



Second Announcement / Call for papers

CSST 2021

2021 China Symposium on Sustainable Iron- and Steelmaking Technology

December 14-16, 2021

Changsha, Hunan Province, China

Organized by



The Chinese Society for Metals

Co-organized by



Central South University



Hunan Society for Metals

Conference Website: www.csst-2021.com



Invitation to CSST2021

2021 China Symposium on Sustainable Iron- and Steelmaking Technology (CSST2021) will be held on December 14-16, 2021 in Changsha, Hunan Province, China. It is our pleasure to share with you that the conference has received a highly positive response since the first announcement. Many popular experts from domestic and abroad are invited to give keynote presentations in CSST2021. We believe that CSST 2021 will be a successful meeting and hope more guests to attend it online.

Due to the present situation of COVID-19, the format of presentation for CSST2021 will be mainly on-site communication combined with on-line presentation (by VCR) from the overseas speakers who are not possible for international travel in the period of CSST2021. We cordially invite you to participate in this upcoming conference and look forward to meeting you in this event.

Organized by

The Chinese Society for Metals

Sponsored by

Ansteel Group

Baoshan Iron & Steel Co., Ltd.

MCC Capital Engineering & Research Incorporation Limited

Co-organized by

Central South University

Hunan Society for Metals

Supported by

Lianyuan Iron & Steel Co., Ltd of Hunan Valin

Xiangtan Iron & Steel Co., Ltd of Hunan Valin

Hengyang Valin Steel Tube Co., Ltd.

Conference Outline

Date: December 14-16, 2021

Venue: Changsha Preess Resort Hotel

Official Language: English and Chinese



Technical Sessions

- Process and Technology for High Efficiency Production of Iron and Steel
- Recycling and Utilization of Secondary Resources
- Governance of pollutions in Steel Industry
- Technology Innovations under the background of emission peak and carbon neutrality
- Process and Technology for longer Life and reduced quantity of steel

Honorary Chairmen

Ruiyu Yin (Chinese Academy of Engineering / Central Iron and Steel Research Institute)

Shourong Zhang (Chinese Academy of Engineering / China BaoWu Steel Group Corporation Limited)

Conference Chairman

Xinhua Wang (HBIS Handan Iron & Steel Group Co., Ltd.)

Organizing Committee

Chairman:

Xinjiang Wang (The Chinese Society for Metals)

Vice Chairmen:

Jinsong Meng (Ansteel Group Corporation Limited)

Xinping Mao (University of Science and Technology Beijing)

Chenguang Bai (Chongqing University)

Xindong Wang (HBIS Group Co., Ltd.)

Minge Zhao (Shougang Group)

Jixin Zou (China BaoWu Steel Group Corporation Limited)

Guorui Han (MCC Capital Engineering & Research Incorporation Limited)

Members:

Ziping Ren, Jianwei Zhu, Xiangwei Liao (Ansteel Group)

Hongming Long, Jialong Yang (Anhui University)

Tianjun Yang, Jianliang Zhang, Anjun Xu (University of Science and Technology Beijing)

Lijie Guo (Beijing General Research Institute of Mining & Metallurgy)

Xuewei Lyu (Chongqing University)

Miaoyong Zhu, Zhouhua Jiang (Northeastern University)

Jiaqing Zeng, Xiuping Li (Central Iron & Steel Research Institute)

Jianxin Li, Hongqiang Liu (HBIS Group)

Deng Luo, Liang Liang, Guangxin Song (Lianyuan Iron & Steel Co., Ltd of Hunan Valin)

Jian Zhang (Magang Group)

Han Ma (Shagang Group)

Zhongming Ren, Jian Yang (Shanghai University)

Fuming Zhang, Guosen Zhu, Zhihong Tian (Shougang Group)

Jianmin Li (Taiyuan Iron & Steel (Group) Co., Ltd.)

Lifeng Zhang (Yanshan University)

Lejun Zhou (Central South University)

Yiyu Zheng, Zhaoping Chen (China Baowu Steel Group)

Jianning Cao (MCC Capital Engineering & Research Incorporation Limited)

Xiaohong Xu (CITIC Pacific Special Steel Group Co., Ltd.)

