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FOR IMMEDIATE RELEASE

SCA ANNOUNCES SLAG CEMENT WEBINAR SERIES – SPRING 2021

Four complimentary webinars featuring the use of slag cement in concrete

Farmington Hills, Mich., Feb. 18, 2021 – The Slag Cement Association (SCA) is pleased to announce a second series of slag cement webinars presented by industry experts. These free webinars are a great opportunity to learn about the different benefits that slag cement offers when used in concrete construction. The webinars will commence at the beginning of March.

The Slag Cement Webinar Series – Spring 2021 will include:

- **Avoiding Scaling in Concrete with Slag Cement**, presented by Henry Prenger, LafargeHolcim, March 4, 1 p.m. EST;
- **Geotechnical Applications with Slag Cement**, Gordon McLellan, Lehigh Hanson, March 18, 1 p.m. EST;
- **Slag Cement Award Ceremony 2020 Winners**, Drew Burns, Executive Director, SCA, April 15, 1 p.m. EST; and
- **Slag Cement Research Awards Presentations**, April 29, 1 p.m. EST.

The SCA encourages participants to preregister for each webinar. Registration links are included with the webinar descriptions below. For those who can't attend the live webinar the recordings will be archived on the SCA website to view on demand at www.slagcement.org/videos.

“Due to the great success of the first webinar series in 2020 and the demand for more slag cement resources the SCA is thrilled to provide more digital offerings,” said Drew Burns, SCA Executive Director.

The Slag Cement Webinar Series – Spring 2021 details include:

AVOIDING SCALING IN CONCRETE WITH SLAG CEMENT

Registration link: <https://attendee.gotowebinar.com/register/4935853245366300171>

Presenter: Henry B. Prenger, FACI, is an Engineer with LafargeHolcim and the former Concrete Engineer for the State of Maryland. Prenger is a member of several ACI committees and is the Chair of ACI Subcommittee 301-D, Concrete Mixtures - Section 4. He is a member of the Slag Cement Association Technical Marketing Committee and a Past Chair of ASTM Subcommittee C09.27, Ground Slag, which developed ASTM C989/C989M-18, Standard Specification for Slag Cement for Use in Concrete and Mortars. He is a licensed professional engineer in Maryland.

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Prenger will highlight his long-term work with various Departments of Transportation to properly work with slag cement in sidewalk and flatwork applications. The presentation will discuss common missteps, ways to effectively work with slag cement, resources for the industry to use, and case study examples of what has worked in various cold weather climates.

GEOTECHNICAL APPLICATIONS WITH SLAG CEMENT

Registration link: <https://attendee.gotowebinar.com/register/6625553028118553611>

Presenter: Gordon McLellan is Technical Manager at Lehigh Hanson's slag facility in Cape Canaveral, Fla. He has been involved in the development and growth of slag cement, formally known as ground granulated blast furnace slag (GGBFS,) in North America for 28 years. After Queen's University (BSc Eng), he worked with Koch Minerals, in Sudbury, Ontario, Canada, developing applications using slag cement in mining backfill applications and heavy construction. As a Product Manager for Holcim in both slag cement and fly ash, where he started in Chicago, Ill. in 1993, he continued promoting the use of slag cement in concrete applications.

McLellan will provide information on how slag cement can be used in soil stabilization projects. The design process, standard design criteria, laboratory testing examples, and field test case studies will be covered in this presentation.

2020 SLAG CEMENT PROJECT OF THE YEAR AWARDS CEREMONY

Registration link: <https://attendee.gotowebinar.com/register/905763797901469708>

Presenter: Drew Burns joined the Slag Cement Association in 2017 and is currently its Executive Director. Recently he has taken on a dual role with another trade association in the cement industry, the Great Lakes Cement Promotion Council as its Executive Director as well. Burns has more than 10 years of experience in for-profit and non-profit organizations, focusing on development of strategic plans, marketing materials, content management, website development, social media, e-mail campaign management, and special event coordination. Burns received his Bachelor of Science in Parks, Recreation and Tourism Resources with an emphasis in Commercial Recreation and Business from Michigan State University in 2009.

This webinar will highlight the award winners for the 2020 Slag Cement Project of the Year Awards program. An overview of each project will be given providing great case studies on the various uses of slag cement in concrete construction.

