meter trace to that in fig. 1 in his fig. 8, for material of the same composition and quenching treatment as that used in the present work. Although he has interpreted his results in terms of an asymmetric side band produced by spinodal decomposition, we can index his "side-band" as an $(01\bar{1}2)$ reflection of the R phase, $\theta = 22.8°$. The R phase peak shown in fig. 1 is more intense than that in fig. 8 of Douglass' paper. This has been demonstrated to be a texture effect as rotation of the specimen about the surface normal reduced the intensity of the peak. Small differences between the observed θ values may be due to differences in rhombohedral distortion of the R phase as a result of differences in quench-rate. Furthermore the observed width of the R phase peak is probably caused by slight variations in the amount of rhombohedral distortion and the small size of the precipitate. Douglass observed asymmetric side bands in specimens of different compositions aged at room temperature and 100°C. Our interpretation of Douglass' results in terms of a metastable phase is consistent with previous work [6-9] which has shown that R phase or fcc α' is produced over a composition range comparable to that investigated by Douglass. Consequently we do not consider that the X-ray data presented by Douglass are satisfactory evidence for spinodal decomposition in his alloys.

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Short Notice

Contemporary Crystallography

Martin J. Buerger

Pp xi + 364 (McGraw-Hill Book Company 1970) 120s

This well-known author gives an introduction to the geometry of crystals and its determination by X-ray diffraction. After a clever presentation of the basic concepts of symmetry, diffraction and the reciprocal lattice (80 pp), the second part of the book (105 pp) deals with the routine determinations of symmetry, lattice type, and cell dimensions. The Weissenberg method and the precession method are also dealt with at some length.

The last five chapters (151 pp) are an exceptionally well-written survey of the investigation of the arrangement of atoms in the cell. A prominent example of Buerger's art of explaining is his introduction to the Patterson function from different points of view.

The book is suitable for beginners in crystallography because the author goes step by step through the deduction assisted by many instructive pictures. It needs an experienced teacher to lead the reader so carefully without lengthening the text. Graduate research workers from many fields, eg chemistry, physics, metallurgy, mineralogy, biology, and materials science will get a quick and enjoyable access to the concepts of the determination of crystal structures.

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H.A.