**論文タイトル**

一般社団法人　日本伸銅協会　技術部 伸銅　太郎 \*

一般社団法人　日本伸銅協会　技術部 伸銅　花子

English Title

Japan Copper and Brass Association Taro Shindou

Japan Copper and Brass Association Hanako Shindou

(Received March 19, 2025; Accepted April 21, 2025)

Japan Copper and Brass Association (JCBA) was established on April 1, 1948 for the purpose of overall improvement and development of copper & copper alloys fabricating industry.

On the basis of harmonized communication between the members and for the purpose of overall improvement and development of copper & copper alloy fabricating industry, JCBA is engaged in the following activities through various committees.

***Keywords:*** *copper, zinc, microstructure, plating, corrosion*

1. **緒言**

ここから本文（2段組）

1. **実験方法**

**2.1　供試材**

　本実験に用いた供試材をTable 1に示す。

Table 1 Samples

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**2.2　中見出し**

1. **実験結果及び考察**

**3.1　断面監察結果**

試料の断面監察結果をFig.1に示す．

\* 〒110-0005　東京都台東区上野1-10-10

Tel: 03-6803-0587 Fax: 03-3836-8808

E-mail: tech-div@copper-bras.gr.jp

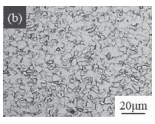


Fig.1　Cross–sectional microstructures of the specimen

**3.2　中見出し**

**3.3　中見出し**

1. **緒言**

以下の知見を得た。

**謝辞**

本研究は日本銅学会2024年度研究助成を受けて行われました。ここに厚く御礼申し上げます。

**参考文献**

[1] 三浦博己, 小林正和, 牧一誠, 森広行, 伊藤優樹：Cu–Al合金の強圧延ヘテロナノ組織と多軸鍛造超微細粒組織の機械的特性比較，銅と銅合金，55 (2016), 190-196．

[2] T. Iyasu, M. Kuratani, I. Ikeda, N. Tanaka, Y. Yamada and O. Sakurada: A Study of Water Treatment Chemical Effects on Type I” Pitting Corrosion of Copper Tubes, Materials Sciences and Applications, 11 (2020), 494–504.

[3] 川田紳悟，高澤司：Cu-Mn-Ni合金における表面酸化が電気的特性に及ぼす影響，日本銅学会第63回講演大会講演概要集, (2023), 13-14．

[4] R. Matsumoto, K. Hashimoto and H. Utsunomiya: Improvement in Bonding Strength by Applying Circumferential Sliding in Cold Copper/Aluminum Forge-Bonding, Journal of Materials Processing Technology, 307 (2022), 117685.