SLAG CEMENT RESEARCH AWARDS PRESENTATIONS

Registration link: <https://attendee.gotowebinar.com/register/1127610060168874251>

This webinar will feature two presentations from the 2020 Slag Cement Research Project of the Year Award winners. These outstanding projects highlight the use of slag cement in durable and resilient concrete.

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- **SUSTAINABILITY OF CONCRETE IN THE PACIFIC NORTHWEST**

Presenter: Hilary Chaimov is an undergraduate student in her senior year pursuing her B.S. in Civil Engineering at Oregon State University (OSU). Interests in furthering a more sustainable built environment drive her research. In 2017 she worked in Madrid, Spain for an international research effort aimed at quantifying positive impacts of nature-based solutions applied on buildings. Her recent work, looking at the sustainability of concrete in Seattle, Wash., is supervised by Dr. Erica Fischer, and is part of Chaimov's Honors College undergraduate thesis at OSU. After graduation in 2021, she hopes to take what she has learned throughout this process with her as she continues to find ways to advance the industry.

This research used continuously approved concrete mixture designs obtained from concrete suppliers in Seattle, and a life cycle assessment (LCA) tool to explore the impact that supplementary cementitious materials (SCMs) have on the global warming potential (GWP) of concrete in Seattle. The results are consistent with existing research in demonstrating that the use of SCMs in concrete mixtures reduce the GWP of concrete. A comparison of the GWP of the Seattle mixture designs with the GWP of the National Ready Mixed Concrete Association (NRMCA) benchmark mixtures demonstrated that 98% of continuously approved concrete mixtures in Seattle are meeting the NRMCA benchmarks for GWP. This research provided a framework that could be used by other major cities to evaluate how sustainable their concrete is and highlight which SCMs are being used the most. In Seattle, 79% of the mixture designs used slag cement, and on average, these mixtures had a GWP 30% lower than the NRMCA benchmark for the same compressive strength. All continuously approved mixture designs in Seattle that used slag cement are below the NRMCA benchmarks, so if an engineer specifies a continuously approved concrete mixture design in Seattle with slag cement, they meet one stipulation for a LEED credit for their building.

- **INNOVATIVE APPLICATION OF SLAG CEMENT IN IMPROVING SUSTAINABILITY, FLEXIBILITY, and COST IN THIN PANELS**

Presenter: Arash Rahmatian is an Associate Professor and Program Coordinator of Structural Engineering at the University of Houston-Downtown. Rahmatian's work focuses on fatigue analysis, structural health monitoring of FRP-RC beams under different weathering and serviceability state study, finite element analysis and numerical modeling, scanning electron microscope (SEM) study on degradation of FRP bars in alkali condition, bond and crack behavior of FRP-RC, application of sensor in concrete girders and strain monitoring, and high-strength concrete material mixture design.

The thin panels' applications are in walls, shell elements, domes, storage tanks, decorative structures, and even bridge decks. They are mainly under tension with a low thickness ratio per other dimensions. By default, due to the weakness of concrete in tension—its tensile strength is ignored in calculations.

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As long as the concrete section is deep enough the nominal flexural capacity can be regained by steel reinforcing bars, but in thin panels with given limited depth of section some concrete tensile block lever is needed in spite of the low carrying stress. Consequently, the higher the compressive strength the higher the flexural resistance. Flexural behavior is another pivotal factor in design for crack control and serviceability requirements, which were well tested and improved the capacity to a tangible extent. The thin elements of these mechanical properties need more improvement, and in this proposal slag cement is used for the purpose of sustainability and cost efficiency. The above-mentioned mechanical properties enhanced with adding the components such as nanotubes, fibers, and various admixtures. The optimum compound included the ultimate flexibility, strength, and low cost proposed for industry application. A self-build direct tensile test apparatus was mounted on a tension machine and its results were verified by ACI formulas.

The SCA is looking forward to hosting the Slag Cement Webinar Series – Spring 2021. These webinars directly align with SCA's mission: "To serve as the leading source of knowledge for slag cement and slag blended cements through promotion, education, and technology development. To communicate the performance and environmental benefits of these cementitious materials through the support and participation of member companies." In addition, the SCA has more digital resources to showcase slag cement used in durable concrete construction throughout the United States at www.slagcement.org/videos.

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