Special Issue

Prequalifying Emergency Welding (Temper Bead Welding)

Message from the Guest Editors

Prequalifying emergency welding (temper bead welding) is a commonly used concept in industry, which aims to deposit the weld bead at the specified position on the weld bead surface to affect the heat-affected zone formed by the previous weld bead and the metallurgical properties of the weld metal. The technology could be applied to emergency repair welding of ships, surface modification of workpieces, variation of interface structure with heat input during dissimilar material bonding, simulation analysis of joint structure change, and temperature field and stress field during multi-layer and multi-channel welding. In the past 30 years, we have accumulated a lot of experience in research on the efficiency of the welding process of ship steel, the interface of microstructure control of the dissimilar metal connection, and the analysis of the welding thermal process. In this Special Issue, we invite articles on various aspects of emergency welding prequalification. Articles on interface metallurgy, welding methods, welding numerical simulation, and dissimilar metal connection processes are particularly welcome.

Guest Editors

Dr. Hongtao Zhang
Harbin Institute of Technology, Harbin 150001, China
Prof. Dr. Yinan Li
School of Mechanical & Automotive Engineering, Qingdao University of Technology, Qingdao 266000, China

Deadline for manuscript submissions

closed (31 July 2022)

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/si/97073

Metals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
metals@mdpi.com

mdpi.com/journal/metals

Metals

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.3

mdpi.com/journal/metals

About the Journal

Message from the Editor-in-Chief

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

Editor-in-Chief

Prof. Dr. Yong Zhang
Beijing Advanced Innovation Center of Materials Genome Engineering, State Key Laboratory for Advanced Metals and Materials, University of Science and Technology Beijing, 30 Xueyuan Road, Beijing 100083, China

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Metals and Alloys)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.7 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the second half of 2025).

MDPI