Micrographs for the Recovery, Recrystallization, and Grain Growth Experiment

The micrographs in this document are given to students who also get to view the original samples using an optical microscope and a projection system like that shown in figure 1. During the laboratory session the instructor leads a discussion where the two views for each sample shown in these micrographs are presented and analyzed for essential features that relate to the questions of recovery recrystallization and grain growth. These figures are not labeled because the students are expected to be able to identify each one, based on these discussions.

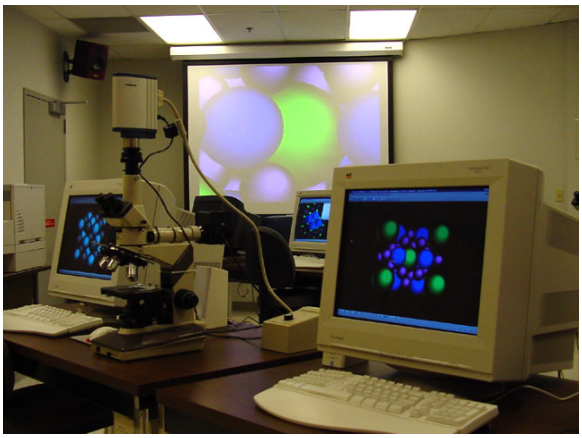

Figure 1 The computers, microscopes and projection system used to review the microstructures with the students.

The micrographs on each page show the normal (left) and rolling direction (right) views of each sample. The magnification for the first two pages are the same while for the last page shows micrographs at a higher magnification plus pictures of a stage micrometer taken at these two magnifications, allowing one to work out the magnification in the micrographs or to use them as a ruler to measure the size of features. The stage micrometer is 1 millimeter long and is graduated in 10 : m.

The micrographs on the following pages are all for 70/30 brass that was received in the ½ hard condition and annealed for one hour in air at the temperatures listed in the tables on the following page.

Page 1

As Received Normal (Low Magnification)	As Received Rolling Direction (Low Magnification)
250°C Normal (Low Magnification)	250°C Rolling Direction (Low Magnification)
350°C Normal (Low Magnification)	350°C Rolling Direction (Low Magnification)

Page 2

450°C Normal (Low Magnification)	450°C Rolling Direction (Low Magnification)
550°C Normal (Low Magnification)	550°C Rolling Direction (Low Magnification)
750°C Normal (Low Magnification)	750°C Rolling Direction (Low Magnification)

Page 3

250°C Normal (High Magnification)	250°C Rolling Direction (High Magnification)
750°C Normal (High Magnification)	750°C Rolling Direction (High Magnification)
Stage Micrometer (Low Magnification)	Stage Micrometer (High Magnification)