ('BSRM unfired');
- (f) The market for non-basic unshaped refractories ('NBUR');
- (g) The market for non-basic shaped refractories ('NBSR').

The product market definitions are visualised in Figure 3.

Figure 3 - Refractories, product market definitions



4.1.2. Raw materials (transformed or ore)

- (41) There are a number of different raw materials that are used for the production of refractory products. In order to be employed in the manufacture of refractories, the raw material has to be transformed.
- (42) As a first step, the raw ore is extracted either through mining, both surface and underground, or through seawater extraction. Following the mining process, an initial treatment process is applied. Depending on the type of the initial treatment

process, raw materials for refractory products are transformed into sintered³⁴ (also called ‘dead-burnt’) or fused³⁵ materials.

- (43) The Parties are active in mining and selling of raw materials that are used as input for refractory products. In its past practice, the Commission has generally treated each industrial mineral as a separate product market.³⁶ However, the Commission has previously not considered the markets for any of the raw materials for which the Parties' activities overlap, except for chrome.³⁷
- (44) The Notifying Party submits that the following raw materials are used as input for the production of refractories and sold to third parties by either of the Parties: sintered magnesia, fused magnesia, sintered dolomite, chrome ore/chromite, spinel, fused mullite, fused zirconia-mullite, and aluminium silicates/chamotte. Out of those transformed raw materials, the Parties' activities overlap in sintered magnesia, sintered dolomite, and chrome ore/chromite. In addition, the Parties also mine raw magnesite, raw dolomite, caustic magnesia and magnesium hydroxide. However, according to the Notifying Party, these materials are not used as a direct input for the production of refractories.
- (45) Furthermore, the Notifying Party submits that the transformed raw materials should be considered the relevant product market rather than the raw ore itself, as the raw ore destined for refractory products is typically not traded separately. The Parties also do not sell raw magnesite or raw dolomite for refractory applications.³⁸ The Notifying Party further explains that the initial treatment of the raw materials typically takes place close to the extraction site due to cost reasons.³⁹
- (46) According to the Notifying Party, the precise product market definition for raw materials can be left open, as the Transaction will not lead to any competitive concerns at a global or EEA-wide level, although it submits that the following (transformed) raw materials give rise to vertically affected markets: (i) sintered magnesia, (ii) sintered dolomite, (iii) fused magnesia, (iv) chrome ore/chromite, (v) spinel and (vi) fused mullite.
- (47) The Commission's market investigation confirmed⁴⁰ that it is indeed the processed (transformed) materials that are needed for the production of refractory products. Refractory producers that are not vertically integrated and thus do not mine the raw materials themselves, tend to source transformed materials, in

34 Sintering refers to the process of compacting and forming a solid mass of material by heat and/or pressure without melting it to the point of liquefaction. For instance, in the case of magnesia, the ore may be heated in rotary kilns to temperatures of 1 800 – 2 200 degrees Celsius to achieve this.

35 Fusing involves liquefying the material through extreme heat or pressure. In case of magnesia, the temperature required is up to 2 800 degrees Celsius.

36 M.1381 – *Imetal / English China Clays*, paragraph 34. Similarly in the not yet published M.8130 – *Imerys/Alteo* certain assets.

37 M.6541 – *Glencore / Xstrata*, paragraphs 480–481.

38 The Parties only sell residual volumes for other applications such as for road construction or railtrack beds.

39 For instance, sintering raw magnesite and raw dolomite reduces their weight by approximately 50%.

40 See replies to question 47 of Q1 – Questionnaire to Competitors.

particular sintered and fused magnesia and sintered dolomite.⁴¹ As explained by a competitor, ‘*For the use as refractory raw material, the MgO...has to be burnt at high temperatures to get DBM (dead-burnt MgO mainly used for basic bricks for the cement industry) or even fused MgO, mainly used for bricks for the steel industry.*’⁴²

- (48) In conclusion, the Commission finds that to the effect of the competitive assessment of the Transaction, the precise product market definition for raw materials can be left open, as the present Transaction does not raise competition concerns with regard to the raw materials irrespective of the specific market definition retained for raw materials.

4.2. Relevant geographic market

4.2.1. Refractory products

- (49) The Commission has previously considered various refractory markets to be EEA-wide in scope,⁴³ though precedents have not addressed all potential product segmentations relevant for the present case.
- (50) The Notifying Party submits that the relevant geographic market for (i) basic shaped refractories from magnesite are worldwide while (ii) for all other affected refractory products the relevant market is worldwide or at least EEA-wide.
- (51) The Notifying Party submits that, since the Commission's relevant precedent, there have been market trends which warrant a broader market definition. Most notably, the Notifying Party explains that barriers to trade are no longer in place, as anti-dumping duties on Chinese refractory material imports to the EEA were lifted in 2010. Domestic restrictions to exports from China have also been gradually lifted, with the last remaining one in January 2017.
- (52) The Notifying Party further explains that low transportation costs allow global trade of refractories, so that customers can be served from worldwide locations. For instance, several competitors have production facilities or a supplier base in China from where they serve also the EEA. Even competitors without production facilities in the EEA can serve customers in the EEA. Correspondingly, customers have global supply patterns⁴⁴. In particular with respect to shaped products, the Notifying Party notes that their value and production costs are higher than those for unshaped products which make long-distance shipping commercially more attractive due to lower relative transport costs.
- (53) The Notifying Party's view is that EEA customers no longer have quality concerns regarding refractories supplied by Chinese suppliers, as qualitative differences have to a great extent diminished.

41 See replies to question 47.1 of Q1 – Questionnaire to Competitors.

42 See Minutes of a conference call with a Competitor of 17 March 2017, paragraphs 8, 11 and 12.

43 See case M.4961 – Cookson / Foseco, paragraph 3 and case M.8130 – Imerys / Alteo certain assets, paragraph 93 and No IV/M.472 - Vesuvius / Wülfrath, paragraph 24.

44 The Notifying Party submits that, in 2015, the EEA imported 19% of its consumption of shaped refractory products, including 13% from China. According to the Notifying Party, imports from China have increased from 2% in 2000 to 13% in 2015.

- (54) The market investigation confirmed a growing Chinese presence on the refractory markets in the EEA,⁴⁵ the share of imports of basic shaped refractory materials still remains below 15%. However, a number of other findings from the market investigation does not support a broadening of the geographic scope of the market compared to precedent.
- (55) First, geographic regions, in particular the EEA, seem to differ in their demand structures. EEA customers stated high quality products as the most important attribute they looked for in their refractory purchases, and especially so among steel customers.⁴⁶ Despite the possibility to import some refractory materials a very large share of EEA based customers responding to the market investigation reported having a clear preference for EEA-based suppliers.⁴⁷ Also competitors (including Chinese) considered that their customers have a preference for EEA based suppliers.⁴⁸
- (56) While customers acknowledged that non-EEA suppliers including suppliers from China have become more technologically advanced, for a number of reasons they were not competing fully with EEA-based suppliers for a number of reasons.⁴⁹ When asked to name alternative suppliers to the Parties as potential sources of supply, customers indicated almost exclusively EEA based suppliers, whereas non-EEA based manufacturers only appeared sporadically.⁵⁰ Customers explained that Chinese suppliers still cannot guarantee the consistency of the quality,⁵¹ as they appear to lack a thorough and systemic quality control mechanism at the plants. Therefore, although EEA customers may sometimes use Chinese refractory products in their processes, they only do so in technologically non-critical applications. Certain applications, such as linings for converters or Electric Arc Furnaces ('EAF') or Basic Oxygen Furnaces ('BOF') are largely served through EEA based suppliers⁵².
- (57) Second, aside from quality considerations, the sourcing pattern of EEA customers seems to be explained by other elements, too, such as locally available service. Many customers prefer performance / yield based payment, which Chinese

45 See replies to question 18 of Q1 – Questionnaire to Competitors.

46 Steel makers for instance explain that the quality and other characteristics of the final steel product is influenced by the exact composition of the refractory material, thus the consistency of the final product requires a consistency in the refractories. All variations in the refractory material need to be notified to the steel maker, and the steel maker may also need to notify the final client of the change.

47 See replies to questions 15 and 17 of Q2 – Questionnaire to Customers, Minutes of a conference call with a Competitor of 03.03.2017, paragraph 17.

48 See replies to question 17 of Q1 – Questionnaire to Competitors.

49 The specific shortcomings of non-EEA based suppliers as limiting the constraint exerted on EEA suppliers will be addressed within the competitive assessment section.

50 See replies to question 27 of Q2 – Questionnaire to Customers, Minutes of a conference call with a large steel Customer of 28 February 2017, paragraph 18.

51 See Minutes of a conference call with a Competitor of 03.March 2017, paragraph 19.

52 See replies to questions 15 and 18 of Q2 – Questionnaire to Customers, Minutes of a conference call with a large steel Customer of 23.05.2017, paragraph 7, Minutes of a conference call with a large steel Customer of 03 March 2017, paragraph 17.

suppliers do not offer.⁵³ Customers also often require the joint co-development of tailored products, which relies on local presence, long earned reputation and established customer relationships.⁵⁴ RHI and Magnesita's internal documents confirmed that their distinctive commercial strategies relied on these factors.

Figure 4 – [...]⁵⁵

[...]

- (58) Third, while the removal of trade barriers and low transportation costs enable the refractory products to travel across continents, particularly in case of shaped materials, lead times and just-in-time delivery are important for customers and are essential in guiding customer choice.⁵⁶
- (59) Fourth, even globally active suppliers seem have regional production facilities to serve regional customers⁵⁷ and this is reported to strongly influence the significance of the competitive role they play in those regions. Although there are competitors with activities in different regions and a worldwide presence, their market shares show wide variations across regions.⁵⁸
- (60) Fifth, the market investigation confirmed that different conditions of competition, relating to market structure, different costs, availability of raw materials, transportation, taxation, presence of Chinese suppliers, etc.), are reflected by a difference in prices across different geographic regions.⁵⁹
- (61) In conclusion, the Commission finds that, as confirmed by the market investigation, the Commission's previous practice is still valid and the relevant geographic market for refractory materials notably BSRD, BURD BSRM and BURM shall be considered EEA wide in scope.⁶⁰

53 See replies to question 18 of Q2 – Questionnaire to Customers, Minutes of a conference call with a Customer of 13 March 2017, paragraph 15.

54 See replies to questions 16 and 29 of Q2 – Questionnaire to Customers.

55 Form CO, Annex 5.4, document 5 [...].

56 See replies to question 21 of Q2 – Questionnaire to Customers, Minutes of a conference call with a Competitor of 03.03.2017, paragraph 32.

57 See replies to question 17 of Q1 – Questionnaire to Competitors.

58 Form CO, Annex 5.4, document 2 - Magnesita, Competitor's Profiles, April 2016.

59 See replies to questions 19 and 20 of Q2 – Questionnaire to Customers and replies to questions 19 and 20 of Q1 – Questionnaire to Competitors.

60 The competitive pressure exerted by imports will nevertheless be addressed in the competitive assessment.

4.2.2. *Raw materials (transformed or ore)*

- (62) The Commission has in certain recent cases considered the markets for a number of industrial minerals to be at least EEA-wide in scope, though it has left the exact market definitions ultimately open.⁶¹
- (63) The Notifying Party submits that the relevant geographic market for raw materials for refractory products is at least EEA-wide if not global.⁶² The Notifying Party further explains that mining of the materials takes place globally, there are global supply patterns and that relative transport costs are not significant.
- (64) Magnesita, for instance, sources the sintered magnesia necessary for its European refractory production from its mine in Brazil. Magnesita submits that it markets its raw materials from its mines in Brazil worldwide. As concerns raw magnesite, the Notifying Party argues that 80% of the world's resources are outside of Europe, most of it in China, therefore, most of the raw materials used by EEA refractory producers originate from outside of Europe.
- (65) The market investigation also provided indications that the geographic market for raw materials may be worldwide in scope.⁶³ Many competitors source raw materials from outside of the EEA, often China. Prices in supply contracts rely on global sintered magnesite prices, which are based from the Chinese reference price. Large suppliers have mines globally and serve customers worldwide.
- (66) In conclusion, the Commission finds that the exact geographic scope of the market for transformed raw materials can be left open as the Transaction would not raise competition concerns under even the narrowest plausible geographic market definition.

5. **COMPETITIVE ASSESSMENT**

- (67) The Commission finds that the Transaction gives rise to (1) horizontal overlaps between the Parties' activities in (i) raw materials for refractory products, (ii) non-basic refractory products, (iii) basic refractory products, including magnesite and dolomite-based products, as well as to (2) vertical relationships between their activities in the markets for raw materials and those for refractory products. However, the Commission considers that affected markets only arise in relation to dolomite-based refractory products and magnesite-based refractory products, and consequently in relation to the existing vertical relationship with the Parties' activities in raw materials for refractory products.
- (68) In this Section, after a general introduction on the data and methodology used to compute market shares and a brief description of the Commission's assessment on the robustness the proposed data (Section 5.1), the competitive assessment is presented of the horizontal overlaps in the dolomite-based refractory markets (Section 5.2), the horizontal overlaps in the magnesite-based refractory markets

61 See M.7456 – Imerys / S&B Minerals, paragraphs 30–32; and M.6189 – Imerys / Rio Tinto Talc Business, paragraph 37.

62 See replies to question 58 of Q1 – Questionnaire to Competitors.

63 See replies to questions 18 and 59 of Q1 – Questionnaire to Competitors.

(Section 5.3) and the vertical relationships between the parties' activities in the transformed raw materials and refractory products (Section 5.3.3).

5.1. Introduction on market share methodology and investigation

- (69) The Parties provided market share estimates based on a two-step methodology which estimated market size separately from competitors' sales.
- (70) Due to the general lack of recent public data on refractory consumption both at the worldwide and EEA levels, the Parties first estimated the market sizes of the affected markets for recent years using a top-down approach. This approach calculated refractory consumption for each customer segment by multiplying figures on the downstream output with estimates on refractory consumption rates, i.e. the average quantity of refractory material required to produce one unit of downstream output.
- (71) The Parties estimated specific consumption rates of refractory material per type of customer,⁶⁴ on the basis of the latest public report on global and regional refractory consumption. This report was published in 2013 and contained refractory consumption figures for 2011.⁶⁵ The Parties assume that customer type specific consumption rates have stayed constant since 2011 for all customers except steel producers. Refractory materials for the production of steel have become more efficient and, thus, steel producers consumed less refractory products per tonne of output in 2015 than in 2011. Based on the Parties' submissions, adjustments for efficiency improvements are more relevant for steel customers than for customers active in other industries and have therefore been accounted for this type of customers only.⁶⁶
- (72) The Parties obtained public data on current refractory customers' production figures, such as steel output. Applying the consumption rates per customer type to these production figures, the Parties estimated total refractory market sizes per region and customer type. The Parties relied on their industry knowledge to adjust these estimations and allocate the total estimated volume of refractories consumed to specific product groups⁶⁷, yielding the final estimations of volume market sizes per product and region for 2013 - 2015.
- (73) As a second step, the Parties then calculated volume market shares (EEA and worldwide) from their own sales volumes, while they estimated volumes sold by their competitors.⁶⁸ Value market shares were obtained by using aggregate price estimations in combination with the volume market shares.
- (74) In addition to market shares data, the Parties also submitted estimations on the production capacities available per product.

64 Iron and steel, non-ferrous metals (copper, aluminium, etc.), non-metallic minerals (cement, glass, etc.) and other.

65 Industry Study No. 2985, World Refractories, March 2013 (Freedonia 2013 Study).

66 See paragraph 10.1 of confidential Annex 6.7 to the Form CO.

67 Basic and non-basic products, shaped or unshaped, fired or unfired where applicable.

68 Estimated captive sales were excluded from the market size and market shares estimations.

- (75) Against this background, the Commission acknowledges the difficulties in estimating market sizes and market shares in the refractory industry due to the apparent lack of recent public information on the sector.
- (76) While, in principle, the chosen methodology appears appropriate to estimate market shares, it relies on a number of assumptions. In order to test these against real market data, the Commission obtained more detailed data in frames of its market investigation.
- (77) The Commission collected sales and capacity figures from the Parties' main competitors in the EEA. While the sample obtained by the Commission does not cover the entirety of the competitors identified by the Parties so as to have a full market reconstruction, it enabled a comparison between the Parties' volume estimations and actual sales of those competitors.
- (78) Based on the data collected, the Commission finds that in BSRM products, both fired and unfired, the Parties overestimated their competitors' sales.⁶⁹
- (79) As regards BSRM unfired, the Commission finds that the discrepancy in volumes reported by competitors against volumes estimated by the Parties was particularly significant, resulting in a much lower comparative share of the main competitors on this market compared to each of the Parties.
- (80) Separately, the Commission also scrutinised the top-down estimates for market size by checking the assumptions on consumption rates against information obtained during the market investigation.
- (81) During its market investigation, the Commission gathered information from customers on their consumption of BSRM products and production output. From this data the Commission was able to calculate actual consumption rates of BSRM unfired products for a number of customers. To determine the typical consumption rate by customers of BSRM products the Commission examined a number of measures including the median and weighted average consumption rate across these customers as well as consumption rates of the main customers. This approach eliminates or reduces the influence of outliers in the consumption rates implied by the responses to the market investigation.
- (82) These different measures of actual consumption rates were relatively close to one another indicating that the measures are relatively robust. However, the actual consumptions rates found were significantly lower than the consumption rate estimated by the Parties. Rescaling the Parties' market size estimates to account for these lower consumption rates leads to a lower market size for BSRM unfired than the one estimated by the Parties. This is consistent with the observed [...] of competitors' sales.
- (83) Depending on the measure for the actual consumption rate used to calculate the market size estimate for BSRM unfired products, the Parties' combined share for such products increases from an estimated [40-50]% (see Table 8 below) to a combined share between 50 and 60% (see Section 5.3.1).

