

WRA

World
Refractories
Association



ANNUAL REPORT

ISSUE 2019/2020

A WORD FROM THE PRESIDENT

In just a few short years, WRA has gained tremendous momentum in representing the worldwide refractory industry's interests and delivering value for its members.

As the first North American leader elected by our organization, it is an immense honor to lead WRA through its next chapter and continue building on all that we have achieved since our formation in 2014. It is also particularly exciting to recognize our continued evolution from a Euro-centric group to a truly global organization representing all regions.

However, none of us across our global membership could have predicted the events of 2020 and the innumerable challenges resulting from the COVID-19 pandemic that, by many accounts, is still not behind us.

During the past year, individually and together through WRA, we quickly learned of the need to elevate the criticality of refractories during a pandemic where choices were made about which industries should be allowed to continue and which ones would be required to close their doors for some period of time.

During the past year, circumstances have sparked incredible collaboration among our members and partner organizations. We have demonstrated the ability for WRA to unify and magnify our individual voices into a formidable global voice that cannot be ignored.

As we look ahead, we have forged a clear path to build on WRA's very solid foundation, thanks to our members' ongoing enthusiastic participation. The state of our association is strong. Our committee structure has continued to advance these shared interests and build refractory awareness through communications.

Through our Safety, Technical, and Communications committees' continued work, we will leverage our members' expertise to advance our common interests in these critical areas. We will address issues across the industry's most pressing topics from safety, quality, talent management, digitalization, and regulatory, to environmental, raw materials, recycling, and energy consumption, to name a few.

We invite new member participation to influence and drive the agenda of today's World Refractory Association. Through our members' engagement, we are collectively advancing our industry to address the many challenges and opportunities for manufacturing in the 21st century.



CAROL JACKSON
WRA PRESIDENT

WRA IN 2019



From 2018 to 2019, Mr Stefan Borgas (pictured), CEO of RHI Magnesita, was the president of WRA. That year, WRA released the current version of its website to provide an

information hub for our members, linking to our more dynamic tools such as our social media channels. The current version of the website contains information about Technological Papers, safety statistics and many other topics relevant to our members.

Data management was also a priority in 2019; international standards became a topical point of discussion in our Technical Committee, where industry experts are committed to finding a common approach across different regions.

Furthermore, consistent data aggregation and standards for data exchange between companies were established. Our members also attended face-to-face meetings and conferences in 2019:

- World Steel Association Economic Committee meeting, March 2019, *Buenos Aires, Argentina*
- WRA Board meeting, April 2019, *Washington D.C., USA*
- International trade conference, April 2019, *Washington D.C., USA*
- Environment Committee, May 2019, *Rio de Janeiro*
- UNITECR2019, October 2019, *Yokohama, Japan*
- WRA Board and General Assembly meetings, October 2019, *Yokohama, Japan*



WRA IN 2020

As the year 2020 was inevitably marked by the COVID-19 outbreak, all industries, including refractories, have been severely impacted by the global pandemic. In light of the unprecedented challenges, many projects were revised to adapt to the new circumstances brought on by the pandemic.

In March, WRA created its Communication Committee, which played a significant role in improving the awareness and attractiveness of the industry throughout the pandemic. The Committee continues its work to promote the importance of the refractory industry.

Safety has always been a primary concern for WRA members. Stricter measures have been implemented during the COVID-19 pandemic to safeguard the health and safety of all employees. To recognize best practices, WRA implemented the Safety Recognition Program, to be launched in 2021.