Secretary General

Wanlin Wang (Central South University)

Qing Song (The Chinese Society for Metals)

Deputy Secretary General

Xu Gao (Central South University)

Min Jiang, Zhengjian Liu (University of Science and Technology Beijing)

Plenary Speakers

1. Prof. Xinhua Wang, Steelmaking Committee of CSM, China

Presentation Presentation Title: Progress in Improving Steelmaking Production Efficiency

Recently in China

2. Mr. Jianming Hua, China BaoWu Steel Group Corporation Limited, China

Presentation Presentation Title: Exploration and Reflection on Economic Operation of Iron-making Under the Constraint of "Dual Carbon" Goals

3. Dr.-Ing. Hans Bodo Lungen, Steel Institute VDEh, Germany

Presentation Presentation Title: Challenges for the Transformation of Steel Production to Climate Neutrality

4. Prof. Dong Joon Min, Yonsei University, Korea

Presentation Presentation Title: Technological Approach to Carbon Neutral in Korea's Steel Industry

5. Prof. Tetsuya Nagasaka, Tohoku University, Japan

Presentation Presentation Title: Solving the Base Metal Crisis with Novel Technology for Refining Scrap

6. Dr. Dongyeop Shin, POSCO, Korea

Presentation Presentation Title: Experience of K-OBM for Increase Scrap Ratio in POSCO

7. Prof. Jianliang Zhang, Iron-making Committee of CSM, China

Presentation Presentation Title: Low-carbon Ironmaking & Hydrogen Metallurgy to Achieve Carbon Neutrality

Keynote Presentations

Please refer to the attachment.

Conference Schedule

Date	Activity		
	Morning	Afternoon	Evening
December 14, 2021 (Tuesday)	—	Registration	Registration
December 15, 2021 (Wednesday)	Opening Ceremony Plenary Session	Parallel Sessions	— —
December 16, 2021 (Thursday)	Parallel Sessions	Parallel Sessions	— —

Proceedings

The accepted full papers will be published in conference proceedings by China Machine Press in proceedings as a book (black and white printing) which will be issued to attendees at the conference.

Presentation

Due to the present situation of COVID-19, the format of presentation for CSST2021 will be mainly on-site communication combined with on-line presentation (zoom) for overseas speakers who are not possible for international travel in the period of CSST2021. More details about presentation is as follows:

Duration	Plenary Lecture 30 minutes (including 5 minutes for discussion) Keynote Paper 25 minutes (including 5 minutes for discussion) Contributed Paper 20 minutes (including 5 minutes for discussion)
Format	AVI or MP4
Aspect Ratio	16:9
Submission	Please kindly send a VCR file of ppt presentation with your photo to csst2021@csm.org.cn before November 20, 2021.

Notes:

1. The official conference language is English and Chinese.
2. It is mandatory to add the audio of your talk within your PowerPoint presentation or video file.
3. Before you submit your files, please kindly check your recorded audio narration, playback the PowerPoint presentation slide show or video file to verify audio recorded successfully.
4. Videos and animations are supported but will be automatically started with the slide.
5. Please do not use any passwords or encryption for your presentation.
6. Please note that macros should not be used and flash-animations are not supported.

Conference Venue and Hotel Reservation

The conference will be held in Changsha Preess Resort Hotel from December 14-16, 2021. The Preess Resort Hotel (Purui Wenquan Jiudian) is a five-star hotel located by a lake and mountain which integrates the functions of conferencing, fitness, entertainment and leisure. The hotel has guestrooms, 14 villas and 11 meeting rooms of different sizes complete with full audio-visual support tech and team. Boasting hot spring that bubble up from several hundred meters underground, the guests can enjoy an authentic spa as well as sites for football, basketball, tennis and golf among other luxurious sport activities.

For the participants of CSST2021, the special rates will be effective from December 14-16, 2021. Please contact the conference secretariat for more details of the hotel reservation. The room rate is

CNY 350 / night (breakfast included and only for CSST2021).