⁶⁹ See replies to question 3 of Q1 – Questionnaire to Competitors.

5.2. Horizontal overlaps in dolomite-based refractory products

- (84) The Parties' activities overlap and the proposed Transaction gives rise to affected markets with regard to both (i) BURD and (ii) BSRD in the EEA.⁷⁰ With regard to BSRD, affected markets also arise with respect to both of its potential sub-segments (iii) BSRD fired and (iv) BSRD unfired.
- (85) The Notifying Party's estimation of the Parties' market shares in the affected markets in the EEA are shown in Table 1.

Table 1 - Overview horizontally affected markets for dolomite-based refractory products, EEA

	Volume based market shares EEA, 2015			Value base market shares EEA, 2015		
	RHI	Magnesita	Combined	RHI	Magnesita	Combined
Dolomite-based						
BSRD	[20-30]%	[50-60]%	[70-80]%	[20-30]%	[50-60]%	[80-90]%
BSRD fired	[5-10]%	[80-90]%	[80-90]%	[5-10]%	[70-80]%	[80-90]%
BSRD unfired	[30-40]%	[30-40]%	[70-80]%	[30-40]%	[30-40]%	[70-80]%
BURD	[50-60]%	[10-20]%	[60-70]%	[40-50]%	[10-20]%	[60-70]%

Source: The Notifying Party

5.2.1. The Notifying Party's submission

- (86) The Notifying Party submits that the proposed Transaction does not give rise to competition concerns related to dolomite-based refractories. The Notifying Party contends that, in its view, a number of credible competitors would remain post-Transaction, including both EEA and non-EEA suppliers of dolomite-based refractories, and those competitors would have sufficient spare capacities. The Notifying Party further notes that the customers of dolomite-based refractories have purchasing power and the barriers to entry are low and expansion from producing other types of refractory materials is possible.

5.2.2. The Commission's assessment: Dolomite-based refractories

5.2.2.1. BSRD (Basic shaped refractories based on dolomite)

- (87) The Commission observes that the proposed Transaction results in affected markets and high combined market shares in the EEA for the Parties, regardless of whether an overall BSRD market or the sub-segmented fired and unfired BSRD segments are considered. To the effect of the competitive assessment of the Transaction, the Commission is accordingly considering the supplies of both the fired and unfired BSRD products combined and separate as if these constituted separate markets.
- (88) Against this background, the Commission finds that in the overall BSRD market in the EEA, the Parties achieve a combined market share of [80-90]% by value and [70-80]% by volume. The market share increment brought by the proposed Transaction is over [20-30] percentage points. Only one competitor with a not insignificant market position, Kelsen, would remain after the proposed

⁷⁰ BURD would be affected even if a global market definition was adopted. The Parties achieved a combined market share of [30-40]% in volume and [50-60]% in value in 2015 globally.

Transaction. The Notifying Party's estimates of the Parties' and their competitors' market shares in 2013–2015 are included in

(89) Table 2.

Table 2 – BSRD (all types combined) market shares, EEA

BSRD (all)	2013		2014		2015	
	Volume	Value	Volume	Value	Volume	Value
RHI	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
Magnesita	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[50-60]%
Combined	[70-80]%	[80-90]%	[70-80]%	[80-90]%	[70-80]%	[80-90]%
Kelsen	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
AM Refractories	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Qinghua	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Tata	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
McKeow	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%	100%	100%

Source: The Notifying Party

- (90) In the potential sub-segment of BSRD fired, the market share increment is below [10-20] percentage points but the Parties' combined market share is very high, [80-90]% by value and [80-90]% by volume. No competitors with market shares reaching [5-10]% would remain after the proposed Transaction. The Notifying Party's estimates of the Parties' and their competitors' market shares in 2013–2015 are included in Table 3.

Table 3 – BSRD fired market shares, EEA

BSRD fired	2013		2014		2015	
	Volume	Value	Volume	Value	Volume	Value
RHI	[0-5]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%	[5-10]%
Magnesita	[80-90]%	[80-90]%	[80-90]%	[70-80]%	[80-90]%	[70-80]%
Combined	[80-90]%	[80-90]%	[80-90]%	[80-90]%	[80-90]%	[80-90]%
Qinghua	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Tata	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
McKeow	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Jinlei	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%	100%	100%

Source: The Notifying Party

- (91) In the potential sub-segment of BSRD unfired, the Parties' combined market share reaches [70-80]% by volume and value while the market share increment is over [30-40] percentage points. Only one competitor with a not insignificant market position, Kelsen, would remain after the proposed Transaction. The Notifying Party's estimates of the Parties' and their competitors' market shares in 2013–2015 are included in

(92) Table 4.

Table 4 – BSRD unfired market shares, EEA

BSRD unfired	2013		2014		2015	
	Volume	Value	Volume	Value	Volume	Value
RHI	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Magnesita	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%	[30-40]%
Combined	[70-80]%	[70-80]%	[70-80]%	[70-80]%	[70-80]%	[70-80]%
Kelsen	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%	[20-30]%
AM Refractories	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%	100%	100%

Source: The Notifying Party

- (93) The Commission notes that the Parties' significant market shares in BSRD, and its potential subsegments BSRD fired and unfired seem, prima facie, indicative of market power. The finding is corroborated by the fact that there is only one, or with respect to BSRD unfired no, competitors with non-negligible market shares.
- (94) The results of the market investigation indicate that in general customers do not consider there to be many suppliers alternative to the Parties. Only few customers could name any alternative suppliers for dolomite refractories. For fired dolomite-products, it was also explicitly mentioned that there are no alternative suppliers.⁷¹
- (95) In line with the finding of a limited number of alternative suppliers, particularly steel customers also considered the Parties to be close competitors in BSRD. Reasons for that include, for example, similarities in product portfolios. One steel customer commented, for instance, that *'[b]asically both companies have the same product portfolio. On to [sic] of this Magnesita is big in dolomite products'*.⁷²
- (96) In addition to large product portfolios, the Commission finds from the results of the market investigation that the Parties are considered to benefit from the fact that they have access to internal raw material supplies. In particular, a vast majority of competitors considered that vertical integration into raw materials is a competitive advantage, for instance because of cost and the ability to ensure constant quality in production.⁷³
- (97) The Commission further notes that while certain customers have internal capacity to produce refractory products, this only applies to a small subset of all customers. Moreover, even those customers that have internal production capacity are not necessarily able to produce all types of refractories needed or to adjust their production rapidly.⁷⁴ Generally customers thus do not have the possibility to resort to internal production to offset rising prices or otherwise deteriorating conditions in the merchant market.
- (98) There appear to be barriers to entry into BSRD markets. Refractory products are critical for production continuity and even safety at the customer's production sites. Deficient refractories may result in the need to shut down the production for

71 See replies to question 27 of Q2 – Questionnaire to Customers.

72 See replies to questions 26, 39 and 40 of Q2 – Questionnaire to Customers.

73 See replies to question 49 of Q1 – Questionnaire to Competitors.

74 See replies to questions 31 and 32 of Q2 – Questionnaire to Customers.

repairs, which is costly and burdensome for the customer. In addition, some steel customers indicated that the quality of the refractory material may also affect the quality of their final steel products.⁷⁵

- (99) In line with the critical role of refractories, quality was most commonly referred by customers as a very important or important factor in their purchasing decision.⁷⁶ A clear majority of customers responding also replied that new suppliers need to go through qualification processes before they can be accepted as a supplier. Some customers indicated that also their own customers require that such qualification is done if they are to change the refractory supplier. Customers further indicated that such qualification process can take several months, some even referring to 1–2 years.⁷⁷ A smaller majority of customers indicated that even their present suppliers need to undergo a qualification process if they are to supply new products.⁷⁸
- (100) For competitors, entering into or expanding in BSRD appears to require some effort and resources. Competitors in general indicated that prices would need to increase significantly, 10–30%, for them to be willing to enter or expand in BSRD. A refractory producer commented, for instance, that *'[m]argins should increase at least in 15% to make any big investment attractive'* while another one stated simply that *'[...] will not increase output on short term'*.⁷⁹
- (101) Finally, customers were in general concerned about the proposed Transaction and many of them, including a number of steel producers, expected price increases in BSRD fired and unfired. Customers commented, for instance that *'[t]he new company will become the market leader and will be free to impose higher prices'* and *'[i]n this case the price increases could be higher because there are no alternative suppliers of these products'*⁸⁰
- (102) Therefore, on the basis of the results of the market investigation and all evidence available to it, the Commission concludes that the proposed Transaction, as notified, would give rise to serious doubts as to its compatibility with the internal market due to horizontal effects in BSRD regardless of whether the market for BSRD is further sub-segmented into BSRD fired and BSRD unfired.

5.2.2.2. BURD (Basic unshaped refractories based on dolomite)

- (103) The Parties achieve a high combined market share in BURD of up to [60-70]% in the EEA.⁸¹ Only one competitor with a not insignificant market share, Kelsen, will remain after the proposed Transaction. The Notifying Party's estimates of the Parties' and their competitors' market shares are included in Table 5.

75 See replies to question 37 of Q2 – Questionnaire to Customers and minutes of a call with a steel Customer on 17 March 2017.

76 See replies to question 21 of Q2 – Questionnaire to Customers.

77 See replies to question 36 of Q2 – Questionnaire to Customers.

78 See replies to question 37 of Q2 – Questionnaire to Customers.

79 See replies to question 45 of Q1 – Questionnaire to Competitors.

80 See replies to questions 47 and 49 of Q2 – Questionnaire to Customers.

81 BURD would be affected even if a global market definition was adopted. The Parties achieved a combined market share of [30-40]% in volume and [50-60]% in value in 2015 globally.

Table 5 – BURD market shares, EEA

BURD	2013		2014		2015	
	Volume	Value	Volume	Value	Volume	Value
RHI	[60-70]%	[50-60]%	[50-60]%	[50-60]%	[50-60]%	[40-50]%
Magnesita	[10-20]%	[20-30]%	[10-20]%	[20-30]%	[10-20]%	[10-20]%
Combined	[70-80]%	[70-80]%	[70-80]%	[70-80]%	[60-70]%	[60-70]%
Kelsen	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%	[10-20]%
AM Refractories	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Haznedar Vardar	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Kümas	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Others	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%	[0-5]%
Total	100%	100%	100%	100%	100%	100%

Source: The Notifying Party

- (104) The Commission notes that the Parties' significant market shares in BURD seem, prima facie, indicative of market power. The finding is corroborated by the fact that there is only one competitor with not insignificant market shares remaining after the proposed Transaction.
- (105) The findings of the market investigation are largely similar to those described in paragraphs (94) to (100) for BSRD.
- (106) Moreover, customers were in general concerned of the proposed Transaction and many of them, including a number of steel producers, expected price increases in BURD.⁸²
- (107) Therefore, considering the results of the market investigation and all evidence available to it, the Commission concludes that the proposed Transaction, as notified, would give rise to serious doubts as to its compatibility with the internal market due to horizontal effects in BURD.

5.3. Horizontal overlaps in magnesite-based refractory products

- (108) Magnesite-based refractory products are used in a broad range of applications. BSRM fired products are extensively used by cement customers, as the fired products are able to withstand higher temperatures for use in the lining of cement kilns. Steel customers, in particular carbon steel customers, mainly use BSRM unfired products for the lining of steel furnaces and ladles. Almost the entirety of the Parties' sales of BSRM unfired is achieved with steel customers.⁸³ Whereas shaped (fired and unfired) magnesite products, and in particular bricks, are mainly used for internal linings of kilns and furnaces, unshaped materials are typically used for ad-hoc repair, maintenance and gunning of surfaces and linings.
- (109) As illustrated in Table 6, the Transaction gives rise to horizontally affected markets in connection to the Parties' activities in BURM, BSRM-fired and BSRM-unfired.

⁸² See replies to question 45 of Q2 – Questionnaire to Customers.

⁸³ See Annex 6.1 and 6.2, Notifying Party's response to question 6 of Questionnaire n.3 of 20 April 2017.

Table 6 – Overview horizontally affected markets for magnesite-based refractory products, EEA

	Value based market shares EEA, 2015			Volume base market shares EEA, 2015		
	RHI	Magnesita	Combined	RHI	Magnesita	Combined
Magnesite-based						
BSRM	[30-40]%	[5-10]%	[30-40]%	[20-30]%	[10-20]%	[30-40]%
BSRM fired	[30-40]%	[0-5]%	[30-40]%	[30-40]%	[0-5]%	[30-40]%
BSRM unfired	[20-30]%	[10-20]%	[40-50]%	[20-30]%	[10-20]%	[40-50]%
BURM	[20-30]%	[0-5]%	[20-30]%	[20-30]%	[0-5]%	[20-30]%

Source: The Notifying Party

5.3.1. BSRM-unfired

5.3.1.1. The Notifying Party's submission

- (110) As mentioned in Section 4.14.1, the Parties submit that the BSRM market should be considered as a distinct single market and should not be further segmented by distinguishing between fired and unfired products. The main arguments of the Parties in relation to these products, as summarised below, were thus submitted irrespective of such sub-segmentation, as they are meant to apply both for fired and unfired products. The Commission herewith summarises the main arguments made by the Parties in respect of the BSRM market, while assessing the unfired BSRM market in sub-section 5.3.1.2. The assessment relating to fired BSRM market is instead presented in sub-section 5.3.2.2.
- (111) As to the competitive effects on the BSRM market, the Parties maintain that the Transaction does not give rise to any competition concerns for a number of reasons.
- (112) First, the Parties consider that their combined share would not suggest the achievement of a joined anticompetitive market power as it would be about [40-50]% at EEA level. According to the Parties, their main competitors in BSRM include companies such as Refratechnik ([10-20]% volume and [10-20]% value market share in the EEA), Vesuvius ([5-10]% volume and [5-10]% value market share in the EEA) and Zakłady Magnezytowe Ropczyce ([5-10]% volume and [5-10]% value market share in the EEA) together with a number of other suppliers, including non-EEA companies.

Table 7 – BSRM market shares, EEA

2015	Volume	Value
RHI	[20-30]%	[30-40]%
Magnesita	[10-20]%	[5-10]%
Combined	[30-40]%	[30-40]%
Refratechnik	[10-20]%	[10-20]%
Vesuvius	[5-10]%	[5-10]%
Ropczyce	[5-10]%	[5-10]%
TRL Krosaki	[0-5]%	[0-5]%
Sanac	[0-5]%	[0-5]%
Mayerton	[0-5]%	[0-5]%
Kelsen	[0-5]%	[0-5]%
AM Refractories	[0-5]%	[0-5]%
Duferco	[0-5]%	[0-5]%
Carboref	[0-5]%	[0-5]%
Qinghua	[0-5]%	[0-5]%
Others	[5-10]%	[5-10]%
Total	100% = [...] kT	100% = [...] m€

Source: The Notifying Party

- (113) Second, according to the Parties, competitors in BSRM would be likely to increase output if prices were to increase post-transaction. In fact, according to the Parties, there is sufficient spare capacity so that competitors could expand their production without having to make any investment.
- (114) Third, customers can switch to other suppliers relatively quickly as according to the Parties, there are no significant costs associated with switching and most customers multisource.
- (115) Fourth, BSRM products manufactured outside the EEA, in particular in China, are highly competitive both price and quality-wise for EEA customers. According to the Parties, the role of Chinese suppliers in the EEA has significantly increased over the last years, also in view of the repeal of anti-dumping measure in 2010.
- (116) Moreover, according to the Parties, in the BSRM market, suppliers face strong customers with significant buyer power. In particular, steel customers of refractory products tend to be large multinational companies, which source refractories on a global scale through sophisticated procurement systems and tendering.
- (117) Finally, according to the Parties, barriers to entry in the BSRM markets are low and expansion is possible at limited costs.

5.3.1.2. The Commission's assessment

- (118) For the reasons set out below in paragraphs (119) to (153), the Commission finds that the Transaction raises serious doubts as to its compatibility with the internal market in relation to the market for BSRM-unfired products.

- (119) First, the Commission finds that the Parties' combined market share is likely to be very high, and the Parties' main competitors have a lower share than the Parties estimated.
- (120) According to the Parties' estimates, their combined market shares for BSRM unfired products at EEA level would be [40-50]%. The Commission observes that, according to the Parties' own submission, the most important competitors include Refratechnik ([10-20]% volume and [10-20]% value EEA), Vesuvius ([10-20]% volume and [5-10]% value EEA) and Ropczyce ([0-5]% volume and [0-5]% value EEA).

Table 8 – BSRM unfired market shares, EEA

2015	Volume	Value
RHI	[20-30]%	[20-30]%
Magnesita	[10-20]%	[10-20]%
<i>Combined</i>	<i>[40-50]%</i>	<i>[40-50]%</i>
Refratechnik	[10-20]%	[10-20]%
Vesuvius	[10-20]%	[5-10]%
Ropczyce	[0-5]%	[0-5]%
Mayerton	[0-5]%	[0-5]%
Sanac	[0-5]%	[0-5]%
AM Refractories	[0-5]%	[0-5]%
Kelsen	[0-5]%	[0-5]%
TRL Krosaki	[0-5]%	[0-5]%
Duferco	[0-5]%	[0-5]%
Carboref	[0-5]%	[0-5]%
Others	[5-10]%	[5-10]%
Total	100% = [...] kT	100% = [...] m€

Source: The Notifying Party

- (121) Based on the Parties' estimates, the Transaction would bring together the number one and number three players in this market. Refratechnik, whose share the Parties estimate to be almost equal to Magnesita's and one third that of the combined entity, would remain the Parties' largest competitor in the market post-Transaction, followed by several other smaller players.
- (122) During the market investigation, actual sales and production data collected from competitors showed that the Parties have overestimated competitors' sales volumes for BSRM unfired products.⁸⁴ Data collected from steel customers on their consumption of refractory products⁸⁵ also point to the fact that the actual size of the market might be smaller than what the Parties initially estimated (see section 5.1 above).
- (123) Both these findings lead to the conclusion that the actual share of the Parties in the BSRM unfired on the EEA market is likely to be much higher than the Parties' estimate. The elements collected during the investigation suggest that the actual market share might be in the range of 50-60 %, rather than [40-50]%.
- (124) For the Commission, the finding of higher market shares and stronger market position of the Parties is more in line with the qualitative evidence gathered

84 See replies and Annex to question 3 of Q1 – Questionnaire to Competitors.

85 See replies to question 6 of Q2 – Questionnaire to Customers.

during the market investigation. The finding that the Parties' competitors have a much smaller share than each of the Parties is also consistent with other qualitative evidence pointing to the competitors' more limited role on the competitive interaction on the market in question.