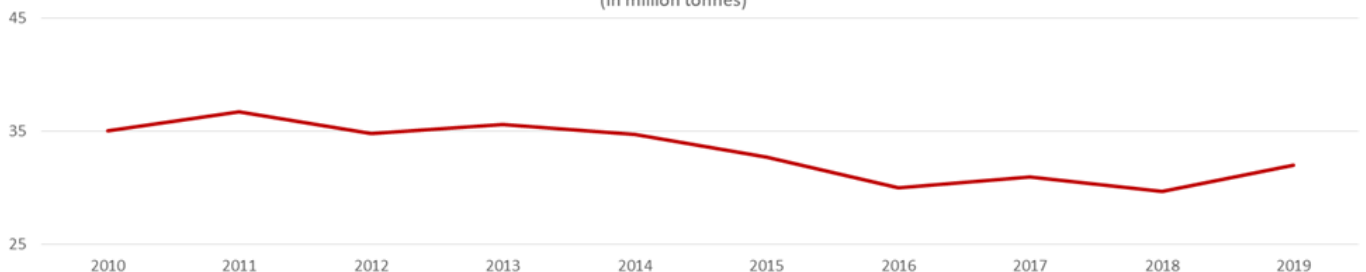


WRA INDUSTRY DATA

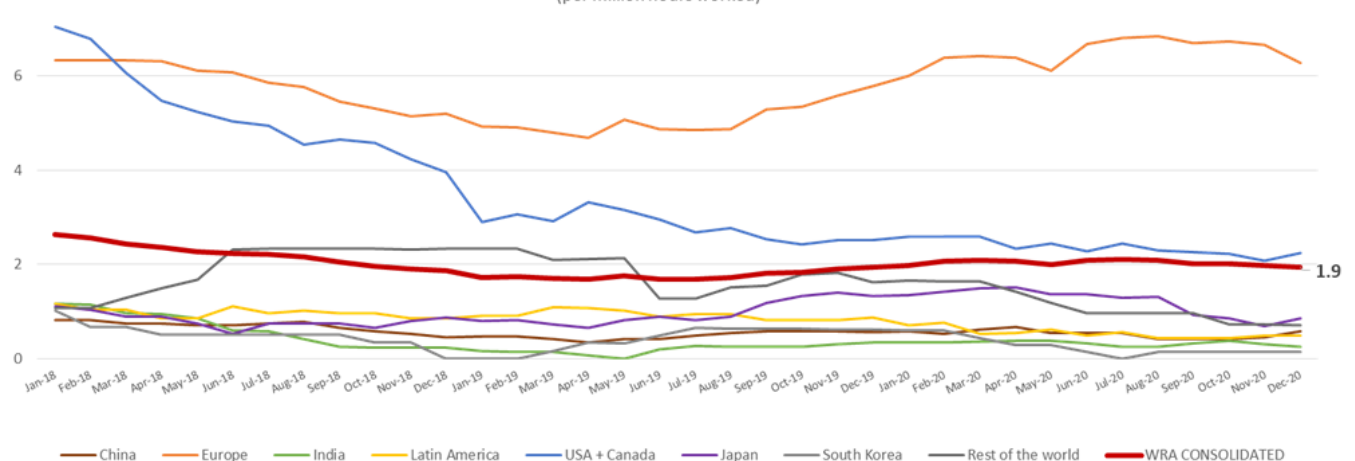
Since its establishment, World Refractory Association has been committed to collecting data in order to assess the changing trends in the global refractory industry. Thanks to the concerted efforts of all WRA members, the Association has been able to develop a consistent statistical report over the past decade. The WRA Secretariat is continuously working to improve the quality of the data collection to increase the representativeness and accuracy of its reports.

In this Annual Report, we have included the latest aggregation of production figures and safety statistics over the past years, based on the contributions submitted on a regular basis by our members. While the first graph presents the production trends in volumes since 2010, the second figure showcases the lost time injury frequency rate on a 12 months rolling basis over the past two years.

Reported production of refractories by WRA members
(in million tonnes)



12M Rolling Average - lost time injury frequency rate reported by WRA members
(per million hours worked)



MISSION AND STRUCTURE

The World Refractories Association is a forum to debate regulatory issues affecting global trade, circulate aggregated industry statistics and promote the interests of the worldwide refractory industry. It also serves as a counterpart to other world industry organisations.

WRA serves six main purposes:

- Enhance worldwide awareness of refractories unique and valuable qualities;
- Provide a global forum for refractories producers and engage cooperation between regional and national associations;
- Encourage and assist in continuous progress in the healthy, safe and environmentally sound production of refractories;
- Collect statistics and distribute them to WRA members and stakeholders;
- Identify issues of relevance to global standards development and promote appropriate actions;
- Communicate the views and positions of the refractory industry to international organisations and other relevant parties.

As of 2020, WRA consists of six major refractory industry associations and 16 multinational companies. The secretariat is held by the European Refractories Producers Federation, PRE.

WRA Structure

General Assembly

Board of Directors

President *Carol Jackson*

Committees

Safety Committee

Chairman *Patrick Andre*

Technical Committee

Chairman *Rainer Gaebel*

Communication Committee

Chairman *Stefan Borgas*

Secretariat

Secretary-General

Daniela Vigilante

Deputy Secretary-General

Leonardo Mosca

MEMBERS

SIX REGIONAL/NATIONAL ASSOCIATIONS REPRESENTING:



Latin America (ALAFAR)



Europe (PRE)



North America (TRI)



China (ACRI)



India (IRMA)



Japan (JRA)

16 MEMBER COMPANIES:



Beijing LIRR



Calderys



Chosun Refractories Co. Ltd



HarbisonWalker International



INTOCAST AG



JINLONG Refractories Group



Magnezit Group



POSCO CHEMICAL Co., Ltd.