Conference Secretariat

Mr. Xin Zhao, Ms. Fang Liu

The Chinese Society for Metals

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Email: csst2021@csm.org.cn

Website: www.csst-2021.com

Attachment 1

Keynote Presentation from Abroad (Online)

1. Geoffrey Brooks, Swinburne University of Technology, Australia

Presentation Title: The Future of Oxygen Steelmaking in a Carbon Restrained World

2. Anrin Bhattacharyya, RECYRON Engineering & Consulting Co., Austria

Presentation Title: Waste to Cash: Disruptive Technologies for Solid Waste Recycling in Steel Industry

3. Tadeu Carneiro, Boston Metal, USA

Presentation Title: Decarbonizing Steel Production: Molten Oxide Electrolysis as a Viable, Commercial Solution

4. Jung-Wook Cho, POSTECH, Korea

Presentation Title: Mixed Alkali Effect and Its Application to Mold Flux Design

5. Hongbiao Dong, University of Leicester, UK

Presentation Title: To be determined

6. Kasai Eiki, Tohoku University, Japan

Presentation Title: Toward Zero-Carbon Ironmaking Technology

7. Maarten Geerdes, Geerdes Advies, The Netherlands

Presentation Title: The Blast Furnace and Net Zero, How Far Can We Go?

8. In-ho Jung, Seoul National University, Korea

Presentation Title: From Calphad Thermodynamic Database to Smart Factory

9. Youn-bae Kang, POSTECH, Korea

Presentation Title: A New Mechanism of Early Stage of Nozzle Clogging during Continuous Casting of Ti-added Ultra Low C Steel

10. Young-jok Kang, Dong-A University, Korea

Presentation Title: Thermodynamic Influences of Metallic Solute in Solid Fe on the Formation of Non-Metallic Precipitates

11. Sun-joong Kim, Chosun University, Korea

Presentation Title: Kinetic Assessment of Decarburization of Stainless Steelmaking Process by Coupled Reaction Model

12. Shin-ya Kitamura, Tohoku University, Japan

Presentation Title: Slag Recycling of Steelmaking Process

13. Zushu Li, Warwick University, UK

Presentation Title: Research and Development for Decarbonisation of the UK Steel Industry - Current Status

14. Hiroyuki Matsuura, The University of Tokyo, Japan

Presentation Title: Stability of Oxides In Fe-Mn-Al Melt At Steelmaking to Casting Temperature Range

15. Hiroshi Nogami, Tohoku University, Japan

Presentation Title: Thermodynamic Analysis of Carbon Requirement of Ironmaking

16. Hideki Ono, University of Toyama, Japan

Presentation Title: Formation and Evolution of Inclusions in High Chromium Steel

17. Joohyun Park, Hanyang University, Korea

Presentation Title: Grain Refinement of Advanced High Strength Steels and Stainless Steels by Controlling Non-Metallic Inclusions During Refining, Casting and Reheating Processes

18. Martin Pei, SSAB AB, Sweden

Presentation Title: Fossil Free Steelmaking with HYBRIT – SSAB's Transformation of Iron and Steelmaking Technology in Sweden and Finland

19. Noritaka Saito, Kyushu University, Japan

Presentation Title: Crystallization of Mold Flux characterized under AC Field

20. Johannes Schenk, Montanuniversität Leoben, Austria

Presentation Title: Decarbonisation of Steel Production In Europe - Status of Hydrogen-Based Ironmaking

21. Yansong Shen, University of New South Wales, Australia

Presentation Title: Process Modelling of Reacting Flows and Industry Applications: Recent Work of Hydrogen Injection Processes in Ironmaking Blast Furnaces

22. Hiroyuki Shibata, Tohoku University, Japan

Presentation Title: Calcium Elution Mechanism From Silicate-Based Minerals into Water

23. Il Sohn, Yonsei University, Korea

Presentation Title: To be determined

24. Shigeru Ueda, Tohoku University, Japan

Presentation Title: Property Control of Burden for Low Carbon Operation of the Blast Furnace

25. Bryan Webler, Carnegie Mellon University, USA

Presentation Title: Advances in Analysis of Non-Metallic Inclusion Populations

26. Hideyuki Yasuda, Kyoto University, Japan

Presentation Title: Time-Resolved and In-situ Observation of Steel Solidification - Transmission Imaging (2D) and Tomography (3D)

27. Hongbin Yin, ArcelorMittal Global R&D, USA

Presentation Title: To be determined

Attachment 2

Keynote Presentations from China

1. Bing Bai, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Practice and Application of High Precision Angle Rolling Technology in Modern Plate Mill

2. Dong Chen, Ansteel Group

Presentation Title: Effect of Mg-treatment on the Distribution and Polymerization of Inclusions in Steel