- (125) Second, the Commission considers that imports, especially from China, play a less significant role on the market than argued by the Parties and they would be unlikely to constrain the parties post-transaction.
- (126) The Parties maintain that the magnesite markets are extremely competitive due to the increasing role played by Chinese suppliers in the EEA markets in recent years. Customers however indicated that Chinese suppliers still have a limited role in the EEA market. This is because customers have a strong preference and buy predominantly products from EEA-based manufacturers.⁸⁶
- (127) This preference is mainly driven by quality considerations. According to customers, Chinese products do not always meet the required quality standards.⁸⁷ Customers explain that: *'[...] according to our experience the quality from Chinese suppliers is not homogenous'* and *'Chinese supplies increase lead times and past experiences have shown variation in quality of bricks'*.⁸⁸ For steel customers in particular, high quality BSRM unfired products are necessary for key applications such as the EAF, BOF and ladles. As explained by one customer, whereas lower quality products might be used in certain stages of the steel production process, other specific applications require the highest quality. *'The type of refractories used depends on the stage and the particular steps of the steel production process, In general, the closer to molten steel – and in particular slag – the more resistant the refractory bricks need to be. Whereas, if the refractories are used in parts of the applications far from the steel and slag, lower resistance refractories can be used. For example, the most aggressive locations in an EAF, where the refractory is in contact with slag, may be lined with carbon enforced magnesite bricks even if other parts of the same EAF used cheaper and less durable refractories.'*⁸⁹ Another steel manufacturer explained that it tried to source from Chinese suppliers, but had to revert to EEA-based suppliers due to quality problems and now limits the use of Chinese material to non-critical applications. This customer specifically *'[...] indicates that it used to source magnesite-based refractories from China in the past. However, it has mostly stopped sourcing from China because the quality of Chinese refractories was proven not adequate. Today, [...] only uses Chinese magnesite-based refractories for RH-degasser.'*⁹⁰
- (128) The Commission finds that, for steel applications requiring high product quality, Chinese suppliers do not seem to be an option and actually only few EEA suppliers can meet such requirements. As explained by one major global steel manufacturer, *'In general, there are natural variations in the quality of the raw material to make refractory products. That affects the quality of the final*

86 See replies to questions 6, 15, 16 and 17 of Q2 – Questionnaire to Customers.

87 See replies to question 18.1 of Q2 – Questionnaire to Customers.

88 See replies to question 18.1 of Q2 – Questionnaire to Customers.

89 See Minutes of a conference call with a Customer of 20 April 2017, paragraph 12.

90 See Minutes of a conference call with a Customer of 17 March 2017, paragraph 7.

refractory products. However, EEA suppliers, with more R&D, are able to ensure the consistency of quality. [...] Chinese generally do not have such capabilities.’, ‘producers in the EEA all have systematically higher quality products and for occasions where very high quality requirements are needed, only EEA producers usually compete. This results in an oligopoly situation for high quality products in the EEA.’⁹¹

- (129) Moreover, it is important for customers to be able to receive the materials quickly when needed, in order not to perturb their production activities too long. This appears to be particularly important for steel manufacturers.⁹² The associated lead times for Chinese products are uncertain and much higher than for intra-EEA deliveries.⁹³ This again explains the customers' preference for EEA-based suppliers of BSRM unfired products.
- (130) In addition, a large number of steel customers rely on payment schemes based on the cost per performance of the refractory materials used, rather than based on the volume of the refractory products purchased.⁹⁴ This payment system is typically associated to highly sensitive components, such as BOF, EAF, ladle, where the performance of the refractory product is critical to the end application. The majority of Chinese suppliers do not seem to offer this option to customers.⁹⁵
- (131) For the reasons outlined above, the Commission finds that the potential constraint exerted by Chinese suppliers in this market appears to be limited in particular because of the strong customers' preferences for EEA-based suppliers, as well as for the technical differences between Chinese and EEA products.
- (132) Third, the Commission considers that spare capacities on the markets do not appear sufficient to constrain the Parties post-transaction, and competitors would be likely to re-allocate capacity only in the event of a significant price increase.
- (133) The Parties maintain that post-transaction competitors will continue to have ample spare capacity so that any attempt by the merged entity to increase prices would not be successful. Notwithstanding the intrinsic limitations of the market reconstruction exercise conducted during the investigation and explained in section 5.1, the ensuing evidence seem to suggest that the Parties' spare capacity for BSRM unfired products would likely not be matched by competitors in the EEA. Therefore, contrary to what the Parties claim, the Commission considers that competitors would likely not be able to fully and swiftly counter a potential price increase by the Parties by relying on their actual spare capacity. As regards the possibility for suppliers to relocate production and/or divert capacity to further expand supply of magnesite-based products for European customers, in view of the associated costs and investments, the majority of competitors indicated such exercise would make sense only further to a significant price increase (at least

91 See Minutes of a conference call with a Customer of 03 March 2017, paragraph 20, 27.

92 See Minutes of a conference call with a Customer of 20 April 2017.

93 See replies to question 18 of Q2 – Questionnaire to Customers. Minutes of a conference call with a Customer of 13 March 2017 and 20 April 2017.

94 See replies to question 35 of Q2 – Questionnaire to Customers.

95 See Minutes of a conference call with a Customer of 13 March 2017, paragraph 15, and Minutes of a conference call with a Competitor of 20 March 2017, paragraphs 12, 41.

10%).⁹⁶ On this basis, the preliminary investigation does not support the view that competitors would be able to quickly react to a potential price increase implemented by the merged entity and thus offset it.

- (134) Fourth, the Commission finds that the Parties are close and important competitors, in particular in the supply of BURM-unfired products to steel customers, as they both supply products in the high quality end of the market.
- (135) The findings of the market investigation show that the Parties compete closely in this market, in particular in relation to steel applications. Both customers and competitors consider that the Parties are closely competing in BSRM unfired products.⁹⁷ In a market where performance is critical, steel customers indicated they value quality before price,⁹⁸ and both Parties are considered to have a competitive advantage in terms of product quality (consistency over time and durability).⁹⁹
- (136) Customers active in steel explained that the Parties are close competitors and the most reliable suppliers when it comes to supplying high quality BSRM unfired products for the lining of a BOF, converter, EAF and ladles.¹⁰⁰ Steel customers explained that the Parties *‘compete for unfired shaped products in: converter, EAF, ladle, AOD converter’*, *‘Magnesita and RHI are direct competitors and have similar or even equal products in their Portfolio and very strong market Position.’*; *‘The two companies compete in ladle furnace bricks product range.’*¹⁰¹ These applications are particularly critical in the steel-making process because sub-optimal lining materials could contaminate and damage the steel quality. *‘The most important factor [...] is, nonetheless, the quality of the steel produced. The refractories used affect the quality because small amounts of the refractory linings are dissolved into the hot steel – they essentially become unwanted impurities in the product.’*¹⁰² Moreover, sub-optimal refractory material could entail serious safety risks for the whole production facility.¹⁰³
- (137) The Commission finds that evidence suggesting close competition between the Parties in magnesite products used in steel applications/steel linings is also available in internal documents.
- (138) In its internal analysis, RHI analyses the refractory markets by [...]. When analysing *‘the competitive situation’* in the steel lining market (i.e. the market for

96 See replies to question 46 of Q1 – Questionnaire to Competitors.

97 See replies to question 26 of Q2 – Questionnaire to Customers and question 27 of Q1 – Questionnaire to Competitors.

98 See replies to question 21 of Q2 – Questionnaire to Customers.

99 See replies to questions 22 and 24 of Q2 – Questionnaire to Customers.

100 See replies to question 26 of Q2 – Questionnaire to Customers.

101 See replies to question 26.1 of Q2 – Questionnaire to Customers.

102 See Minutes of a conference call with a Customers of 17 March 2017, paragraph 13.

103 See replies to questions 8, 36, 37 and 38 of Q2 - Questionnaire to Customers.

the products used for the lining of furnaces and ladles, namely BSRM unfired), RHI [...].¹⁰⁴

Figure 5—[...]¹⁰⁵

[...]

(139) In another document, RHI [...]¹⁰⁶, [...].¹⁰⁷

Figure 6—[...]¹⁰⁸

[...]

(140) In its [...],¹⁰⁹ Magnesita considers [...].

Figure 7- [...]¹¹⁰

[...]

(141) Therefore, based on the evidence collected, the Commission finds that the Transaction would remove an important competitive constraint on RHI.

(142) Fifth, the Commission finds that customers are likely to face important switching costs should they decide to move to alternative suppliers.

(143) The Parties maintain that post-transaction several alternative suppliers will remain available to customers who could easily switch to other suppliers. Customers acknowledged indeed the presence of several players in the BSRM unfired market.¹¹¹ However, the Commission considers that the switching costs for customers would be quite high. Contrary to what the Parties claim, there appear to be significant barriers to switching for customers. New suppliers (or new products from existing suppliers) need to undergo lengthy qualification processes for internal safety and quality management reasons, regardless of whether their final client requires it or not. Findings of the market investigation are contrary to the Parties' claim that the duration and costs of the qualification process have decreased compared to the situation in Cookson/Foseco. The results of the market investigation indicated that the qualification takes at least 12 months and accurate testing of the material is very important for steel customers in view of safety and quality management issues.¹¹²

104 Form CO, Annex 5.4, document 9 [...].

105 Form CO, Annex 5.4, document 9 [...].

106 From the Geman, Magnesitisch Geformt Ungebrannt.

107 See Form CO, Annex 5.4, document 4 [...].

108 Form CO, Annex 5.4, document 4 [...].

109 See Form CO, Annex 5.4, document 3 [...].

110 Form CO, Annex 5.4, document 3 [...].

111 See replies to question 27 of Q2 – Questionnaire to Customers.

112 See replies to questions 36, 37 and 38 of Q2 – Questionnaire to Customers.

- (144) Sixth, the Commission infers from the evidence deriving from internal documents and from the market investigation that Magnesita has exercised constraints on RHI's pricing policy, thus influencing RHI's market behaviour.
- (145) In addition, Magnesita appears to be also an aggressive competitor on price with ability to keep RHI's prices on check. Magnesita is indeed perceived as a price aggressive player by many respondents¹¹³: *'Magnesita has been an effective competitor'*;¹¹⁴ *'Magnesita was selling at very low price in some customers in order to penetrate into the market'*¹¹⁵; *'The price policy of Magnesita has been very aggressive and has made market conditions more competitive'*.¹¹⁶ In particular, market participants stress that the competition between RHI and Magnesita in relation to steel applications had significant impact on final prices: *'Both companies have tried and are trying to clean the market by reducing prices up to 50%. As a recent example in one of Germany's largest carbon steel plants [...] both companies reduced their prices from approx [...]€ to [...]€ for a converter lining and with that shared the market for the next 18 month with no competitor able to compete'*.¹¹⁷; *'Competition was on converters and ladles. Magnesita offered cut prices in 2014/2015 and RHI reacted with price cuts in 2016/2017'*.
- (146) Seventh, the Commission finds that RHI and Magnesita compete head to head thanks to their advantage as to vertical integration.
- (147) Competitors point out also that the Parties are competing head to head on prices because both share the competitive advantage of being vertically integrated in upstream markets for raw materials.¹¹⁸ *'The strategy is to sell final products and very low prices, lowest than any other competitor when at the same time selling raw materials controlled by them at higher than market price'*.¹¹⁹ The backward integration represents a definitive advantage according to competitors as it enables the Parties to be more price competitive, as well as being independent and shielded from fluctuations in quality and price of Chinese imports of raw materials, which represent the main source for the vast majority of the Parties' competitors.¹²⁰ As explained by some competitors, *'there is advantage in terms of cost of products, since the chain is simpler and obvious economies are possible. Moreover, having control on raw materials source gives strategical advantage as there is less dependence on the policies of Chinese government (the main producers of refractory raw materials).'*¹²¹ Moreover, being vertically integrated

113 See replies to question 30 of Q1 - Questionnaire to Competitors, and question 28 of Q2 - Questionnaire to Customers.

114 See replies to question 30 of Q1 - Questionnaire to Competitors, and question 28 of Q2 - Questionnaire to Customers.

115 See replies to question 30 of Q1 - Questionnaire to Competitors, and question 28 of Q2 - Questionnaire to Customers.

116 See replies to question 28.1 of Q2 – Questionnaire to Customers.

117 See replies to question 30.1 of Q1 - Questionnaire to Competitors.

118 See replies to questions 23, 25 and 49 of Q1 – Questionnaire to Competitors.

119 See replies to question 30.1 of Q1 – Questionnaire to Competitors.

120 See replies to question 49 of Q1 - Questionnaire to Competitors.

121 See replies to question 49.1 of Q1 - Questionnaire to Competitors.

is what allows the Parties to offer consistently high-quality products, conveying to them a distinctive competitive advantage as already mentioned in paragraph (128).

- (148) The majority of competitors, including the competitors identified by the Parties as their main challengers in these markets, are not vertically integrated upstream.¹²² Conversely, RHI covers around 70% of its raw magnesite and dolomite requirements from its raw material sites, while Magnesita covers around 80% of its basic material requirement from its raw material sites.¹²³ In its internal documents, RHI considers [...].¹²⁴

Figure 8— [...] ¹²⁵

[...]

- (149) Within the market investigation, qualitative evidence from internal documents also supported the fact that competitive interaction between the Parties led to lower prices. [...].¹²⁶

Figure 9— [...] ¹²⁷

- (150) The Commission accordingly finds that post-Transaction, this important constraint would be eliminated.
- (151) Eighth, the Commission finds that a significant number of customers have expressed concerns as to the potential negative impact of the Transaction on prices for BSRM-unfired products.
- (152) Many market participants feared that the Transaction would push prices upwards. In particular, about one third of the responding customers and the majority of steel customers, including major European steel manufacturers, voiced strong concerns in relation to the Transaction and its likely negative impact on prices for BSRM unfired products.¹²⁸
- (153) Therefore, considering the results of the market investigation and all evidence available to it, the Commission concludes that the proposed Transaction, as notified, would give rise to serious doubts as to its compatibility with the internal

122 See replies to question 48 of Q1 - Questionnaire to Competitors.

123 Form CO, paragraph 416.

124 Form CO, Annex 5.4, document 18 [...]; Form CO, Annex 5.4, document 19 [...]; Form CO, Annex 5.4, document 23 [...].

125 Form CO, Annex 5.4, document 18 [...].

126 Form CO, Annex 5.4, document 5 [...].

127 Form CO, Annex 5.4, document 5 [...].

128 See replies to question 47 of Q2 – Questionnaire to Customers.

market with respect to its horizontal effects on the market for the BSRM unfired products.

5.3.2. BSRM-fired

5.3.2.1. The Notifying Party's submission

- (154) The Notifying Party submits that the Transaction would not raise any competition concerns in relation to the BSRM-fired market for the reasons outlined in paragraphs (110) - (117).

5.3.2.2. The Commission's assessment

- (155) The Commission observes that, post-Transaction, on the basis of their estimates, the Parties' combined market share would be [30-40]% in the EEA market for BSRM-fired products in 2015. According to the Parties, their most important competitors include Refratechnik ([20-30]% volume and [20-30]% value market share in the EEA), Zakłady Magnezytowe Ropczyce ([10-20]% volume and [10-20]% value market share in the EEA) and TRL Krosaki ([5-10]% volume and [5-10]% value market share in the EEA).

Table 9 – Market share overview – BSRM fired, EEA

2015	Volume	Value
RHI	[30-40]%	[30-40]%
Magnesita	[0-5]%	[0-5]%
<i>Combined</i>	<i>[30-40]%</i>	<i>[30-40]%</i>
Refratechnik	[20-30]%	[10-20]%
Ropczyce	[10-20]%	[10-20]%
TRL Krosaki	[5-10]%	[5-10]%
Vesuvius	[5-10]%	[5-10]%
Qinghua	[5-10]%	[0-5]%
Others	[10-20]%	[10-20]%
Total	100% = [...] kT	100% = [...] m€

Source: The Notifying Party

- (156) Based on the Parties' market share estimates, the Transaction will not significantly alter the existing market structure. In fact, the increment brought about by the Transaction in the BSRM-unfired market is limited (in the range of [0-5]% both for value and volume market shares). Magnesita is a small player in this market. Well-established players, with a stronger position than Magnesita in this market, include Refratechnik, Vesuvius, Krosaki and Ropczyce.
- (157) The market reconstruction exercise conducted by the Commission showed that the Parties overestimated certain competitors' sales in this market (see section 5.1). On the other hand, in the course of the investigation, the evidence collected corroborated the Parties' claim about the availability of spare capacity in this market.¹²⁹ Based on the data gathered by the Commission, which are per se incomplete as they captured not all the existing suppliers, the reconstructed available spare capacity in the EEA for BSRM fired products would not only

¹²⁹ See replies to question 3 of Q1 – Questionnaire to Competitors.

exceed by far the Parties' current production volumes, but also would be enough to match the Parties' overall total capacity for BSRM fired products in the EEA. Therefore, the constraint exerted by competitors would be sufficient to counter a potential post-merger price increase by the Parties.¹³⁰ On such basis, regardless of the magnitude of the discrepancy in the Parties' estimates for the BSRM-fired market, the Commission concludes that the overestimation of competitors' sales would not actually have an impact on the competitive assessment of the Transaction.

