

THE 'HOLE' PICTURE: LOOKING BACK AT FURNACE TAPPING 2022

Joalet Steenkamp



"Flying Sparks" photo credit:
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Furnace Tapping series was established
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—Joalet Steenkamp

The third in the series, Furnace Tapping 2022 was co-hosted with the TMS 2022 Annual Meeting & Exhibition (TMS2022) in Anaheim, California, USA. It followed on Furnace Tapping 2018, hosted in Skukuza in the world-renowned Kruger National Park in South Africa, and Furnace Tapping 2014, hosted in the UNESCO World Heritage site in the Cradle of Humankind in South Africa.

An example of problem-based conferencing, the Furnace Tapping series was established to serve the pyrometallurgical industry at large. It focuses on a very specific challenge: tapping of furnaces. Various perspectives on the topic are typically drawn upon with participants represented by industry, consultants, service providers, and research institutions.

This was also the case for Furnace Tapping 2022. Over the two days, presentations ranged from operational practices to tap-hole designs, material and equipment selection, and the application of various modelling techniques in optimizing these aspects.

Joalet Steenkamp posing
next to the banner for Furnace
Tapping 2022.





Merete Tangstad (photo right, at podium), Norwegian University of Science and Technology, delivering her keynote address on the first day of programming for Furnace Tapping 2022.

The program included two keynote addresses. Merete Tangstad, professor at the Norwegian University of Science and Technology, reported on "Controlled Tapping – The Research Project" on day one. Her talk focused on building on the understanding and experience of tapping through modelling, industrial campaigns, and lab experiments to describe the tapping rate and mechanisms that affect furnace tapping.

Isabelle Nolet, associate at Hatch in South Africa, reported on "PGM-Ni-Cu Tapping: An Updated Industry Survey" on day two. Nolet cited many new trends since the original 2014 survey, including innovations in technology, safety, and environmental considerations, and called for a new industry survey to take place with wider participation and more specific objectives. Both presentations were very well-received and set the tone for the presentations to follow on each of the respective days.

A panel discussion was included in the second day's programming. It was facilitated by Gerardo Alvear Flores of Rio Tinto and opened by short presentations from each of the panel members on the topic of the session, "The Good, The Bad, and The Ugly of Furnace Tapping." The panel consisted of Harmen Oterdoom (independent consultant, Germany); Stanko Nikolic (Glencore, Australia); Ryan Walton (Rio Tinto, USA); Christine Wenzl (RHI Magnesita, Austria); Stefan Schmidt (Aurubis, Germany); and Isabelle Nolet (Hatch, South Africa). The lively and interactive discussion, which ranged from improvements and ideal environments to safety for operators, allowed for members of the audience to engage with panel members which added significant value to the event.



A unique draw for this year's Furnace Tapping programming was the hybrid nature of the TMS2022 meeting as a whole; this allowed presenters and audience members to participate in the conference either in person or via livestreaming, like Christine Wenzl (far right), RHI Magnesita, who appeared virtually as a plenary session panelist.

As with the previous two events, Furnace Tapping 2022 included a standalone proceedings volume. All abstracts were reviewed by the organizers, and authors of accepted abstracts were invited to submit full-length manuscripts to the proceedings. Only papers included in the proceedings were included in the program for presentation. Additionally, a special topic on Furnace Tapping is included in the November 2022 issue of *JOM: The Journal*. This topic contains a selection of invited papers, some solicited from researchers that were unable to meet the deadlines for the symposium but who could also contribute significantly to the field. (**Editor's Note: See sidebar, "Additional Reading," for more details on these resources.**)

The COVID-19 pandemic did affect programming, due to travel restrictions or other factors. However, the robust programming system at TMS allowed for last minute changes to be made even the day before, which was quite impressive. Furthermore, the first session on the second day of Furnace Tapping programming was hosted in a venue that allowed for livestreaming. This allowed for broader participation from people who were unable to travel, including presenters, participants in the panel discussion, and attendees.

I do look forward to organizing Furnace Tapping 2026 and to continuing the conversation around tapping of furnaces.

ADDITIONAL READING

Did you miss Furnace Tapping at TMS2022? Want more Furnace Tapping content? Here are two ways you can catch up and keep up with the industry while plans come together for the next conference:

1. Furnace Tapping 2022, available at the TMS Bookstore portal

Visit www.tms.org/Bookstore log in to see the discount, and enter the appropriate code when checking out on the Springer website.



2. Furnace Tapping special topic in JOM: The Journal

Visit www.tms.org/JOM to log in and access technical articles on Springer from this invited topic in the November 2022 issue.

THANK YOU

ORGANIZING COMMITTEE

- **Joalet Steenkamp**,
Chair, Glencore XPS, Canada
- **Dean Gregurek**,
RHI Magnesita, Austria
- **Quinn Reynolds**,
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Joalet Steenkamp, Chief Metallurgist, Pyrometallurgy and Furnace Integrity, Glencore XPS, was chair of the Furnace Tapping 2022 organizing committee. A TMS member since 2009, Steenkamp has been actively involved in several technical committees and currently serves as the vice chair of the Pyrometallurgy Committee.