3. Xiaoxuan Deng, Shougang Group

Presentation Title: Formation Mechanisms of Point-Like Defects In Ultra Low Carbon Steel Sheets During Deep Drawing Process

4. Xiushi Gan, Angang Group

Presentation Title: Theory And Practice of Longevity Technology of Large-Scale Coke Dry Quenching System

5. Fubin Gao, HBIS Handan Iron & Steel Group Co., Ltd.

Presentation Title: Experiment on High Efficient Conditioning Treatment of Ladle Slag in Production of ULC Automobile Sheet Steels

6. Xu Gao, Central South University

Presentation Title: Efficient Extraction and Utilization of Phosphorus from Steel Slag Through Mineral Structure Control

7. Lijie Guo, Beijing General Research Institute of Mining & Metallurgy

Presentation Title: Progress and Prospects of the Preparation of Low-carbon Cementitious Materials Based on Metallurgical Slags

8. Liangyuan Hao, HBIS Group Co., Ltd.

Presentation Title: Research on Big Data Intelligent Ironmaking Technology in HBIS Blast Furnace

9. Yidang Hao, Central Research Institute of Building and Construction Co. Ltd., MCC

Presentation Title: High Efficient Power Generation Technology and Equipment Through Tank Pressurized Heat from Molten Steel Slag

10. Jian Hou, HBIS Handan Iron & Steel Group Co., Ltd./Chongqing University

Presentation Title: Industrial Practice of Increasing Proportion of High Al₂O₃ Iron Ores in Blast Furnace Ironmaking Process

11. Chenxi Ji, Shougang Group

Presentation Title: Study on Cleanliness Control Technology of High Efficiency Steelmaking Process in Shougang

12. Zhouhua Jiang, Northeastern University

Presentation Title: Development and Application of High Efficiency EAF Steelmaking Technology with Only Scrap Continuous Charging

13. Wei Kang, Ansteel Group

Presentation Title: Research on High Efficiency and Energy Saving Direct Charging of Low Alloy Steel

14. Xiuping Li, Central Iron and Steel Research Institute

Presentation Title: Carbon Emission Reduction Technologies and Roadmap of Chinese Steel Industry

15. Hualong Li, Shagang Group

Presentation Title: Current Progress of Castrip Technology in Shagang

16. Hongming Long, Anhui University of Technology

Presentation Title: Research Progress on Resource Utilization of Waste Scr Denitration Catalyst

17. Guangqiang Li, Wuhan University of Science and Technology

Presentation Title: Recycling of Ironmaking and Steelmaking Slags in China

18. Jian Li, Baosteel Group

Presentation Title: Research on Microwave Sintering Technology of Iron Ore

19. Liang Liang, Valin Group

Presentation Title: High Strength Steel Research and Lightweight Application in Valin LY Steel

20. Yinghao Liu, Baosteel Group

Presentation Title: Application of Life Cycle Assessment In Low-Carbon Planning of Steel Company

21. Dong Liu, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Smart Management and Control Platform for Power Grid in Integrated Iron & Steel Enterprises With Cps Structure

22. Xuwei Lyu, Chongqing University

Presentation Title: The Mathematical Model for Iron Ore Sintering and the Application

23. Deng Luo, Valin Group

Presentation Title: To be determined

24. Gele Qing, Shougang Group

Presentation Title: Application of Life Cycle Assessment in Low-Carbon Planning of Steel Company

25. Zhongming Ren, Shanghai University

Presentation Title: Study on Microstructure Segregation of Bearing Steel in Continuous Casting

26. Chang Shen, Masteel

Presentation Title: Development and Application of Plastic Inclusion Technology for Wheel Steel

27. Yujia Sun, HBIS Group Co., Ltd.

Presentation Title: Collaborative Optimal Disposal and Resource Utilization of Solid Waste in Hbis Group

28. Guangxin Song, Hengyang Valin Steel Tube Co., Ltd.

Presentation Title: To be determined

29. Yong Tian, Ansteel Group

Presentation Title: Construction Practice of Efficient Green Intelligent Steelmaking Quality Production Line in Ansteel

30. Jia Wang, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Technical Analysis of The Direct Reduction Iron Application in Steelmaking Process