- (158) The Parties also appear to have different commercial strategies targeting different customers. In 2015 the majority of RHI's sales of BSRM-fired went to [...] ([...])%, followed by [...] ([...])%¹³¹ As for Magnesita instead, the vast majority of its EEA sales of BSRM-fired were made to [...] ([...])% and the remainder to [...].¹³² This suggests to a certain extent that the competitive interaction between the two companies is limited and mainly relates to [...] applications. Interestingly, however, the vast majority of [...] customers did not consider Magnesita's product portfolio to be able to cover most of their needs.¹³³ Neither did they identify any product that suppliers other than the Parties cannot offer in the EEA market.¹³⁴
- (159) As regards the role of Chinese suppliers, it seems to be limited also in relation to the EEA BSRM-fired market. Cement manufacturers explain that there can be some constraints in terms of lead times when sourcing from Chinese suppliers.¹³⁵ One customer, who already sources from Chinese suppliers, explains '*Lead time can be a problem if no warehouses in Europe are available, but as said, it is all a matter of proper planning*'.¹³⁶
- (160) However, despite a limited impact of imports on the market, a number of other companies were identified as significant alternatives on these markets. Potential alternative suppliers, from which currently the Parties' customers already source¹³⁷, include Ropczyce, Misano, Refratechnik, Magnezit, Sanac, Duferco, Carboref, Vesuvius, Krosaki, Slovmag, Lubenik.¹³⁸ In particular, Vesuvius, Refratechnik, Ropczyce, Krosaki and ArcelorMittal were identified during the market investigation as competing closely with the Parties in relation to BSRM fired products.¹³⁹
- (161) A number of market participants expressed the concern that prices in the market might increase as a result of the Transaction.¹⁴⁰ However, those claims were not

130 See replies to question 3 of Q1 – Questionnaire to Competitors.

131 See Annex 6.1, Notifying Party's response to question 6 of Questionnaire n.3 of 20 April 2017.

132 See Annex 6.2, Notifying Party's response to question 6 of Questionnaire n.3 of 20 April 2017.

133 See replies to question of 40 of Q2 – Questionnaire to Customers.

134 See replies to question of 41 of Q2 – Questionnaire to Customers.

135 See replies to question of 18 of Q2 – Questionnaire to Customers.

136 See replies to question of 18.1 of Q2 – Questionnaire to Customers.

137 Respondents to the market investigation formed part of the Parties' customer base.

138 See replies to question 6 of Q2 – Questionnaire to Customers.

139 See replies to question of 27 of Q2 – Questionnaire to Customers.

140 See replies to question 48 of Q2 – Questionnaire to Customers.

further substantiated and mainly related to the fact that, as a result of the Transaction, concentration in the market would increase. Moreover, as illustrated in paragraphs (157) and (160), many alternative suppliers with available additional spare capacity will continue to operate in the market and will exert a significant constraint on the merged entity post-Transaction.

- (162) Therefore, considering the results of the market investigation and all evidence available to it, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market with respect to its horizontal effects in relation to the market for BSRM fired products.

5.3.3. BURM (*Basic unshaped refractories based on magnesite*)

5.3.3.1. The Notifying Party's submission

- (163) The Notifying Party submits that no competition concerns arise with regard to BURM due to low combined market shares of the Parties, very modest increment and the presence of a large number of alternative suppliers.

5.3.3.2. The Commission's assessment

- (164) Based on the Parties' estimates, the Commission observes that their combined 2015 market shares in BURM are around [20-30]% at EEA level and therefore remain relatively modest. RHI submits that their main competitors in BURM include Vesuvius ([10-20]% volume and [10-20]% value market share in the EEA), MagNa ([10-20]% volume and [10-20]% value market share in the EEA) and Intocast ([5-10]% volume and [5-10]% value market share in the EEA) together with a number of other suppliers, including companies based outside the EEA.

Table 10 – BURM market shares, EEA

2015	Volume	Value
RHI	[20-30]%	[20-30]%
Magnesita	[0-5]%	[0-5]%
<i>Combined</i>	<i>[20-30]%</i>	<i>[20-30]%</i>
Vesuvius	[10-20]%	[10-20]%
MagNa	[10-20]%	[10-20]%
Intocast	[5-10]%	[5-10]%
Minteq	[5-10]%	[5-10]%
Calderys	[5-10]%	[5-10]%
Daussan	[0-5]%	[0-5]%
Weerulin	[0-5]%	[0-5]%
Jelsava	[0-5]%	[0-5]%
Ropczyce	[0-5]%	[0-5]%
Sanac	[0-5]%	[0-5]%
Krosaki	[0-5]%	[0-5]%
Magnezit	[0-5]%	[0-5]%
Others	[10-20]%	[10-20]%
Total	100% = [...] kT	100% = [...] m€

Source: The Notifying Party

- (165) Based on the Parties' market share estimates, the Transaction will not significantly alter the existing market structure. In fact, the increment brought

about by the Transaction in the BURM market is minimal (in the range of [0-5]% both for value and volume market shares). Magnesita appears to be one the smallest players in this market. Well-established players, with a stronger position than Magnesita in this market, include for example Vesuvius, MagNa, Intocast and Minteq.

- (166) During the market investigation, actual sales and production data collected from competitors showed no significant difference in aggregate terms with the Parties' estimation.¹⁴¹
- (167) RHI maintains that the refractories market is characterised by substantial spare capacity across all segments giving competitors an incentive to expand should the Parties attempt to raise prices post-Transaction. However, the findings of the market investigation on spare capacity in the BURM market were inconclusive and could not confirm or refute the Parties' claim.¹⁴²
- (168) Even though it is noted by market participants that imported refractory products, particularly from China, are not as reliable as the European ones in terms of quality, Chinese suppliers are more often used in relation to BURM than in relation to other refractory products.¹⁴³ According to the answers filed by market participants this follows from the fact that BURM seems to be more often used in less critical parts of the refractory process where a compromise between quality and price is more acceptable than in other applications in light of the limited associated risks.¹⁴⁴
- (169) Furthermore, no specific concerns in relation to BURM were raised during the market investigation. The majority of customers expected that prices of BURM will either stay the same or even decrease¹⁴⁵ and indicated that a wide choice of alternative suppliers will remain after the Transaction.¹⁴⁶
- (170) Therefore, considering the results of the market investigation and all evidence available to it, the Commission concludes that the Transaction does not raise serious doubts as to its compatibility with the internal market in relation with respect to its horizontal effects on the market for BURM products.

5.4. Vertical relationships

- (171) The Transaction gives rise to vertically affected markets between the Parties' activities in the upstream markets for raw materials for refractory products and the downstream markets for production and sale of refractory materials.

141 See replies to question 3 of Q1 - Questionnaire to Competitors.

142 See replies to question 3 of Q1 - Questionnaire Q1 to Competitors.

143 See replies to question 18.1 of Q2 – Questionnaire to Customers.

144 See replies to question 9.1 and 10.1 of Q2 – Questionnaire to Customers.

145 See replies to question 44 of Q2 – Questionnaire to Customers.

146 See replies to question 27 of Q2 – Questionnaire to Customers.

- (172) In particular, the vertically affected markets on the upstream level include the following raw materials: (i) sintered magnesia; (ii) sintered dolomite; (iii) fused magnesia; (iv) spinel; and (vi) fused mullite.
- (173) The Notifying Party submits that no foreclosure concerns arise. While both Parties are active at both levels, they, however, supply and procure mostly captively. Consequently, their sales to third parties are minimal and they also only source small volumes of third-party processed raw materials.
- (174) As to the supply of processed raw materials, the Notifying Party submits that, in addition to the Parties who are not selling material volumes, there are several large raw materials suppliers with ample spare capacities. The Notifying Party further notes that many competitors on the refractory markets are already vertically integrated and are thus not dependent on third-party supplies. Therefore, the Notifying Party considers that the Transaction does not give rise to concerns of input foreclosure.
- (175) As to sourcing of processed raw materials, the Notifying Party holds that the Transaction will not give rise customer foreclosure concerns, in particular given that (i) there is a strong customer base for raw materials and sufficient economic alternatives on the downstream markets and (ii) the Parties are both vertically integrated and only purchase raw materials from the open market in relatively small amounts.
- (176) The Commission observes that the Parties' sales of raw materials on the merchant market are indeed limited, as most of the Parties' production is used captively for the production of their own refractory products. Combined market shares for the Parties' merchant sales of sintered magnesia, sintered dolomite, fused magnesia, chrome ore/chromite and fused mullite range from [0-5]% to [5-10]% both globally and in the EEA, except for spinel where RHI has a [20-30]% market share in the EEA.¹⁴⁷
- (177) The commercial strategy to use raw materials captively pre-Transaction is also evidenced by the Parties' internal documents¹⁴⁸ and the low share of turnover these sales represent: In 2015, sales of sintered magnesia, a main input for magnesite-based refractories, represented [0-5]% of RHI's and [0-5]% of Magnesita's annual turnover.
- (178) The Parties' total production capacity of raw materials remains a fraction of the total market¹⁴⁹; as concerns magnesite, the Notifying Party estimates that RHI's share of the global magnesite resources is less than [0-5]% while Magnesita estimates that its corresponding share is [0-5]%. Within the EEA, RHI estimates that it controls [5-10]% of the known resources while Magnesita has no deposits in the EEA. In addition, a large number of companies are active in the supply of raw materials for refractory production, including those mined and produced by the Parties. Such are for instance, Lhoist, Magnezit, Imerys/Calderys, Roullier/Magna and a large number of Chinese suppliers.

147 Magnesita makes no sales of spinel in the EEA.

148 See, for instance, **Figure 8.** above.

149 Form CO, paragraph 428.

- (179) Many competitors, including the largest such as Vesuvius, Refratechnik or Sanac are not vertically integrated and purchase their raw materials on the merchant market. Nonetheless, the large majority of competitors replying to the market investigation stated that they either did not procure raw materials from the Parties or held that there were ample other available sources for raw materials.¹⁵⁰
- (180) As to the possible concerns of customer foreclosure, the Commission observes that the Parties have, unlike many other refractory producers, a high degree of vertical integration and self-sufficiency. RHI covers around 70% of its raw magnesite and dolomite requirement from its raw material sites, while Magnesita covers around 80% of its basic material requirement from its raw material sites.¹⁵¹ The Parties role as purchasers of processed raw materials is thus smaller than what their downstream market shares for refractories would otherwise suggest. Moreover, a number of competing refractory producers sourcing from third-party suppliers will remain after the Transaction.
- (181) In addition, respondents in the market investigation did not in general raise concerns related to customer foreclosure.
- (182) In conclusion, the Commission considers that the merged entity will not have the ability to engage into input or customer foreclosure.
- (183) Therefore, considering the results of the market investigation and all evidence available to it, the Commission concludes that the Transaction does not raise concerns as to its compatibility with the internal market with respect to the vertical relationships between the Parties' manufacture of refractory products (BSRD, BURD, BSRM and BURM) and their supplies of raw materials for the concerned refractory products.¹⁵²

6. COMMITMENTS

6.1. Analytical framework

- (184) Where the Commission considers that a concentration will raise competition concerns, the parties may seek to modify the concentration in order to resolve such competition concerns and thereby gain clearance of their transaction.
- (185) In Phase I, commitments offered by the parties can only be accepted where the competition problem is readily identifiable and can easily be remedied. The competition problem therefore needs to be so straightforward and the remedies so clear-cut that it is not necessary to enter into an in-depth investigation and that the commitments are sufficient to clearly rule out serious doubts within the meaning of Article 6(1)(c) of the Merger Regulation. Where the assessment confirms that the proposed commitments remove the grounds for serious doubts on this basis, the Commission clears the merger in Phase I.

150 See replies to question 58 of Q1 - Questionnaire to Competitors.

151 Form CO, paragraph 416.

152 The Parties' vertical integration, however, has been identified as a competitive advantage in the manufacture and supply of the downstream products, and as such will be addressed in the section devoted to the competitive assessment of their downstream horizontal overlaps.

- (186) In assessing whether the proposed commitments will likely eliminate the competition concerns identified, the Commission considers all relevant factors including inter alia the type, scale and scope of the proposed commitments, judged by reference to the structure and particular characteristics of the market in which the competition concerns arise, including the position of the parties and other participants on the market.
- (187) As concerns the form of acceptable commitments, the Merger Regulation leaves discretion to the Commission as long as the commitments meet the requisite standard. Structural commitments will meet the conditions set out above only in so far as the Commission is able to conclude with the requisite degree of certainty that it will be possible to implement them and that it will be likely that the new commercial structures resulting from them will be sufficiently workable and lasting to ensure that the significant impediment to effective competition will not materialise. Divestiture commitments are generally the best way to eliminate competition concerns resulting from horizontal overlaps.

6.2. Procedure

- (188) In order to render the concentration compatible with the internal market, the undertakings concerned have modified the notified concentration by entering into the following commitments, which are annexed to this decision and form an integral part thereof.
- (189) The Parties submitted two successive sets of commitments in order to address the serious doubts raised by the Transaction. The Parties first submitted remedies on 9 June 2017 ('Initial Commitments'), accompanied by a Form RM. The Commission launched on 13 June 2017 a market test of the Initial Commitments (the 'market test'). Questionnaires were sent to competitors and customers of the Parties. After the Commission gathered the views of market participants on the Initial Commitments and informed the Parties of the remaining concerns, the Parties formally submitted the Final Commitments ('Final Commitments'), accompanied by an updated Form RM, on 21 June 2017.

6.3. The Initial Commitments

6.3.1. Description of the Initial Commitments

- (190) The Divestment Business as defined in the Initial Commitments consists in the divestiture of the entire RHI's business in dolomite products and Magnesita's business in BSRM-unfired products.
- (191) Specifically, the proposed Divestment Business under the Initial Commitments includes:
- (a) RHI's entire dolomite business in the EEA ('Dolomite Divestment Business') with all its tangible and intangible assets, including RHI's plant in Marone (Italy) for the manufacturing of BSRD-unfired and BURD products and RHI's plant in Lugones (Spain) for the manufacturing of BSRD-fired products. As an alternative to the divestment of Lugones plant, the Commitments envisage the option for the purchaser to request the installation of a firing kiln at the Marone facility at RHI cost. In order to replicate the vertical integration of RHI pre-transaction, the Divestment Business included RHI's dolomite mine in Calarusso (Italy), adjacent

to the Marone plant, and a [...] year Offtake Agreement for the supply of sintered magnesia required to operate the dolomite business.

- (b) Magnesita's BSRM-unfired business in the EEA ('Magnesite Divestment Business') with all its tangible and intangible assets including Magnesita's plant in Oberhausen (Germany). In order to replicate Magnesita's access to own sources of the main raw material for the manufacturing of BSRM-unfired products, the Divestment Business includes a [...] year Offtake Agreement for the supply of sintered magnesia that is currently used for the production of BSRM-unfired products in the Oberhausen plant.
 - (c) Personnel currently employed at the divested facilities in connection to the Dolomite and Magnesite Divestment Businesses and the transfer of a number of sales personnel
 - (d) Supply contracts in place, subject to the supplier's consent;
 - (e) On top of all personnel currently employed at the divested facilities in connection to the Dolomite and Magnesite Divestment Businesses, the transfer of a number of additional sales personnel;
 - (f) At the purchaser's option, transitional support in connection to R&D and engineering, training service, recipe and formulation of the duration of [...] months, extendable up to maximum [...] months.
- (192) Subject to the Commission's approval, the Initial Commitments provide for the option to divest the Magnesite divestment business and the Dolomite divestment business to separate purchasers.
- (193) The Initial Commitments also contain engagements related notably to the preservation of the viability of the package of the commitments offered and the appointment of a Monitoring Trustee, in line with the standard Commitments' provisions.

6.3.2. Assessment of the Initial Commitments

6.3.2.1. Suitability to remove the overlaps

- (194) The Commission takes note that the Initial Commitments envisage the divestment of RHI's position in the EEA dolomite-based refractory markets and Magnesita's position in the EEA BURM unfired market. This proposal is therefore clear-cut in that it eliminates the entire overlap created by the Transaction.
- (195) The vast majority of those respondents to the Commission's market test who expressed a view considered that, in relation to their scope, the Initial Commitments were sufficient to remove the competition concerns identified by the Commission,¹⁵³. A few respondents questioned the suitability of the proposal to remove the concerns identified by the Commission, referring mainly to implementation risks that could affect the immediate viability and

¹⁵³ See replies to question 1,2 of MT - Questionnaire to Customers and replies to question 1,2 of MT - Questionnaire to Competitors.

competitiveness of the Divestment Business and thus the effectiveness of the Commitments.¹⁵⁴

- (196) Against the above background, the Commission could therefore consider that the Initial Commitments are in principle suitable to remove entirely the identified competition concerns.
- (197) In this case, the Commission finds, however, that, in view of the issues which will be discussed in the following sub-sections, it cannot be concluded with the sufficient degree of certainty that the new commercial structures created by the Initial Commitments would be workable and lasting. In particular, the Commission identifies the possibility that, the transfer of the business as devised in the Initial Commitments, the Divestment Business would not be in condition to effectively operate as a viable stand-alone business on a lasting basis, so as to replicate the competitive constraints removed by the Transaction, on the markets where the Commission has identified the presence of serious doubts as to its compatibility with the internal market. The Commission summarises its findings as follows.

