<table>
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<tr>
<th>著者</th>
<th>神田 信 秋田 江川 浩一 玛斑</th>
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<td>タイトル</td>
<td>電気的特性 アモルファス Cu-Zr 合金</td>
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| 雑誌名     | 科学研究報告  科学研究所  諏訪多大 多大 多大  
| 巻号       | 26                                               |
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the amorphous iron alloys is attributed to the peculiar film formation partly by
the presence of Cr and a large quantity of P in the alloys and partly by a single
phase of the amorphous state.

**Magnetostriction of Amorphous Fe$_{0.80}$P$_{0.13}$C$_{0.07}$ Ribbon**
N. TSUYA, K.I. ARAI, Y. SHIRAGA, M. YAMADA and T. MASUMOTO

The saturation magnetostriction constants and the forced magnetostriction of
the amorphous Fe$_{0.80}$P$_{0.13}$C$_{0.07}$ ribbon are measured from liquid nitrogen to room
temperatures by a three terminal capacitance method. As a result, the saturation
magnetostriction constants $\lambda_s$ are not completely isotropic but partly anisotropic
with direction of the ribbon, and the average constant is $31 \times 10^{-6}$.

**Electrical Properties of Amorphous Cu-Zr Alloy**
T. MURA, S. TOMIZAWA, T. FUKASE and T. MASUMOTO
Scripta Met., 10 (1976), 181.

The electrical resistivity of amorphous Cu$_{50}$Zr$_{50}$ alloy and the temperature
coefficient of the resistivity are estimated to be 195 $\mu\Omega\cdot$cm and $-1.23 \times 10^{-4}$ $\mu\Omega\cdot$cm/$^\circ$K
at 273$^\circ$K, respectively. The Hall coefficient and the thermoelectric power are equal
to $+1.4 \times 10^{-11}$ m$^2$/AS and $+0.39 \mu$V/$^\circ$K, respectively. These electrical properties
are similar to those for some liquid transition metals.

**High Frequency Core Loss and Initial Permeability of Ferromagnetic
Amorphous Ribbons**
Noboru TSUYA, Masamichi YAMADA, Ken Ichi ARAI, Tsuyoshi MASUMOTO and
Hiroyasu FUJIMORI

For the purpose of practical applications of the amorphous Fe$_3$Co$_{70}$Si$_{15}$B$_{10}$
ribbon to high frequency magnetic material, the initial permeability $\mu_i$, the loss
factor $\tan \delta$ as well as the quality factor were measured in the frequency region
from 3 kHz to 70 kHz by using a Maxwell Bridge. $\mu_i$ is almost independent of
the intensity of magnetic field and increases monotonically with a decrease of the
frequency. $\tan \delta$ increases linearly with an increase of the frequency in the initial
permeability region. $\tan \delta/\mu_i$ is a good linear function of the square of the
thickness and increase with an increase of the frequency. From these experiments,
it was found that among losses, the eddy current loss is most essential in the high
frequency region in the amorphous ribbons.