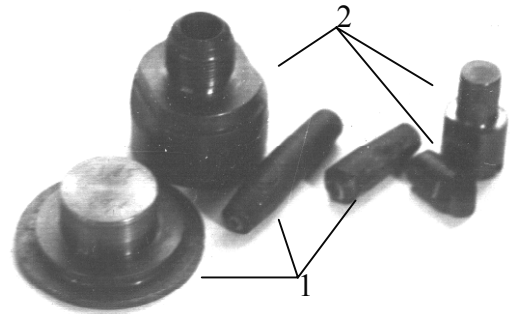
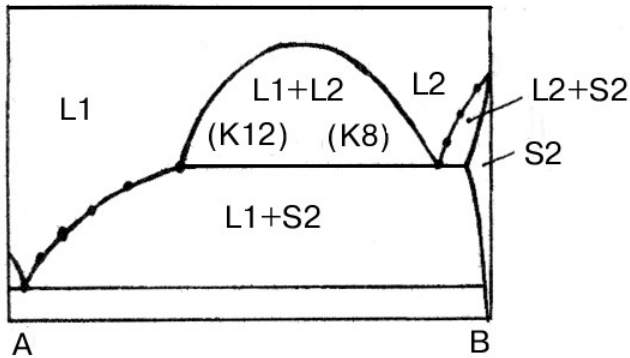




Strengthening alloys of system Cu-Cr-Fe-C with miscibility gap in liquid

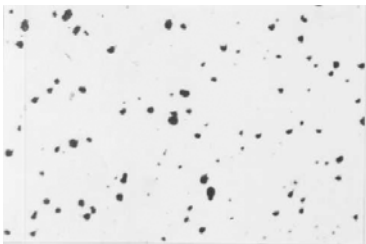
The diagram of system with miscibility gap



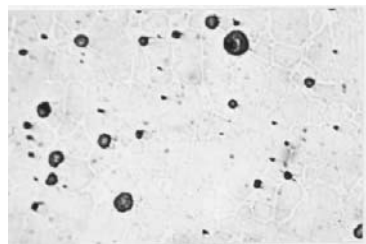
Electrodes for contact welding from alloys
Cu-Fe-Cr-C

1 – Bottom electrodes;
2 – Top electrodes.

Values of parameters we define by considering of equation systems of balance L1-S2 and S2-L2 by using of points of diagram of state with certain values of chemical composition and structure.

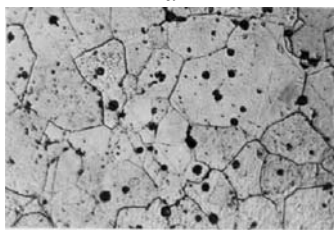


a

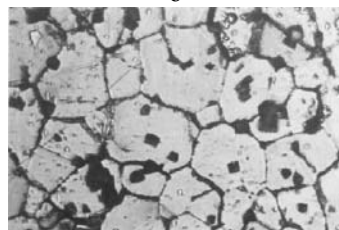


б

Structure of chromium cast iron
with copper additions, x100: a –
11,4%; б – 14,0%



a



б

Structures of copper with addi-
tives of the chromium cast iron,
x500: a – 5%; б – 8% cast iron.

Tests of the electrodes for floss weld on the equipment of “Shlumberge” firm show:

- chromium bronze БрХ07 electrodes - 190 units of welds;
- “Shlumberge” firm electrodes “- 325 units of welds;
- experimental PTIMA electrodes - 350 units of welds.