6.3.2.2. Scope and Viability of the Divestment Business

Carved-out assets

- (198) In the Initial Commitments, the Parties proposed to carve out certain assets, notably those relating to the production of BURM, from the Oberhausen facility, based on the fact that the Commission did not raise serious doubts on the market for BURM and NBUR.
- (199) The Parties submit that the BURM and NBUR production only account for [...] % and [...] % respectively of the overall volumes produced in Oberhausen in 2015, the remainder being made up of BSRM-unfired products.¹⁵⁵
- (200) The Commission observes that, although BURM production in Oberhausen is relatively small compared to BSRM unfired, making up [...] % of Oberhausen's turnover, its margin contribution to the profitability of the plant is relatively higher than that of BSRM unfired. Moreover, considering that the production of BURM and BSRM unfired are currently intertwined, the Commission cannot exclude at this stage that a potential carve-out of assets would not pose any risk to the viability and competitiveness of the Divestment Business.
- (201) Moreover, in 2016, nearly [...] % of the value of BSRM-unfired products sold from Oberhausen was sold with other products, typically with BURM and/or NBUR products.¹⁵⁶ As the transfer of contracts is subject to customers' consent, the absence of one of the products currently purchased by those customers together with BSRM unfired increases the risk that those customers may not agree to transfer to the Divestment Business. Moreover, the carve-out of assets

154 See replies to question 1.1 of MT - Questionnaire to Customers.

155 See Notifying Party's response to RFI # 9 of 09 June, question 21

156 See the Notifying Party's response to the Commission's request of information RFI#12 of 14.6.2017, question 3

that account for a relatively higher margin contribution could likely impair the broader viability of the plant operation.

- (202) Therefore, the Commission finds that the carve-outs from the Oberhausen facility are likely to impair the viability of the Divestment Business.

Sales, technical and R&D support and personnel

- (203) Both Magnesita and RHI have centrally managed sales and R&D organisations, which carry out the bulk of the commercial and technical operations at European level and coordinate efforts with the limited sale and technical personnel deployed at the production sites.
- (204) In the Initial Commitments, in addition to the personnel currently employed at the divested facilities, RHI proposed to transfer additional [...] sales employees to the Dolomite Divestment Business in Marone from RHI's central sales organisation. In relation to the Magnesite Divestment Business in Oberhausen, the Initial Commitments provide for the transfer of [...] additional sales staff from Magnesita's central sales organisation.
- (205) As to technical support personnel, RHI offer to transfer the [...] employees currently staffed with the customer service department at the Marone facility and [...] additional employee from the central organization. The Magnesita Divestment Business includes [...] customer service employee form the central organization, in addition to the [...] employees currently staffed at Oberhausen.
- (206) As to R&D, the Initial Commitments provided for the transfer of the R&D staff currently employed at the Divestment facilities, namely [...] employee for each of the facilities.
- (207) Additionally, at the purchasers' option the Parties will provide R&D support services for [...] months, extendable to [...] years for the Dolomite Divestment Business and [...] months and extendable to [...] years for the Magnesite Divestment Business. Only a minority of respondents to the market test considered this sufficient.¹⁵⁷ Competitors emphasized the critical role of R&D but acknowledged that the requirement for R&D support will ultimate depend on the Purchaser's capabilities.
- (208) The Commission's investigation has showed that close customer contacts, commercial and technical assistance, the capability to co-develop products with customers, all contribute to the Parties' competitive strengths and are critical for the competitiveness of the Divestment Business.¹⁵⁸
- (209) In response to the remedy market test, many market participants, and in particular competitors, stressed that R&D, technical and sales personnel are key to the success of the business and should be transferred to the Divestment Business so as to ensure continuity of both commercial and technical development

¹⁵⁷ See replies to question of 9 of MT - Questionnaire to Competitors.

¹⁵⁸ See replies to question of 16 of MT - Questionnaire to Competitors.

operations.¹⁵⁹ Respondents also indicated that R&D support would in general be necessary for a longer period of time. Whereas many agreed that R&D personnel might not be essential provided that the Purchaser already has in place its own R&D central organization and/or that adequate R&D support is offered for a transitional period, many other insisted that technical profiles, which typically translate customers' needs into a suitable commercial offer, and sales personnel are key to the business.¹⁶⁰

- (210) On such basis, the Commission considers that the Divestment Business' commercial and technical/R&D functions as proposed in the Initial Commitments would not be sufficient for the continued competitiveness and viability of the Divestment Business on a stand-alone basis.

Product Portfolio of the Divestment Business

- (211) The remedy is a two sided remedy, consisting of assets from both, RHI and Magnesita.
- (212) While the Divestment Business addresses competition concerns relating to four separate markets, all these products are often consumed jointly by customers, and in particular by steel manufacturers. Those customers currently can source either from RHI or Magnesita a large portfolio of magnesite and dolomite-based refractory products.
- (213) The remedy should therefore replicate the existing competitive position of the Parties and thus the Divestment Business should constitute a single remedy package, whereby a remedy taker would be enabled to offer a large selection of products similar to that offered by the Parties before the merger. The feedback received from the market test confirmed the importance for the Divestment Business to be able to rely on a comprehensive portfolio of products so as to ensure its viability.¹⁶¹
- (214) The Initial Commitments provided for the possibility to sell the Divestment Business to separate Purchasers, hence implying the possibility to further split the package. In this respect, the Commission considers that in order to be satisfactory, the Commitments shall convey to the Divestment Business a broad portfolio of magnetise and dolomite-based products, which mirrors to a sufficient degree the product portfolio currently offered to customers by each of the Parties.
- (215) Therefore, the Commission considers that the potential split of the package could endanger the viability and competitiveness of the Divestment Business.

159 See replies to question of 9, 10 and 16 of MT - Questionnaire to Competitors and replies to question 6, 7 and 14 of MT - Questionnaire to Customers.

160 See replies to question 8 of MT - Questionnaire to Customers and replies to question 10 of MT - Questionnaire to Competitors.

161 See replies to questions 16, 17, 18, 19 of MT - Questionnaire to Customers and questions 27, 28 and 29 of MT – Questionnaire to Competitors.

Replicating vertical integration

- (216) Both Parties are vertically integrated refractory material producers with independent access to their own raw materials. As explained in paragraph (146), respondents to the market investigation considered this feature to be a major competitive advantage of the Parties.¹⁶² The Commission's investigation furthermore showed, that beyond representing a competitive advantage, the seamless access to raw materials was also critical for the Divestment Business' viability. This is because customers responding to the market test indicated that they would need to re-qualify the products shall the raw material source of the Divestment Business change.¹⁶³ Such a re-qualification process can take several months, up to a year, which could lead to a significant loss of the Divestment Business' customer base and compromise its immediate viability.¹⁶⁴
- (217) The magnesite facility in Oberhausen has been sourcing sintered magnesia from Magnesita's own mine in Brazil.
- (218) In principle, to the extent possible, the remedy should replicate the Parties' vertical integration. The remedy should aim at enabling the Divestment Business to source sintered magnesia on terms that would make it as competitive as Magnesita before the transaction.
- (219) The Parties contend that the divestiture of the entire mine in Brazil would be disproportionate, as it is predominantly used to supply other global activities of Magnesita. However, the proposal of an Offtake Agreement could be a viable solution only provided that its terms and conditions mirror as much as possible the competitive situation afforded by Magnesita today for its BSRM unfired activities in Oberhausen.
- (220) The remedy as proposed in the Initial Commitments contains an Offtake Agreement for sintered magnesia for a total of [...] kt per annum for a [...] -year duration for the supply of BSRM unfired at the Oberhausen plant.
- (221) The proposed volume and duration of the off-take agreement were considered to be sufficient to guarantee the viability and competitiveness of the Divestment Business by the respondents to the market test.¹⁶⁵ The Commission also notes that the proposed volume caters for [>90% of] BSRM production capacity at the Oberhausen facility. Consequently, the Commission considers that the duration and volume of the proposed off-take agreement are adequate to ensure the viability of the Divestment Business.
- (222) The Initial Commitments, however, do not contain any specification of the commercial terms of the Agreement, noting that the pricing mechanism would be determined 'on standard market terms for this type of long term agreement [...]'. The proposal in the Initial Commitments thus leaves much ambiguity on the

162 See replies to questions 23–26 of Questionnaire Q1 to Competitors.

163 See replies to question 15 of MT - Questionnaire to Customers.

164 See replies to question of 18 of MT - Questionnaire to Competitors.

165 See replies to question of 17 of MT - Questionnaire to Competitors.

terms of a critical input, and consequently on the ultimate competitiveness of the Divestment Business.

- (223) As regards the Dolomite divestment Business, the remedy consists of an integrated facility with ownership of the annexed dolomite mine, where the main raw material for dolomite products is sourced from. Nonetheless, RHI also indicates that for the production of certain dolomite products it relies on the captive supply of sintered magnesia. The Initial Commitments therefore also provide for a [...] -year long off-take agreement for the supply [...] of sintered magnesia to the Divestment business. The volume of the agreement allows full production at the divested plants. Nonetheless, the commercial terms of the agreement remain vague as for the offtake agreement for the Magnesite Divestment Business.
- (224) Therefore, the Commission finds that the vague reference to the commercial terms at which the offtake agreements have to be fulfilled are not sufficient to ensure that the Divestment business will be able to replicate the constraint currently exerted by the Parties lost through the Transaction.

Transfer of customer contracts to the Divestment Business

- (225) The Initial Commitments stipulate that all existing customer contracts and records shall stay with the Divestment Business. Since many RHI and Magnesita's customers currently purchase a whole range of products, RHI and Magnesita commit to split up the Divestment Business' customer contracts so as to leave the dolomite products with the Dolomite Divestment Business and the BSRM unfired products with the Magnesite Divestment Business. Shall this require customer consent, RHI and Magnesita commit to use their best endeavours to produce it.
- (226) The Commission considers that splitting contracts is indeed necessary for the continued operation of the Divestment Business, however it carries an inherent risk as it could easily lead to the loss of customers. A majority of those respondents to the Commission's market test who expressed a view stated that they would in principle continue purchasing refractory products from the Divestment Business.¹⁶⁶ Customers responding to the market test indicated that in some cases there are no functional links between the products jointly purchased from the Parties, but that consent may be required.¹⁶⁷ The majority of the respondents who expressed an opinion on the matter indicated to be willing to accept a split of their contract, however about half of the overall respondents was undecided as they indicated their consent would depend on the identity of the purchaser, the terms of the new contracts and the quality of the Divestment Business.¹⁶⁸
- (227) Therefore, the Commission considers that, while the contract split may technically be feasible, there are some inherent risks associated to the transfer of the contracts, which are not adequately addressed by the Commitments.

166 See replies to question 10 of MT - Questionnaire to Customers.

167 See replies to questions 18 and 19 of MT - Questionnaire to Customers.

168 See replies to question 12 of MT - Questionnaire to Customers.

Transitional agreements

- (228) The Initial Commitments include a number of transitional agreements:
- (a) As the RADEX brand is used for a variety of products within RHI, the Divestment Business will have the right to use it for [...] years for BSRD fired products only, with a further blackout period for re-branding of additional [...] years. The majority of respondents to the market investigation agreed with the suggested terms.¹⁶⁹
 - (b) The Initial Commitments contain a supply agreement for the fused magnesia mixture used at Radenthein to manufacture the BSRD fired product for [...] months, extendable to a maximum of [...] years. Competitors replying to the market test indicated that a transfer of recipes and materials might not be sufficient to continue the production of the products from Radenthein in Marone.¹⁷⁰ The key factors noted were the availability of the experienced technical personnel mastering the technology & know-how and also the production facilities are needed.
 - (c) At the option of the Purchaser, shall it not acquire the Lugones plant but opt for the construction of the firing kiln at the Marone facility, the Parties offer a transitional lease agreement to the Lugones facility for the period of construction.
 - (d) No additional transitional agreements have been defined for the IT infrastructure and re-certification process, such as ISO.
- (229) In light of the feedback received during the market test,¹⁷¹ the Commission considers that the terms and duration of the transitional agreements foreseen in the Initial Commitments are adequate to support the Divestment Business in its initial period. As regards the lack of transitional measures concerning the IT system and re-certification process, the Commission considers it a potential risk for the business continuity of the Divestment Business.

Financial viability of the Divestment Business

- (230) The Divestment Business appears to be a financially viable entity.
- (231) Based on the information submitted by the Parties in relation to 2016,¹⁷² the Divestment Business has a consolidated global turnover of about [...] ml EUR and EEA turnover of [...] ml EUR. The latter corresponds to about [...] of Magnesita's entire turnover in the EEA in 2015.
- (232) The Divestment business also bring a positive gross margin corresponding to about [...]% of the Divestment Business EEA turnover and about [...]% of its worldwide turnover (based on 2016 data).

¹⁶⁹ See replies to question of 11 of MT - Questionnaire to Competitors.

¹⁷⁰ See replies to question of 4 of MT - Questionnaire to Competitors.

¹⁷¹ See replies to question 10 of MT - Questionnaire to Competitors and replies to question 8 to Customers.

¹⁷² See Notifying Party's response to RFI #12 of 14.06.2017.

Potential purchasers

- (233) The requirements for the purchaser of the Divestment Business set out in the Initial Commitments correspond to the standard requirements contained in the model text for divestiture commitments of the Commission.¹⁷³ They require, in particular, that (i) the purchaser must be independent of and unconnected to the Parties, (ii) the purchaser must have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and competitive force, and (iii) the acquisition by the purchaser must not be likely to create *prima facie* competition concerns nor give rise to a risk that the implementation of the commitments will be delayed.
- (234) The Initial Commitments foresaw that the purchaser would need to have relevant expertise in owning and operating industrial assets and be active on a comparable industry.
- (235) The overwhelming majority of the respondents to the remedy market test, however, considered that the purchaser of the Divestment Business should already be active in the refractory markets.¹⁷⁴ Many customers also indicated that their willingness to carry on their business relationship with the Divestment Business would basically depend on whether the Purchaser is already known on the market and this has a good understanding of their needs.¹⁷⁵
- (236) During the market test, several respondents expressed an interest in purchasing the Divestment Business.¹⁷⁶
- (237) Based on the market test, the Commission therefore finds that, while the interest expressed by certain market participants in the assets to be divested reduces risks on the implementation of the divestiture, the Purchaser Criteria as set in the Initial Commitments are not adequate as they do not require the purchaser to be active in refractory markets.

6.3.2.3. Conclusion on the Initial Commitments

- (238) On the basis of the above, in light of the market test results and its assessment, the Commission informed the Parties that the Initial Commitments were in principle capable of removing the identified serious doubts, subject to the implementation of the improvements discussed above.

¹⁷³ Paragraph 17 of the model text, available at http://ec.europa.eu/competition/mergers/legislation/template_commitments_en.pdf.

¹⁷⁴ See replies to question of 21 of MT - Questionnaire to Customers and replies to question 33 of MT – Questionnaire to Competitors.

¹⁷⁵ See replies to question of 22 of MT - Questionnaire to Customers.

¹⁷⁶ See replies to question of 24 of MT - Questionnaire to Customers and question 34 of MT - Questionnaire to Competitors. .

6.4. The Final Commitments

6.4.1. Description of the Final Commitments

- (239) In order to address the shortcomings identified by the Commission in relation to the Initial Commitments, the Parties modified its remedy proposal and submitted a final set of commitments ('Final Commitments') on 21 June 2017.
- (240) The Final Commitments provide for the following improvements:
- (a) Reduction of the scope of the carve-out provision in relation to BURM production at the Oberhausen facility;
 - (b) Additional personnel from RHI and Magnesita's central R&D and sales organizations;
 - (c) To replicate the Parties' access to raw material through vertical integration, revised terms of the off-take agreement for sintered magnesia, including a pricing formula based on the [...], which after[...] years will be reset with the support of the Monitoring Trustee to reflect the [...] at this point in time.
 - (d) To facilitate the transfer of contracts, a non-solicitation clause covering all customers of the Divestment Business, regardless of whether they agreed to follow the Divestment Business or not;
 - (e) To protect the viability of the customers and reduce implementation risks, for those customers that do not consent to the contract transfer, the obligation on the parties to source the products from the Divestment Business;
 - (f) To ensure the business continuity, transitional support agreement (for up to [...] months) covering IT services and temporary access to IT systems not transferred to the Divestment Business.
- (241) The Final Commitments contain also undertakings related to the Divestment Business similar to those provided for in the Initial Commitments, notably in terms of preservation of its viability and appointment of a Monitoring Trustee (see paragraph (1)* above).

6.4.2. Assessment of the Final Commitments

- (242) The Commission notes that the final Commitments essentially address all the issues identified in relation to the Initial Commitment and specifically put forward the following improvements.

Carve outs from the Magnesite divestment business and product portfolio.

- (243) First, the Final Commitments reduce the scope of the carve-out at the Oberhausen facility. In particular, the divestiture includes BURM and NBRM manufactured at the plant to the extent that it is purchased by customers together with BSRM unfired products.
- (244) These commitments enable the Divestment Business to continue supplying BSRM unfired customers currently sourcing also other products from the Oberhausen plant. Moreover, while the Parties' retain sales of other products that

are not made to customers who purchase BSRM unfired, these are small and not such to impair the Divestment Business' operations, as the carve-out will account for less than 5% of the plant's turnover.¹⁷⁷

- (245) The inclusion of these products supplied together with BSRM unfired also improves the position of the Divestment business regarding its product portfolio, which would already benefit from the Divestment Business being sold as a single package, as observed above at paragraphs (211) to (215). While the latter commitment was already undertaken in the Initial Commitments, this was strengthened by the Parties in the Final Commitments by removing the option to sell the Dolomite and Magnesite Divestment Businesses separately.