31. Chengjie Wang, HBIS Handan Iron & Steel Group Co., Ltd

Presentation Title: Production Practice of High Cleanness Non - Modulated Steel by Electric Furnace

32. Wanlin Wang, Central South University

Presentation Title: Key Issues in High Speed Casting Technology

33. Xiangfeng Wang, Ansteel Group

Presentation Title: Application Practice of Steel Slag Treatment Technology in Ansteel

34. Lin Wang, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Research and Application of Longevity-Efficient Converter Flue Gas Heat Recovery Technology

35. Cong Wang, Northeastern University

Presentation Title: A Fundamental Study on Welding Fluxes Geared towards High Heat Input Applications

36. Guanghua Wen, Chongqing University

Presentation Title: Some Considerations on "Black Magic" Mold Powders—Al-Smart Mold Powders Proposed

37. Cunyou Wu, Baosteel Group

Presentation Title: Research Progress of Induct Heating Technologies At Baosteel

38. Anjun Xu, University of Science and Technology Beijing

Presentation Title: Calculation Method of Energy Saving in Process Engineering:A Case Study of Iron and Steel Production Process

39. Chunjiang Xiao, HBIS Wuyang Iron & Steel Group Co., Ltd.

Presentation Title: Research on Heat Treatment Process of Bainitic Steel with Large Thickness

40. Zhixin Xiao, Baosteel Group

Presentation Title: Study on Damage Process and Mechanism of Blast Furnace Cooling Stave in Late Service

41. Haifa Xu, Baosteel Group

Presentation Title: The Project Introduction of Hydrogen Rich Carbon-Recycling Blast Furnace of China Baowu

42. Guangwei Yang, Baosteel Group

Presentation Title: Research and Development in Secondary Refining Technology of Clean Steel at Baosteel

43. Jialong Yang, Anhui University of Technology

Presentation Title: Laboratory Research Related to Flux Influence on Properties of Basic Pellets

44. Jian Yang, Shanghai University

Presentation Title: Steelmaking Technology for Surface Defect Control of Hot-dip Galvanized Automobile Exposed Panel

45. Hengdi Ye, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Low-carbon and Low-cost Technology for Integrated Remediation of Sintering Flue Gas

46. Qijie Zhai, Shanghai University

Presentation Title: To be determined

47. Fuming Zhang, Shougang Group

Presentation Title: Research on Theory and Practice of High Blast Temperature Technology for Modern Blast Furnace

48. Lifeng Zhang, Yanshan University

Presentation Title: Prediction on the Three Dimensional Distribution of the Number Density, Size and Composition of Non-metallic Inclusions in Continuous Casting Products

49. Liangliang Zhang, State Key Laboratory of Iron and Steel Industry Environmental Protection

Presentation Title: Research Progress on Treatment and Resource Utilization of Iron and Steel Slag in China

50. Yapeng Zhang, Shougang Group

Presentation Title: Research on Key Technologies for Ultra-low Emissions in Whole Process of Steel Production

51. Zuotai Zhang, Southern University of Science and Technology

Presentation Title: Chemical Activation of Steel-making Slag for The Application of Wastewater Treatment

52. Zhilong Zhao, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Study on Hydrogen Metallurgical Engineering Technologies Based on Coke Oven Gas

53. Yunbo Zhong, Shanghai University

Presentation Title: To be determined

54. Mingshun Zhou, Ansteel Group

Presentation Title: Reducing Carbon Oxides and Nitrogen Oxides Emission of Iron Ore Sintering by Double Layers Pre-Sintering New Process

55. Wenhao Zhou, Valin Group

Presentation Title: To be determined

56. Guosen Zhu, Shougang Group

Presentation Title: Research on Casting Technology of Multi-mode Continuous Casting & Rolling Line

57. Miaoyong Zhu, Northeastern University

Presentation Title: Formation Mechanism and Control Strategy for Wide Face Longitudinal Off-corner Depressions During Thick Slab Continuous Casting of Microalloyed Steel

58. Rong Zhu, University of Science and Technology Beijing

Presentation Title: Fundamental Research And Application of Powder Bottom Ejection-Based Low Carbon Steel Making Technology In BOF

59. Zhibin Zhu, MCC Capital Engineering & Research Incorporation Limited

Presentation Title: Digital Technology of Iron And Steel Engineering Enables Intelligent Twin Factory