1. Safety instructions

The safety of the operator and of the high current coil itself can only be guaranteed if it is used in accordance with the instructions and regulations.

- Experiments must be carried out on a heat-resistant base material. Remember that glowing or melting parts of the test specimen can flow downwards under gravity.
- Only use test specimens that can be passed through the holes in the load connectors.
- After the experiment, allow the test specimen to cool for at least 5 minutes.
- When assembling a transformer, the components may only be handled when the primary voltage is switched off.
- Always use safety leads for the experiments.
- Do not allow liquids to come into contact with the coil.

2. Description

The S-model high current coil is used in conjunction with an S-model transformer core (1001004) for generating high currents. Test specimens such as paper-clips or short lengths of wire can be clamped between the two load connectors for experiments in which the specimen is intended to melt.

3. Technical data

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of turns:</td>
<td>22</td>
</tr>
<tr>
<td>Maximum current:</td>
<td>10 A</td>
</tr>
<tr>
<td>Channel for inserting iron core:</td>
<td>20 × 20 mm²</td>
</tr>
</tbody>
</table>
4. Operation

In order to carry out the experiments, the following additional equipment is required:

1 AC/DC power supply, 0-20V, 0-5A @230V
1003562

or

1 AC/DC power supply, 0-20V, 0-5A @115V
1003561

1 S-model transformer core 1001004
1 S-model transformer coil 1001000

- Assemble the transformer as shown in Fig. 1 and place it on a heat-resistant surface.
- Clamp the test specimen (short length of wire or a paper-clip) between the load connectors.
- Connect the AC current output terminals of the AC/DC power supply to the tapping points of the primary coil corresponding to 200 turns.
- Switch on the power supply and select a voltage between 10 V and 20 V. After a short time the high current causes the test specimen to glow, and eventually it will melt through.
- Allow the remains of test specimens to cool for at least 5 minutes before removing them.

Fig. 1 Experiment set-up