Sales, technical and R&D personnel; purchaser criteria

- (246) Second, the Final Commitments contain undertakings addressing concerns regarding sales, technical support and R&D functions.
- (247) At the option of the Purchaser, the Dolomite and the Magnesite Divestment Business will both benefit of two additional R&D personnel respectively. As regards sales personnel, the Parties provided clarifications as to personnel transferring from the RHI central sales team to support the function, while concerning the Magnesite Divestment Business, the sales team will be reinforced by the transfer of additional two sales personnel from Magnesita's central sales organisation.
- (248) As regards the purchaser criteria, the Final Commitments add the requirement that the Purchaser be active in the refractory industry.
- (249) In view of the described amendments in the Final Commitments, the Commission therefore finds that the Divestment Business could benefit from more adequate own resources to sustain functions that are critical for its continued viability. The required presence of the purchaser in the refractory industry would further reduce implementation risks.
- (250) The Commission finds that the amendments in the Final Commitments are therefore suitable to reduce the remedy implementation risks identified in connection to the transfer of the Divestment Business.

Replicating vertical integration

- (251) The Commission considers that the pricing mechanism to be included in the off-take agreement for sintered magnesia should enable the Divestment Business to replicate the current vertical integration of the Parties.
- (252) To address this, the Parties proposed pricing formulas for both RHI and Magnesita Offtake Agreements (Annex A.12 of Schedule A and B.15 of Schedule B). The initial components of these formulas are based on the actual 2016 cost structure of the respective mining facilities and the price evolution given by

¹⁷⁷ See Annex B6 to the Commitments.

* Should read (191)

public indices. The pricing formulas will be subject to verification by the Monitoring Trustee and the approval of the Commission. The [...] basis of this formula will be reset after [...] years to reflect the then [...] structure of the merged entity under the supervision of the Monitoring Trustee.

- (253) In order to afford to the Divestment Business the necessary flexibility to supply through its network, according to the Final Commitments, under the Magnesita Offtake Agreement, the Purchaser will be able to use the purchased sintered magnesia for the production of BSRM unfired product in the EEA, and not only limited to the Oberhausen plant. As the Commitments concern the divestiture not only of BSRM unfired products, but also of BURM products manufactured through the same raw material at Oberhausen, under the Final Commitments, the Magnesita Offtake Agreement will also cover those. Under the RHI Offtake Agreement, the Purchaser will be able to use the purchased sintered magnesia for the production of all dolomite products.
- (254) The Commission finds that the amendments in the Final Commitments concerning the terms of the Offtake agreements allow the Divestment Business to enjoy to the extent possible the flexibility and competitive advantages currently enjoyed by the Parties through their position of vertically integrated players.

Transfer of customer contracts to the Divestment Business

- (255) In its Final Commitments, in order to accompany the splitting and transfer of contracts, the Parties endeavoured to provide for mechanism reducing the risks associated with such transfer.
- (256) The Parties undertake not to solicit any of the customers transferred to the Divestment Business for a period of two years. In order to further reduce implementation risks which may affect the viability of the Divestment Business, the Parties further undertake that, in the event that a customer does not consent to purchase from the Divestment business, the Parties should procure the relevant product, for which the customer did not agree to transfer, from the Divestment Business in order to sell it through to such customer.
- (257) The Commission finds that the amendments in the Final Commitments are therefore suitable to reduce the risks associated with the transfer of the customer contracts to the Divestment business.

Transitional agreements

- (258) The Parties will assist the Purchaser with the IT services necessary to run the business during a period of [...] months, extendable to a maximum of [...] months, if deemed necessary. This shall enable the purchaser to continue running the Divestment Business while setting up the appropriate new IT systems.
- (259) Furthermore, at the option of the purchaser, the Parties commit to provide all reasonable assistance in preparing the relevant documentation and liaising with third party auditors to obtain re-certification of all the ISO certifications relevant for the Divestment Business.
- (260) The Commission finds that the amendments in the Final Commitments are therefore suitable to reduce the risks associated with the necessary installation of

a new IT system and the recertification process the Purchaser will have to go through in order to continue operating the Divestment Business.

6.4.3. Conclusion on the Final Commitments

- (261) Following the above modifications of the Commitments, the Commission considers that the Divestment Business can rely on all assets enabling it to be an effective and viable competitive force on the product markets concerned.
- (262) Therefore, the commitments entered into by the undertakings concerned are sufficient to eliminate the serious doubts as to the compatibility of the Transaction with the internal market.

7. CONDITIONS AND OBLIGATIONS

- (263) Under the first sentence of the second subparagraph of Article 6(2) of the Merger Regulation, the Commission may attach to its Decision conditions and obligations intended to ensure that the undertakings concerned comply with the commitments they have entered into vis-à-vis the Commission with a view to rendering a notified concentration compatible with the internal market.
- (264) The fulfilment of the measures that give rise to the structural change of the market is a condition, whereas the implementing steps which are necessary to achieve this result are generally obligations on the parties. Where a condition is not fulfilled, the Commission's decision declaring the concentration compatible with the internal market no longer stands. Where the undertakings concerned commit a breach of an obligation, the Commission may revoke the clearance decision in accordance with Article 6(3) of the Merger Regulation. The undertakings concerned may also be subject to fines and periodic penalty payments under Articles 14(2) and 15(1) of the Merger Regulation.
- (265) In accordance with the distinction described above, the commitments in section B of the Final Commitments of the Annex constitute conditions attached to this decision, as only through full compliance therewith can the structural changes in the relevant markets be achieved. The other commitments set out in the Annex constitute obligations, as they concern the implementing steps which are necessary to achieve the modifications sought in a manner compatible with the internal market.
- (266) Therefore, full text of the Final Commitments is attached as Annex to this Decision and forms an integral part of it.

8. CONCLUSION

- (267) For the above reasons, the Commission has decided not to oppose the notified operation as modified by the commitments and to declare it compatible with the internal market and with the functioning of the EEA Agreement, subject to full compliance with the conditions in section B of the Final Commitments annexed to the present Decision and with the obligations contained in the other sections of the said Commitments. This decision is adopted in application of Article 6(1)(b)

in conjunction with Article 6(2) of the Merger Regulation and Article 57 of the EEA Agreement.

For the Commission

(Signed)

*Margrethe VESTAGER
Member of the Commission*

Case M.8286 – RHI AG / Magnesita Refratários S.A.

COMMITMENTS TO THE EUROPEAN COMMISSION

Pursuant to Article 6(2) of Council Regulation (EC) No 139/2004 (the “*Merger Regulation*”), RHI AG (“*RHI*”) and Magnesita Refratários S.A. (“*Magnesita*”), together referred to as the “*Parties*”, hereby enter into the following Commitments (the “*Commitments*”) vis-à-vis the European Commission (the “*Commission*”) with a view to rendering RHI’s acquisition of up to 100% of the issued share capital of Magnesita (the “*Concentration*”) compatible with the internal market and the functioning of the EEA Agreement.

Prior to completion of the Concentration, RHI will undertake an internal reorganisation. The reorganisation will be implemented through the incorporation of two wholly-owned direct subsidiaries (“*RHI Austria*” and “*RHI Netherlands*”), whereby RHI Netherlands will become the ultimate holding company of the RHI Group with the shareholders of RHI ceasing to hold shares in RHI and instead holding shares in RHI Netherlands. Therefore, should the Concentration be completed prior to Closing, all the Commitments given herein, shall be binding upon RHI Netherlands and all Affiliated Undertakings.

This text shall be interpreted in light of the Commission’s decision pursuant to Article 6(1)(b) of the Merger Regulation to declare the Concentration compatible with the internal market and the functioning of the EEA Agreement (the “*Decision*”), in the general framework of European Union law, in particular in light of the Merger Regulation, and by reference to the Commission Notice on remedies acceptable under Council Regulation (EC) No 139/2004 and under Commission Regulation (EC) No 802/2004 (the “*Remedies Notice*”).

Section A. Definitions

1. For the purpose of the Commitments, the following terms shall have the following meaning:

Affiliated Undertakings: undertakings controlled by the Parties and/or by the ultimate parents of the Parties, whereby the notion of control shall be interpreted pursuant to Article 3 of the Merger Regulation and in light of the Commission Consolidated Jurisdictional Notice under Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings (the “*Consolidated Jurisdictional Notice*”).

Assets: the assets that contribute to the current operation or are necessary to ensure the viability and competitiveness of the Divestment Business as indicated in Section B, paragraphs 5 to 8 and described more in detail in the Schedules.

BSRD: basic shaped refractory products from dolomite.

BSRD-fired Brand: the RHI brand currently used by RHI in relation to the marketing of BSRD-fired products.

BSRM: basic shaped refractory products from magnesite.

BURD: basic unshaped refractory products from dolomite.

BURM: basic unshaped refractory products from magnesite.

Closing: the transfer of the legal title to the Divestment Business to the Purchaser.

Closing Period: the period of [...] from the approval of the Purchaser and the terms of sale by the Commission, or if the Closing Period expires prior to the date of closing of the concentration, the Closing Period shall be extended to [...] from the date of closing of the Concentration.

Confidential Information: any business secrets, know-how, commercial information, or any other information of a proprietary nature that is not in the public domain.

Conflict of Interest: any conflict of interest that impairs the Trustee's objectivity and independence in discharging its duties under the Commitments.

Divestment Business: the business including both RHI Divestment Business and Magnesita Divestment Business, as defined in Section B and in Schedules A and B, which the Parties commit to divest.

Divestiture Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by the Parties and who has/have received from the Parties the exclusive Trustee Mandate to sell the Divestment Business to a Purchaser at no minimum price.

Effective Date: the date of adoption of the Decision.

First Divestiture Period: the period of [...] from the Effective Date.

Key Personnel: all personnel necessary to maintain the viability and competitiveness of the Divestment Business, as listed in the Schedules, including the RHI Hold Separate Managers and the Magnesita Hold Separate Manager.

Lugones Business: RHI's entire business in relation to the production and supply of BSRD-fired at the Lugones Facility.

Lugones Facility: RHI's production facility in Lugones, Spain.

Magnesita Divestment Business: the entire EEA business of Magnesita for BSRM-unfired, as further detailed in paragraph 6.

Magnesita Hold Separate Manager: the person or persons appointed by Magnesita for the Magnesita Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

Magnesita Offtake Agreement: an offtake agreement with Magnesita for sintered magnesia on terms and conditions described in more detail in **Schedule B**.

Magnesita Pricing Formula: the pricing formula in relation to the Magnesita Offtake Agreement as described in more detail in Schedule B.

Magnesita Refratários S.A. (“Magnesita”), incorporated under the laws of Brazil, with its registered office at Praça Louis Enschedé, 240, Cidade Industrial, 32210-050, Contagem, Minas Gerais, Brazil and registered with the *Cadastro Nacional de Pessoas Jurídicas* (National Registry of Legal Entities) under number 08.684.547/0001-65.

Marone Business: RHI’s entire business in relation to the production and supply of BSRD-unfired and BURD at the Marone Facility.

Marone Facility: RHI’s production facilities in Marone, Italy, including the adjacent dolomite mine in Calaruso, Italy.

Monitoring Trustee: one or more natural or legal person(s) who is/are approved by the Commission and appointed by the Parties, and who has/have the duty to monitor the Parties’ compliance with the conditions and obligations attached to the Decision.

NBUR: non-basic unshaped refractory products.

Oberhausen Business: Magnesita’s entire business in relation to the production and supply of BSRM-unfired and other products sold to BSRM-unfired customers (or affiliated undertakings) at the Oberhausen Facility.

Oberhausen Facility: Magnesita’s production facility in Oberhausen, Germany.

Parties: RHI and Magnesita.

Personnel: all staff currently employed by the Divestment Business, including staff seconded to the Divestment Business, shared personnel as well as the additional personnel listed in the Schedules.

Purchaser: the entity approved by the Commission as acquirer of the Divestment Business in accordance with the criteria set out in Section D.

Purchaser Criteria: the criteria laid down in paragraph 21 of these Commitments that the Purchaser must fulfil in order to be approved by the Commission.

Radenthein Facility: RHI’s production facility in Radenthein, Austria.

Relevant Markets: the following refractory products in the EEA: (i) BSRD-fired, (ii) BSRD-unfired, (iii) BURD, and (iv) BSRM-unfired.

RHI AG (“RHF”), incorporated under the laws of Austria, with its registered office at Wienerbergstraße 9, 1100 Vienna, Austria and registered with the Commercial/Company Register at the Commercial Court Vienna under number 103123b.

RHI Divestment Business: the entire EEA business of RHI for refractory products made from dolomite, as further detailed in paragraph 5.

RHI Hold Separate Manager: the person or persons appointed by RHI for the RHI Divestment Business to manage the day-to-day business under the supervision of the Monitoring Trustee.

RHI Offtake Agreement: an offtake agreement with RHI for sintered magnesia on terms and conditions described in more detail in Schedule A.

RHI Pricing Formula: the pricing formula in relation to the RHI Offtake Agreement as described in more detail in Schedule A.

Schedules: Schedules A and B to these Commitments describing in detail each of the RHI Divestment Business and the Magnesita Divestment Business, respectively.

Trustee(s): the Monitoring Trustee and/or the Divestiture Trustee as the case may be.

Trustee Divestiture Period: the period of [...] from the end of the First Divestiture Period.

Section B. The commitment to divest and the Divestment Business

Commitment to divest

2. In order to maintain effective competition, the Parties commit to divest, or procure the divestiture of the Divestment Business by the end of the Trustee Divestiture Period as a going concern to the Purchaser and on terms of sale approved by the Commission in accordance with the procedure described in paragraph 22 of these Commitments. To carry out the divestiture, the Parties commit to find a purchaser and to enter into a final binding sale and purchase agreement for the sale of the Divestment Business within the First Divestiture Period. If the Parties have not entered into such an agreement at the end of the First Divestiture Period, the Parties shall grant the Divestiture Trustee an exclusive mandate to sell the Divestment Business in accordance with the procedure described in paragraph 35 in the Trustee Divestiture Period.
3. The Parties shall be deemed to have complied with this commitment if:

- (a) by the end of the Trustee Divestiture Period, the Parties or the Divestiture Trustee has entered into a final binding sale and purchase agreement and the Commission approves the proposed Purchaser and the terms of sale as being consistent with the Commitments in accordance with the procedure described in paragraph 22;
 - (b) the Closing of the sale of the Divestment Business to the Purchaser takes place within the Closing Period; and
 - (c) the Parties have entered into and complied in substance with the terms of the Magnesita Offtake Agreement as further described in **Schedule B**
4. In order to maintain the structural effect of the Commitments, the Parties shall, for a period of 10 years after Closing, not acquire, whether directly or indirectly, the possibility of exercising influence (as defined in paragraph 43 of the Remedies Notice, footnote 3) over the whole or part of the Divestment Business, unless, following the submission of a reasoned request from the Parties showing good cause and accompanied by a report from the Monitoring Trustee (as provided in paragraph 49 of these Commitments), the Commission finds that the structure of the market has changed to such an extent that the absence of influence over the Divestment Business is no longer necessary to render the proposed concentration compatible with the internal market.

Structure and definition of the Divestment Business

RHI Divestment Business

5. The RHI Divestment Business comprises (i) RHI's entire dolomite business in the EEA including RHI's Marone Facility and RHI's Lugones Facility, and (ii) RHI Offtake Agreement as further described in **Schedule A**, together with all essential functions for the RHI Divestment Business which are necessary to ensure its viability and competitiveness as described in paragraph 7 below. In addition, all business relating to BSRD-fired products produced in the Radenthein Facility, including associated know-how and recipes, will be transferred to the RHI Divestment Business.

Magnesita Divestment Business

6. The Magnesita Divestment Business comprises Magnesita's entire business for the production and supply of BSRM-unfired in the EEA, including (i) Magnesita's Oberhausen Facility and the Oberhausen Business, and (ii) the Magnesita Offtake Agreement, as further described in **Schedule B**, together with all essential functions for the Magnesita Divestment Business which are necessary to ensure its viability and competitiveness as described in paragraph 7 below.
7. The legal and functional structure of the Divestment Business as operated to date is described in Schedules A and B (together, the "**Schedules**"). The Divestment Business includes all assets and personnel that contribute to the current operation or

are necessary to ensure the viability and competitiveness of the Divestment Business, in particular:

- (a) all tangible and intangible assets (including intellectual property rights);
- (b) all licences, permits and authorisations issued by any governmental organisation for the benefit of the Divestment Business;
- (c) all contracts, leases, commitments and customer orders of the Divestment Business;
- (d) all customer, credit and other records of the Divestment Business; and
- (e) the Personnel.

8. In addition, the Divestment Business includes the benefit:

RHI Divestment Business

- (a) for a transitional period of [...] from Closing and on terms and conditions described in more detail in **Schedule A**, of all current arrangements under which RHI supplies products or services to the RHI Divestment Business as detailed in **Schedule A**, unless otherwise agreed with the Purchaser;
- (b) at the option of the Purchaser of the Lugones Business: (i) research & development services for a period of [...] from Closing, [...]; and (ii) an exclusive, royalty free rebranding licence for the use of the BSRD-fired Brand; and
- (c) for a transitional period of [...] from Closing and on terms and conditions described in more detail in **Schedule A**, a supply arrangement for [...].

Magnesita Divestment Business

- (d) for a transitional period of [...] from Closing the transitional services on terms and conditions described in more detail in **Schedule B**; and
- (e) at the option of the Purchaser, research & development services described in more detail in **Schedule B** for a transitional period of [...] from Closing, [...].

9. In each case (a), (c) and (d) above, the Parties commit to extend the transitional arrangements [...] or such other period specified in **Schedule A** or in **Schedule B**, if such an extension is requested by the Purchaser and following consultation with the Commission and the Monitoring Trustee, the extension is deemed necessary for the viability of the Divestment Business.

10. In the event of (i) a dispute between the Parties and the Purchaser regarding the applicable [...] in relation to the RHI Offtake Agreement and the Magnesita Offtake Agreement or other supply and transitional service agreements [...] set out in this paragraph 8 or (ii) the [...] under the RHI Pricing Formula and the Magnesita Pricing

Formula, the matter shall be referred to the Monitoring Trustee for resolution. To resolve the matter, the Monitoring Trustee shall appoint an independent auditor, in accordance with paragraph 41 of the Commitments to settle any disputes regarding the applicable [...] according to the RHI Pricing Formula or the Magnesita Pricing Formula or to [...] under the Magnesita Pricing Formula as applicable. The costs incurred by the independent auditor shall be borne by the Parties.

