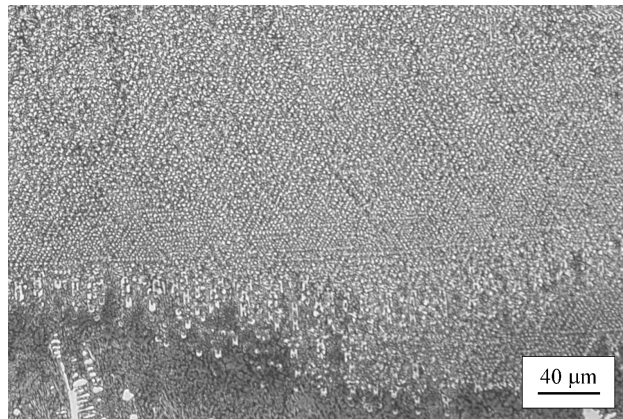
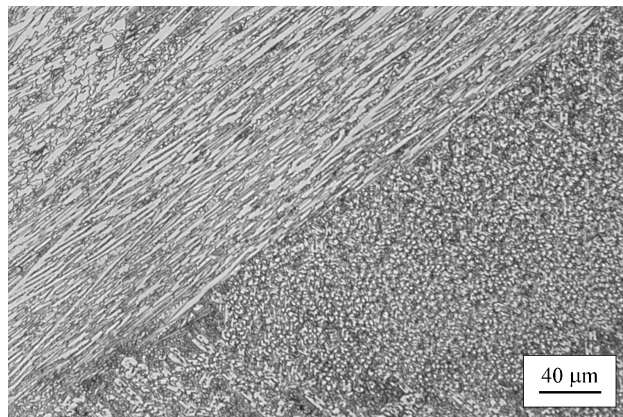


**Figure 5.4(a):** - A typical micrograph from the test plate for condition 1 in Table 5.1. This structure would be described as a conventional hypereutectic microstructure with a high volume fraction of primary carbides.



**Figure 5.4(b):** - The complex regular microstructure (shown above) was also present in the test overlay for condition 1. Carbides can be seen to appear in clusters exhibiting three-fold rotational symmetry.



**Figure 5.4(c):** - This micrograph from test overlay number 1 shows the boundary between two complex regular crystals that have different orientations. The boundary follows a path from the bottom left-hand corner of the micrograph to the top right-hand corner. The carbides in the top left-hand grain generally appear as needles that are approximately parallel to one another. The carbides in the bottom right-hand grain are generally seen in cross-section.