PRCO - Puyang Refractories



Refratechnik



RHI Magnesita



Ruitai Materials Technology



Saint Gobain



Sinosteel Group



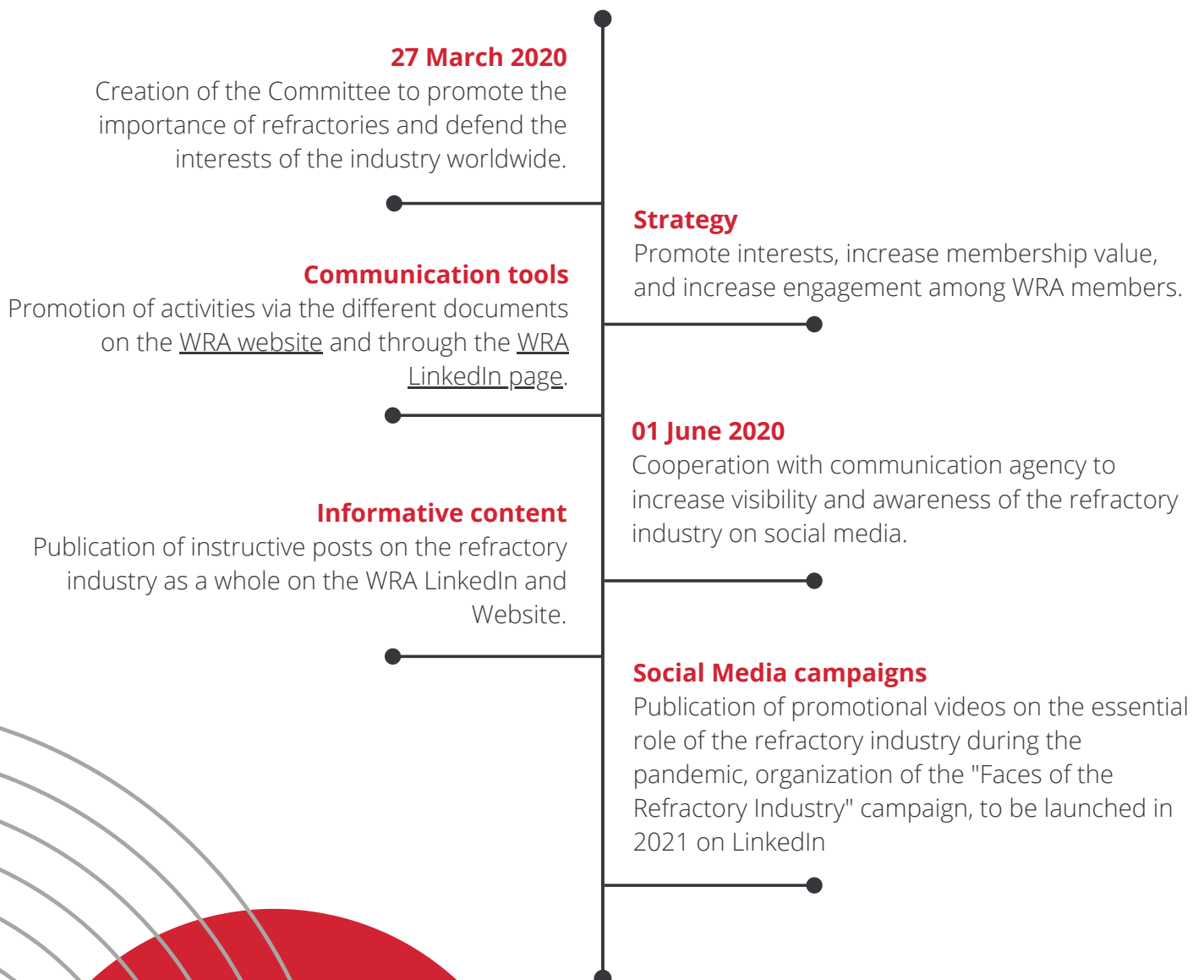
Vesuvius



Zhejiang Zili Co. Ltd

COMMUNICATION COMMITTEE

The Communication Committee was established in March 2020 to elevate the visibility and criticality of the refractory industry through external outreach. Through coordinated work, the Committee promoted WRA activities and raised awareness on different topics pertaining to the industry.