11. Strict firewall procedures will be adopted so as to ensure that any competitively sensitive information related to, or arising from any of the transitional support agreements (e.g. product recipes, production volumes) will not be shared with, or passed on to, anyone outside the relevant operations.

Section C. Related commitments

Preservation of viability, marketability and competitiveness

12. From the Effective Date until Closing, the Parties shall preserve or procure the preservation of the economic viability, marketability and competitiveness of the Divestment Business, in accordance with good business practice, and shall minimise as far as possible any risk of loss of competitive potential of the Divestment Business. In particular the Parties undertake:
 - (a) not to carry out any action that might have a significant adverse impact on the value, management or competitiveness of the Divestment Business or that might alter the nature and scope of activity, or the industrial or commercial strategy or the investment policy of the Divestment Business;
 - (b) to make available, or procure to make available, sufficient resources for the development of the Divestment Business, on the basis and continuation of the existing business plans;
 - (c) to take all reasonable steps, or procure that all reasonable steps are being taken, including appropriate incentive schemes (based on industry practice), to encourage all Key Personnel to remain with the Divestment Business, and not to solicit or move any Personnel to the Parties' remaining businesses. Where, nevertheless, individual members of the Key Personnel exceptionally leave the Divestment Business, the Parties shall provide a reasoned proposal to replace the person or persons concerned to the Commission and the Monitoring Trustee. The Parties must be able to demonstrate to the Commission that the replacement is well suited to carry out the functions exercised by those individual members of the Key Personnel. The replacement shall take place under the supervision of the Monitoring Trustee, who shall report to the Commission.

Hold-separate obligations

13. The Parties commit, from the Effective Date until Closing, to keep each Divestment Business separate from the businesses they are retaining and to ensure that unless explicitly permitted under these Commitments: (i) management and staff of the

businesses retained by the Parties have no involvement in the Divestment Business;
(ii) the Key Personnel and Personnel of the Divestment Business have no involvement in any business retained by the Parties and do not report to any individual outside the Divestment Business.

14. Until Closing, the Parties shall assist the Monitoring Trustee in ensuring that each Divestment Business is managed as a distinct and saleable entity separate from the businesses which the Parties are retaining. Immediately after the adoption of the Decision, each of RHI and Magnesita shall appoint a Hold Separate Manager for the entire Divestment Business or an RHI Hold Separate Manager and a Magnesita Hold Separate Manager, as the case may be. Each Hold Separate Manager, who shall be part of the Key Personnel, shall manage the relevant Divestment Business independently and in the best interest of the business with a view to ensuring its continued economic viability, marketability and competitiveness and its independence from the businesses retained by the Parties. Each Hold Separate Manager shall closely cooperate with and report to the Monitoring Trustee and, if applicable, the Divestiture Trustee. Any replacement of a Hold Separate Manager shall be subject to the procedure laid down in paragraph 12c of these Commitments. The Commission may, after having heard the relevant Party, require that Party to replace the Hold Separate Manager.
15. To ensure that the Marone Business is held and managed as a separate entity, the Monitoring Trustee shall exercise RHI's rights as shareholder in the legal entity that constitutes the Marone Facility (except for their rights in respect of dividends that are due before Closing), with the aim of acting in the best interest of the business, which shall be determined on a stand-alone basis, as an independent financial investor, and with a view to fulfilling the Parties' obligations under the Commitments. Furthermore, the Monitoring Trustee shall have the power to replace members of the supervisory board or non-executive directors of the board of directors, who have been appointed on behalf of RHI. Upon request of the Monitoring Trustee, the relevant Party shall resign as a member of the boards or shall cause such members of the boards to resign.

Ring-fencing

16. The Parties shall implement, or procure to implement, all necessary measures to ensure that they do not, after the Effective Date, obtain any Confidential Information relating to the Divestment Business and that any such Confidential Information obtained by the Parties before the Effective Date will be eliminated and not be used by the Parties. This includes measures vis-à-vis the Parties' appointees on the supervisory board and/or board of directors of the Divestment Business. In particular, the participation of the Divestment Business in any central information technology network shall be severed to the extent possible, without compromising the viability of the Divestment Business. The Parties may obtain or keep information relating to the Divestment Business which is reasonably necessary for the divestiture of the Divestment Business, the carrying out of their obligations under these Commitments, or the disclosure of which to the Parties are required by law, including but not limited

to financial reporting obligations applicable to the Parties as publicly traded companies.

Non-solicitation clause

17. The Parties undertake, subject to customary limitations, not to solicit, and to procure that Affiliated Undertakings do not solicit, the Key Personnel transferred with the Divestment Business for a period of [...] after Closing.

Due diligence

18. In order to enable potential purchasers to carry out a reasonable due diligence of the Divestment Business, the Parties shall, subject to customary confidentiality assurances and dependent on the stage of the divestiture process:
- (a) provide to potential purchasers sufficient information as regards the Divestment Business;
 - (b) provide to potential purchasers sufficient information relating to the Personnel and allow them reasonable access to the Personnel.

Reporting

19. The Parties shall submit written reports in English on potential purchasers of the Divestment Business and developments in the negotiations with such potential purchasers to the Commission and the Monitoring Trustee no later than 10 days after the end of every month following the Effective Date (or otherwise at the Commission's request). The Parties shall submit a list of all potential purchasers having expressed interest in acquiring the Divestment Business to the Commission at each and every stage of the divestiture process, as well as a copy of all the offers made by potential purchasers within five days of their receipt (or, if received beforehand, within five days of the Effective Date).
20. The Parties shall inform the Commission and the Monitoring Trustee on the preparation of the data room documentation and the due diligence procedure and shall submit a copy of any information memorandum to the Commission and the Monitoring Trustee before sending the memorandum out to potential purchasers. Where any such information memorandum has been sent to potential purchasers prior to the Effective Date, the Parties shall submit documentation describing the data room and the due diligence procedure and a copy of such information memorandum to the Commission and the Monitoring Trustee no later than [...] after the Effective Date (and if the Monitoring Trustee is appointed later than this date, to the Monitoring Trustee no later than [...] after its appointment).

Section D. The Purchaser

21. In order to be approved by the Commission, the Purchaser must fulfil the following criteria:

(a) The Purchaser shall be independent of and unconnected to the Parties and their Affiliated Undertakings (this being assessed having regard to the situation following the divestiture).

(b) The Purchaser shall have the financial resources, proven expertise and incentive to maintain and develop the Divestment Business as a viable and active competitive force in competition with the Parties and other competitors;

(c) The acquisition of the Divestment Business by the Purchaser must neither be likely to create, in light of the information available to the Commission, *prima facie* competition concerns nor give rise to a risk that the implementation of the Commitments will be delayed. In particular, the Purchaser must reasonably be expected to obtain all necessary approvals from the relevant regulatory authorities for the acquisition of the Divestment Business.

(d) The Purchaser shall be active in the refractory industry.

22. The final binding sale and purchase agreement (as well as ancillary agreements) relating to the divestment of the Divestment Business shall be conditional on the Commission's approval. When the Parties have reached an agreement with a purchaser, they shall submit a fully documented and reasoned proposal, including a copy of the final agreement, within one week to the Commission and the Monitoring Trustee. The Parties must be able to demonstrate to the Commission that the purchaser fulfils the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commission's Decision and the Commitments. For the approval, the Commission shall verify that the purchaser fulfil the Purchaser Criteria and that the Divestment Business is being sold in a manner consistent with the Commitments including their objective to bring about a lasting structural change in the market.

23. The Commission may approve the sale of the Divestment Business without one or more Assets or parts of the Personnel, or by substituting one or more Assets or parts of the Personnel with one or more different assets or different personnel, if this does not affect the viability and competitiveness of the Divestment Business after the sale, taking account of the proposed Purchaser. In particular, the Commission may approve (i) the sale of the Divestment Business without the Lugones Facility in which case, RHI commits to lease the Lugones Facility to a Purchaser for a period of [...] and set-up and install all equipment required for the production of BSRD-fired at the Marone Facility [...] within that period; and/or (ii) the sale of the Divestment Business without the Oberhausen Facility, the non BSRM-unfired parts of the Oberhausen Business and/or the Magnesita Offtake Agreement.

Section E. Trustee

I. Appointment procedure

24. The Parties shall appoint one or more Monitoring Trustee(s) to carry out the functions specified in these Commitments for a Monitoring Trustee. The Parties commit not to close the Concentration before the appointment of a Monitoring Trustee.
25. If the Parties have not entered into a binding sale and purchase agreement (or agreements) regarding the Divestment Business one month before the end of the First Divestiture Period or if the Commission has rejected a purchaser proposed by the Parties at that time or thereafter, the Parties shall appoint one or more Divestiture Trustee(s). The appointment of the Divestiture Trustee(s) shall take effect upon the commencement of the Trustee Divestiture Period.
26. The Trustee shall:
- (i) at the time of appointment, be independent of the Parties and their Affiliated Undertakings;
 - (ii) possess the necessary qualifications to carry out its mandate, for example have sufficient relevant experience as an investment banker or consultant or auditor; and
 - (iii) neither have nor become exposed to a Conflict of Interest.
27. The Trustee shall be remunerated by the Parties in a way that does not impede the independent and effective fulfilment of its mandate. In particular, where the remuneration package of a Divestiture Trustee includes a success premium linked to the final sale value of the Divestment Business, such success premium may only be earned if the divestiture takes place within the Trustee Divestiture Period.

Proposal by the Parties

28. No later than two weeks after the Effective Date, the Parties shall submit the name or names of one or more natural or legal persons whom the Parties propose to appoint as Monitoring Trustee(s) to the Commission for approval. No later than one month before the end of the First Divestiture Period or on request by the Commission, the Parties shall submit a list of one or more persons whom the Parties propose to appoint as Divestiture Trustee(s) to the Commission for approval. The proposal shall contain sufficient information for the Commission to verify that the person or persons proposed as Trustee(s) fulfil the requirements set out in paragraph 26 and shall include:
- (a) the full terms of the proposed mandate, which shall include all provisions necessary to enable the Trustee to fulfil its duties under these Commitments;

- (b) the outline of a work plan which describes how the Trustee intends to carry out its assigned tasks;
- (c) an indication whether the proposed Trustee is to act as both Monitoring Trustee and Divestiture Trustee or whether different trustees are proposed for the two functions.

Approval or rejection by the Commission

29. The Commission shall have the discretion to approve or reject the proposed Trustee and to approve the proposed mandate subject to any modifications it deems necessary for the Trustee to fulfil its obligations. If only one name is approved, the Parties shall appoint or cause to be appointed the person or persons concerned as Trustee, in accordance with the mandate approved by the Commission. If more than one name is approved, the Parties shall be free to choose the Trustee to be appointed from among the names approved. The Trustee shall be appointed within one week of the Commission's approval, in accordance with the mandate approved by the Commission.

New proposal by the Parties

30. If all the proposed Trustees are rejected, the Parties shall submit the names of at least two more natural or legal persons within one week of being informed of the rejection, in accordance with paragraphs 24 and 29 of these Commitments.

Trustee nominated by the Commission

31. If all further proposed Trustees are rejected by the Commission, the Commission shall nominate a Trustee, whom the Parties shall appoint, or cause to be appointed, in accordance with a trustee mandate approved by the Commission.

II. Functions of the Trustee

32. The Trustee shall assume its specified duties and obligations in order to ensure compliance with the Commitments. The Commission may, on its own initiative or at the request of the Trustee or the Parties, give any orders or instructions to the Trustee in order to ensure compliance with the conditions and obligations attached to the Decision.

Duties and obligations of the Monitoring Trustee

33. The Monitoring Trustee shall:

- (i) propose in its first report to the Commission a detailed work plan describing how it intends to monitor compliance with the obligations and conditions attached to the Decision;

- (ii) oversee, in close co-operation with the Hold Separate Managers, the on-going management of the Divestment Business with a view to ensuring its continued economic viability, marketability and competitiveness and monitor compliance by the Parties with the conditions and obligations attached to the Decision. To that end the Monitoring Trustee shall:
- (a) monitor the preservation of the economic viability, marketability and competitiveness of the Divestment Business, and the keeping separate of the Divestment Business from the businesses retained by the Parties, in accordance with paragraphs 12 and 13 of these Commitments;
 - (b) supervise the management of the Divestment Business as a distinct and saleable entity, in accordance with paragraph 14 of these Commitments;
 - (c) with respect to Confidential Information:
 - determine all necessary measures to ensure that the Parties do not after the Effective Date obtain any Confidential Information relating to the Divestment Business,
 - in particular strive for the severing of the Divestment Business’ participation in a central information technology network to the extent possible, without compromising the viability of the Divestment Business,
 - make sure that any Confidential Information relating to the Divestment Business obtained by the Parties before the Effective Date is eliminated and will not be used by the Parties and
 - decide whether such information may be disclosed to or kept by the Parties as the disclosure is reasonably necessary to allow the Parties to carry out the divestiture or as the disclosure is required by law in accordance with paragraph 16 of these Commitments;
 - (d) monitor the splitting of assets and the allocation of Personnel between the Divestment Business and the Parties or Affiliated Undertakings;
- (iii) propose to the Parties such measures as the Monitoring Trustee considers necessary to ensure the Parties’ compliance with the conditions and obligations attached to the Decision, in particular the maintenance of the full economic viability, marketability or competitiveness of the Divestment Business, the holding separate of the Divestment Business and the non-disclosure of competitively sensitive information;
- (iv) review and assess potential purchasers as well as the progress of the divestiture process and verify that, dependent on the stage of the divestiture process:

- (a) potential purchasers receive sufficient and correct information relating to the Divestment Business and the Personnel in particular by reviewing, if available, the data room documentation, the information memorandum and the due diligence process, and
 - (b) potential purchasers are granted reasonable access to the Personnel;
- (v) act as a contact point for any requests by third parties, in particular potential purchasers, in relation to the Commitments;
 - (vi) provide to the Commission, sending the Parties a non-confidential copy at the same time, a written report within 15 days after the end of every month that shall cover the operation and management of the Divestment Business as well as the splitting of assets and the allocation of Personnel so that the Commission can assess whether the business is held in a manner consistent with the Commitments and the progress of the divestiture process as well as potential purchasers;
 - (vii) promptly report in writing to the Commission, sending the Parties a non-confidential copy at the same time, if it concludes on reasonable grounds that the Parties are failing to comply with these Commitments;
 - (viii) within one week after receipt of the documented proposal referred to in paragraph 22 of these Commitments, submit to the Commission, sending the Parties a non-confidential copy at the same time, a reasoned opinion as to the suitability and independence of the proposed Purchaser and the viability of the Divestment Business after the Sale and as to whether the Divestment Business is sold in a manner consistent with the conditions and obligations attached to the Decision, in particular, if relevant, whether the Sale of the Divestment Business without one or more Assets or not all of the Personnel affects the viability of the Divestment Business after the sale, taking account of the proposed Purchaser;
 - (ix) assume the other functions assigned to the Monitoring Trustee under the conditions and obligations attached to the Decision.

34. If the Monitoring and Divestiture Trustee are not the same legal or natural persons, the Monitoring Trustee and the Divestiture Trustee shall cooperate closely with each other during and for the purpose of the preparation of the Trustee Divestiture Period in order to facilitate each other's tasks.

Duties and obligations of the Divestiture Trustee

35. Within the Trustee Divestiture Period, the Divestiture Trustee shall sell at no minimum price the Divestment Business to one or more purchasers, provided that the Commission has approved both the Purchaser and the final binding sale and purchase agreement (and ancillary agreements) as in line with the Commission's Decision and

the Commitments in accordance with paragraphs 17 and 22 of these Commitments. The Divestiture Trustee shall include in the sale and purchase agreement (as well as in any ancillary agreements) such terms and conditions as it considers appropriate for an expedient sale in the Trustee Divestiture Period. In particular, the Divestiture Trustee may include in the sale and purchase agreement such customary representations and warranties and indemnities as are reasonably required to effect the sale. The Divestiture Trustee shall protect the legitimate financial interests of the Parties, subject to the Parties' unconditional obligation to divest at no minimum price in the Trustee Divestiture Period.

36. In the Trustee Divestiture Period (or otherwise at the Commission's request), the Divestiture Trustee shall provide the Commission with a comprehensive monthly report written in English on the progress of the divestiture process. Such reports shall be submitted within 15 days after the end of every month with a simultaneous copy to the Monitoring Trustee and a non-confidential copy to the Parties.

III. Duties and obligations of the Parties

37. The Parties shall provide and shall cause their advisors to provide the Trustee(s) with all such co-operation, assistance and information as the Trustee(s) may reasonably require to perform its/their tasks. The Trustee(s) shall have full and complete access to any of the Parties' or the Divestment Business' books, records, documents, management or other personnel, facilities, sites and technical information necessary for fulfilling its/their duties under the Commitments and the Parties and the Divestment Business shall provide the Trustee(s) upon request with copies of any document. The Parties and the Divestment Business shall make available to the Trustee(s) one or more offices on their premises and shall be available for meetings in order to provide the Trustee(s) with all information necessary for the performance of its tasks.
38. The Parties shall provide the Monitoring Trustee with all managerial and administrative support that it may reasonably request on behalf of the management of the Divestment Business. This shall include all administrative support functions relating to the Divestment Business which are currently carried out at headquarters level. The Parties shall provide and shall cause their advisors to provide the Monitoring Trustee, on request, with the information submitted to potential purchasers, in particular give the Monitoring Trustee access to the data room documentation and all other information granted to potential purchasers in the due diligence procedure. The Parties shall inform the Monitoring Trustee on possible purchasers, submit lists of potential purchasers at each stage of the selection process, including the offers made by potential purchasers at those stages, and keep the Monitoring Trustee informed of all developments in the divestiture process.
39. The Parties shall grant or procure Affiliated Undertakings to grant comprehensive powers of attorney, duly executed, to the Divestiture Trustee to effect the sale (including ancillary agreements), the Closing and all actions and declarations which the Divestiture Trustee considers necessary or appropriate to achieve the sale and the Closing, including the appointment of advisors to assist with the sale process. Upon

request of the Divestiture Trustee, the Parties shall cause the documents required for effecting the sale and the Closing to be duly executed.

