Mb-P004

Room: Poster

SEM and TEM observation of rhythmic band structures in Precambrian and recent iron deposits

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Banded structures are characteristic to iron ores or strata of Precambrian to recent deposit. However, mineral components, textures and characteristics of the bands have not always been clarified. In this study we examined 4typical specimens having banded structures: present Shibu hot spring deposit, Quarternary Suwa iron mine deposit, Precambrian Xuanlong iron ore deposit composed of stromatolite structure and Precambrian BIF of Wittenoom, Australia. Examining these specimens by microscopy and SEM, characteristic textures composed of compact parts and porous parts were suggested. In the porous parts, specimens from Shibu and Xuanlong iron ore showed that they contained much fossil or fossil-like materials (Dai, 1998 for Xuanlong specimens).

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