SAFETY COMMITTEE

WRA members regularly provide reports on lost time injuries to the WRA Secretariat and share red stripes through a voluntary standardized reporting. The objective is to improve the safety of employees by focusing on the most common causes of accidents. In 2019, WRA has also started preparing for a 2021 WRA Safety Recognition Programme.

2019 / 2020



Increased number of meetings (+/- four per year), regular data reporting, voluntary sharing of red stripes and life-changing incidents.



Increasing participation in data collection from WRA members and improvement in global representativeness of data aggregation.



Safety Recognition Programme, to be implemented for the first time in 2021, comprised of:



1) Certificates: to be awarded every two years to all sites which would meet the criteria of at least one million hours worked without an LTI or five years worked without an LTI. The five-year criterion will allow also smaller sites to participate.



2) Awards: to be awarded every two years only to those sites that have received a WRA safety certificate and who shared the best practices globally. There will be three winners (bronze, silver, gold) to be selected by a jury.

TECHNICAL COMMITTEE

In April 2018, the WRA Board established a WRA Technical Committee, which regularly discusses key technical topics. Five dedicated Task Forces further develop actions on topics as Refractory Exchange Data Standards (REDS), International Standards, Harmonized Systems (HS) Codes revision, Technological Papers and Environment.

25 MARCH 2020: KICK-OFF MEETING

Work divided into two work streams: *Logistics data* and *Process data*. Regular meetings on *Logistics data* to create adequate standards. Work on *Process data* to begin in 2021.

REDS

The Task Force's objective is to create standardized relevant data that allows automated exchanges with the customers.

2019 - 2020

Collect information on all standards, discussion about conversion and comparison issues.

Harmonize, improve and adjust standards according to the users' needs.

Comparison of test methods, repeatability & reproducibility of results and conversion factors for harmonization of units.

Collaboration between laboratories to produce more reliable results, discussion on a more innovative testing method.

INTERNATIONAL STANDARDS

The Task Force's objective is to facilitate standardisation for international companies to prepare an evaluation of existing standards & prioritisation. Industry representatives share their expertise and help harmonize existing standards.

Technological Papers: Creation of a documents' database populated on a voluntary basis by WRA members.

Environmental: On hold pending revision of the European legislation on industrial emissions.

HS Codes: Work completed, the revised HS codes are expected to enter into force in January 2022.

ADDITIONAL WORKING GROUPS

The work of Harmonized Systems Codes (HS Codes), Technological Papers and Environmental Task Forces is either completed or on hold.

UNITECR

UNITECR is a biennial international technical refractories conference organized in rotation by one of its four "Founding Member Organizations". UNITECR aims to maintain and develop its activities and generally to contribute to the progress and exchange of industrial knowledge and technologies concerning refractories. WRA organises its General Assembly every other year in conjunction with UNITECR. The fourth World Refractories Association General Assembly took place on 15 October in Yokohama, Japan, in the context of the UNITECR 2019.

The 2020 WRA General Assembly offered an opportunity to present the initial work developed by WRA. About 60 participants attended the event and exchanged on the future orientations and objectives of the World Refractories Association.

The coming UNITECR 2021 has been rescheduled to March 2022 due to sanitary reasons. The subsequent UNITECR will be held in Germany (UNITECR23).

WORLD STEEL ASSOCIATION

WRA is an affiliated member of the World Steel Association since end 2017. World Steel Association's programmes and projects are conducted under the guidance of its Committees, which report to the Executive Committee and the Board of Directors. WRA has nominated its representatives to the following committees:

- Safety and Health Committee
- Economics Committee
- Raw Materials Committee
- Environment Committee

In 2019, WRA attended the 101st Meeting of the Economics Committee, held from 12 to 15 March in Buenos Aires, as well as the Environment Committee held at Rio de Janeiro on May 28-30 and the Technology Committee TECO-51 from 13 to 14 June.





ABOUT US

THE WORLD REFRACTORIES ASSOCIATION (WRA)

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WRA is made up of major refractory industry associations and multinational companies. The secretariat is held by the European Refractories Association, PRE.

WRA

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WRA Secretariat

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Deputy Secretary-General: Leonardo Mosca
Communication and Project Manager: Laureline Bernard
Project Officer: Inês Ferrão
Office Manager: Aurore De Schrevel