40. The Parties shall indemnify the Trustee(s) and its/their employees and agents (each an “*Indemnified Party*”) and hold each Indemnified Party harmless against, and hereby agrees that an Indemnified Party shall have no liability to the Parties for, any liabilities arising out of the performance of the Trustee’s duties under the Commitments, except to the extent that such liabilities result from the wilful default, recklessness, gross negligence or bad faith of the Trustee(s), its/their employees, agents or advisors.
41. At the expense of the Parties, the Trustee(s) may appoint advisors (in particular for corporate finance or legal advice), subject to the Parties’ approval (this approval not to be unreasonably withheld or delayed) if the Trustee(s) consider(s) the appointment of such advisors necessary or appropriate for the performance of its/their duties and obligations under the Mandate, provided that any fees and other expenses incurred by the Trustee(s) are reasonable. Should the Parties refuse to approve the advisors proposed by the Trustee(s) the Commission may approve the appointment of such advisors instead, after having heard the Parties. Only the Trustee(s) shall be entitled to issue instructions to the advisors. Paragraph 40 of these Commitments shall apply *mutatis mutandis*. In the Trustee Divestiture Period, the Divestiture Trustee may use advisors who served the Parties during the Divestiture Period if the Divestiture Trustee considers this in the best interest of an expedient sale.
42. The Parties agree that the Commission may share Confidential Information proprietary to the Parties with the Trustee(s). The Trustee(s) shall not disclose such information and the principles contained in Article 17(1) and (2) of the Merger Regulation apply *mutatis mutandis*.
43. The Parties agree that the contact details of the Monitoring Trustee are published on the website of the Commission's Directorate-General for Competition and they shall inform interested third parties, in particular any potential purchasers, of the identity and the tasks of the Monitoring Trustee.
44. For a period of 10 years from the Effective Date the Commission may request all information from the Parties that is reasonably necessary to monitor the effective implementation of these Commitments.

IV. Replacement, discharge and reappointment of the Trustee

45. If the Trustee cease to perform its functions under the Commitments or for any other good cause, including the exposure of the Trustee to a Conflict of Interest:
 - (a) the Commission may, after hearing the Trustee and the Parties require the Parties to replace the Trustee; or
 - (b) the Parties may, with the prior approval of the Commission, replace the Trustee.

46. If the Trustee is removed according to paragraph 45 of these Commitments, the Trustee may be required to continue in its function until a new Trustee is in place to whom the Trustee has effected a full hand over of all relevant information. The new Trustee shall be appointed in accordance with the procedure referred to in paragraphs 24-31 of these Commitments.
47. Unless removed according to paragraph 45 of these Commitments, the Trustee shall cease to act as Trustee only after the Commission has discharged it from its duties after all the Commitments with which the Trustee has been entrusted have been implemented. However, the Commission may at any time require the reappointment of the Monitoring Trustee if it subsequently appears that the relevant remedies might not have been fully and properly implemented.

Section F. The review clause

48. The Commission may extend the time periods foreseen in the Commitments in response to a request from the Parties or, in appropriate cases, on its own initiative. Where the Parties request an extension of a time period, it shall submit a reasoned request to the Commission no later than one month before the expiry of that period, showing good cause. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Parties. Only in exceptional circumstances shall the Parties be entitled to request an extension within the last month of any period.
49. The Commission may further, in response to a reasoned request from the Parties showing good cause waive, modify or substitute, in exceptional circumstances, one or more of the undertakings in these Commitments. This request shall be accompanied by a report from the Monitoring Trustee, who shall, at the same time send a non-confidential copy of the report to the Parties. The request shall not have the effect of suspending the application of the undertaking and, in particular, of suspending the expiry of any time period in which the undertaking has to be complied with.

Section G. Entry into force

The Commitments shall take effect upon the date of adoption of the Decision.

(Signed)

.....
duly authorised for and on behalf of RHI AG

.....
duly authorised for and on behalf of Magnesita Refratários S.A.

SCHEDULES, ANNEXES AND EXHIBITS TO THE COMMITMENTS

SCHEDULE A

1. The RHI Divestment Business comprises RHI's entire dolomite business in the EEA, including:
 - (a) **the Marone Facility and the Marone Business, including the adjacent dolomite mine in Calarusso, Italy;**
 - (b) **the Lugones Facility and Lugones Business;**
 - (c) **the RHI Offtake Agreement (as described below); and**
 - (d) **all volumes of BSRD-fired products currently produced in the Radenthein Facility, including associated know-how, trademarks, brands, inventory and recipes,**

together with all essential functions which are necessary to ensure the viability and competitiveness of the business, as set out below.

2. In accordance with paragraph 5 of these Commitments, the RHI Divestment Business includes, but is not limited to:
 - (a) **all tangible assets at each of the Marone Facility and the Lugones Facility necessary to continue to manufacture, develop and supply BSRD and BURD, and all mining machinery. A list of all tangible assets that will form part of the RHI Divestment Business is contained in Annex A.2;**
 - (b) **all intangible assets relating to the production of dolomite-based refractory products, including all brands, trademarks, know-how and recipes currently used by RHI in relation to the production, development and supply of dolomite-based refractory products. This includes an exclusive license for the use of the RADEX brand in relation to dolomite-based refractory products for the purpose of rebranding. The licence will have a term of [...], and shall be followed by a [...] black-out period for the Parties, during which they are not permitted to use the RADEX brand for BSRD-fired. A list of all intangible assets forming part of the RHI Divestment Business is contained in Annex A.3;**
 - (c) **all necessary licences, permits and authorisations. A list of which is contained in Annex A.4;**
 - (d) **all Personnel, and all Key Personnel. A list of which is contained in Annex A.5;**
 - (e) **all customer contracts, commitments, inventory and orders listed in Annex A.6, to the extent still running at the time of Closing; to the extent the transfer of a customer contract requires the customer's**

consent, RHI will use its best endeavours to procure the customer's consent;

- (f) **all customer, credit and other records. A list of which is contained in Annex A.8;**
- (g) **all supply contracts, commitments and orders listed in Annex A.7, to the extent still running at the time of Closing; to the extent the transfer of a supply contract requires the supplier's consent, RHI will use its best endeavours to procure the supplier's consent. If a supplier refuses to consent, RHI commits, at the request of the relevant Purchaser, to supply the relevant material to the RHI Divestment Business for the remaining duration and on the terms and conditions of the relevant supply contract.**
- (h) **the commitment to enter into an offtake agreement to provide the Purchaser, [...], calculated according to the RHI Pricing Formula set out in Annex A.12, with the right for a period of [...] to acquire volumes of up to a maximum volume of [...] per annum of sintered magnesia for the production of all dolomite products (the *RHI Offtake Agreement*).**
- (i) **RHI commits to provide to the Purchaser during a transitional support period (as described below), the following arrangements and services in relation to BSRD-fired products:**
 - a. a supply arrangement, [...], for a duration of up to [...] for a [...] used at the Radenthein Facility to produce BSRD-fired products, to be extended to a maximum of [...] should the Purchaser encounter any delay in qualifying with customers the equivalent BSRD-fired products produced at the Lugones Facility;
 - b. at the option of the purchaser, R&D services for a period of [...] from Closing in relation to engineering and R&D support; training services and recipe formulation;
 - c. an exclusive, irrevocable, non-renewable fully paid up and royalty free rebranding licence for the use of the RHI brand RADEX in relation to BSRD-fired for a term of [...], followed by a black-out period of [...] during which the Parties are not permitted to use the RADEX brand for BSRD-fired; and
 - d. to the extent the Commission approves the sale of the RHI Divestment Business without the Lugones Facility, RHI commits to lease the Lugones Facility to a Purchaser for a period of [...] and set-up and install all equipment required for the production of BSRD-fired at the Marone Facility [...] within that period;
 - e. all assistance in relation to the transfer of IT services for a period of [...], to be extended by a maximum of [...] if requested by the Purchaser and following consultation with the Commission and the

Monitoring Trustee, deemed necessary for the viability of the RHI Divestment Business; and,

- f. at the option of the Purchaser, all reasonable assistance in preparing the relevant documentation and liaising with third party auditors to obtain re-certification of all the ISO certifications relevant for the RHI Divestment Business.
3. RHI further undertakes not to actively solicit, and to procure that Affiliated Undertakings do not actively solicit, any of the customers that will be transferred with the RHI Divestment Business under paragraph 2 (e) of Schedule A, for a period of [...] after Closing. In addition, to the extent required by the Purchaser, RHI commits to provide the Purchaser with any reasonable assistance required for any re-qualification process for BSRD-fired, BSRD-unfired and BURM products that may be required by the relevant customers listed in **Annex A.6**. In relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph 2 (e) of Schedule A, RHI commits to procure the relevant BSRD-fired, BSRD-unfired and BURM products from the RHI Divestment Business on the terms applicable to such contract and supply them without any additional charges to the customer. [...]. For the avoidance of doubt, RHI shall not be restricted from contacting any customers in order to fulfil its obligations under existing contracts which are excluded from the RHI Divestment Business.
4. If there is any asset or personnel which is not covered by paragraph 2 of this Schedule but which is both used (exclusively or not) for the RHI Divestment Business and necessary for the continued viability and competitiveness of the RHI Divestment Business, that asset or adequate substitute will be offered to potential purchasers.
5. In relation to [...] personnel, RHI undertakes to transfer up to [...] employees if requested by the Purchaser and deemed necessary for the viability of the RHI Divestment Business by the Monitoring Trustee.

ANNEXES
THE RHI DIVESTMENT BUSINESS

- **Confidential Annex A.1:** [...]
- **Confidential Annex A.2:** [...]
 - Exhibit A.2.1.1: [...]
 - Exhibit A.2.1.2: [...]
 - Exhibit A.2.2.1.a: [...]
 - Exhibit A.2.2.1.b: [...]
 - Exhibit A.2.2.1.c: [...]
 - Exhibit A.2.2.2.a: [...]
 - Exhibit A.2.2.2.b: [...]
 - Exhibit A.2.2.3.a: [...]
 - Exhibit A.2.2.3.b: [...]
 - Exhibit A.2.2.4.a: [...]
 - Exhibit A.2.2.4.b: [...]
 - Exhibit A.2.2.5: [...]
 - Exhibit A.2.2.6.a: [...]
 - Exhibit A.2.2.6.b: [...]
 - Exhibit A.2.2.7.a: [...]
 - Exhibit A.2.2.7.b: [...]
 - Exhibit A.2.2.8: [...]
 - Exhibit A.2.2.9: [...]
 - Exhibit A.2.3.1: [...]
 - Exhibit A.2.3.2: [...]
- **Confidential Annex A.3:** [...]
 - Exhibit A.3.1: [...]
 - Exhibit A.3.2: [...]
 - Exhibit A.3.3: [...]
 - Exhibit A.3.4: [...]
- **Confidential Annex A.4:** [...]
 - Exhibit A.4.1: [...]
 - Exhibit A.4.2: [...]
- **Confidential Annex A.5:** [...]
 - Exhibit A.5.1:1: [...]

- Exhibit A.5.1.2: [...]
- Exhibit A.5.2.1: [...]
- **Confidential Annex A.6**: [...]
- **Confidential Annex A.7**: [...]
- **Confidential Annex A.8**: [...]
 - Exhibit A.8.1: [...]
- **Confidential Annex A.9**: [...]
- **Confidential Annex A.10**: [...]
- **Confidential Annex A.11**: [...]
- **Confidential Annex A.12**: [...]

SCHEDULE B

1.1. The Magnesita Divestment Business comprises Magnesita's business for the production and supply of BSRM-unfired in the EEA including:

- (a) the Oberhausen Facility and the Oberhausen Business; and
- (b) the Magnesita Offtake Agreement (as described below),

together with all essential functions for the Magnesita Divestment Business which are necessary to ensure the viability and competitiveness of the business, as set out below.

1.2. In accordance with paragraph 6 of these Commitments, the Magnesita Divestment Business includes but is not limited to:

- (a) all tangible assets at the Oberhausen Facility. A list of the main tangible assets is contained in **Annex B.2**;
- (b) all intangible assets relating to the production of BSRM-unfired products including all brands, trademarks, know-how and recipes in relation to the production of BSRM-unfired products. In relation to the other products forming part of the Oberhausen Business, Magnesita will provide an exclusive licence for the EEA of the relevant brands and trademarks for the purpose of rebranding, together with the right to use the know-how and recipes. The licence will have a term of [...], and will be followed by a [...] black-out period for the Parties, during which they are not permitted to use the relevant brands and trademarks in the EEA. A list of all intangible assets forming part of the Magnesita Divestment Business is contained in **Annex B.3**;
- (c) all necessary licences, permits and authorisations. A list of which is contained in **Annex B.4**;
- (d) all Personnel, and all Key Personnel. A list of which is contained in **Annex B.5**;
- (e) all customer contracts, commitments, inventory and orders listed in **Annex B.6**, to the extent still in place/outstanding at the time of Closing; to the extent the transfer of a customer contract requires the customer's consent, Magnesita will use its best endeavours to procure the customer's consent;
- (f) all customer, credit and other records. A list of which is contained in **Annex B.8**;
- (g) all supply contracts, commitments and orders listed in **Annex B.7**, to the extent still in place/outstanding at the time of Closing; to the extent the transfer of a supply contract requires the supplier's consent, Magnesita will use its best endeavours to procure the supplier's consent. If a supplier refuses to consent, Magnesita commits, at the request of the Purchaser, to supply the relevant material to the Magnesita Divestment Business for the

remaining duration and on the terms and conditions of the relevant supply contract;

- (h) the commitment to enter into an offtake agreement to provide the Purchaser, [...], calculated according to the Magnesita Pricing Formula, with the right for a period of [...] to acquire up to a maximum volume of [...] per annum of sintered magnesia for:
 - a. the production of BSRM-unfired products at the Oberhausen Facility or at any of the Purchaser's production facilities in the EEA; and
 - b. for the production of BURM products at the Oberhausen Facility (the **Magnesita Offtake Agreement**); and
- (i) during [...], the following transitional services in relation to the products listed at **Annex B.1**, on [...] to be agreed with the Purchaser: engineering and R&D support; training services; and recipe formulation support;
- (j) a separate “operating instance” set up at Magnesita’s central data centre in Brazil to ensure continued operations of the Oberhausen Facility’s IT systems, which will encompass all essential business IT functions during the hold-separate period and, if required by the Purchaser, provision of all essential business IT services through the separate operating instance for [...], to be extended by a maximum [...] if requested by the Purchaser and following consultation with the Commission and the Monitoring Trustee deemed necessary for the viability of the Magnesita Divestment Business; and
- (k) at the option of the Purchaser, all reasonable assistance in preparing the relevant documentation and liaising with third party auditors to obtain re-certification of all the ISO certifications relevant for the Magnesita Divestment Business.

1.3. **Magnesita further undertakes not to actively solicit, and to procure that Affiliated Undertakings do not actively solicit, any of the customers that will be transferred with the Magnesita Divestment Business in line with paragraph 1.2 (e) of Schedule B, for a period [...] after Closing. In addition, to the extent required, Magnesita commits to provide the Purchaser with the assistance required for any re-qualification process for BSRM-unfired, BURM or NBUR products that may be required by the relevant customers listed in Annex B.6. In relation to customers that have not consented to the transfer of the relevant customer contract in line with paragraph 1.2 (e) of Schedule B, Magnesita commits to procure the relevant Oberhausen Business products from the Magnesita Divestment Business on the terms applicable to such contract and supply them without any additional charges to the customer. [...]. For the avoidance of doubt, Magnesita shall not be restricted from contacting any customers in order to fulfil its obligations under existing contracts which are excluded from the Magnesita Divestment Business.**

1.4. **If there is any asset or personnel which is not covered by paragraph 1.2 of this Schedule but which is both used (exclusively or not) for the Magnesita**

Divestment Business and necessary for the continued viability and competitiveness of the Magnesita Divestment Business, that asset or adequate substitute will be offered to potential purchasers.

- 1.5. **In the event that the Commission approves the sale of the Divestment Business without the Oberhausen Facility under paragraph 23 of the Commitments, Magnesita commits to provide the Purchaser with the option to procure Magnesita-produced BSRM-unfired products (together with related distribution and transitional services) for a transitional period of [...] pursuant to a tolled manufacturing agreement to be agreed with the Purchaser. Such agreement is extendable to a maximum of [...] in accordance with paragraph 9 of the Commitments. In this event, Magnesita will not be required to offer the Magnesita Offtake Agreement.**

ANNEXES
THE MAGNESITA DIVESTMENT BUSINESS

- **Annex B.1:** [...]
- **Annex B.2:** [...]
 - Exhibit B.2.1: [...]
 - Exhibit B.2.2: [...]
 - Exhibit B.2.3: [...]
- **Annex B.3:** [...]
- **Annex B.4:** [...]
- **Annex B.5:** [...]
 - Exhibit B.5: [...]
 - Exhibit B.5.1: [...]
 - Exhibit B.5.2: [...]
- **Annex B.6:** [...]
- **Annex B.7:** [...]
- **Annex B.8:** [...]
- **Annex B.9:** [...]
- **Annex B.10:** [...]
- **Annex B.11:** [...]
- **Annex B.12:** [...]
- **Annex B.13:** [...]
 - Exhibit B.13: [...]
- **Annex B.14:** [...]
- **Annex B.15:** [...]