

PETROMORPHOGRAPHY OF ORBICULAR STRUCTURES IN CHROMITITE OF SUKINDA ULTRAMAFIC COMPLEX, ORISSA, INDIA

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Abstract

The Sukinda ultramafic complex of Orissa comprises ultramafic rocks containing chromitite have intruded into metasediments of Iron Ore Group of meso-Archaean age in the north. Chromitite bands are discontinuously exposed in almost the entire east-west trending belt, the extreme ends of which are folded in the eastern side. Chromite is the predominant ore mineral in the arena of non metallic minerals like talc, tremolite, serpentine, kammererite, uvarvite and cryptocrystalline silica that occurs in different forms with varying structural and textural characteristics. Pyroxenite granite and few dolerites are the younger litho units to intrude into the chromiferous ultramafites. Orbicular structure has been recorded from Sukinda chromiferous ultramafic complex. It is a rare feature found in chromitite, which signifies the tectono-genetic history of the belt. The typical orbicular structure is spheroidal units with /without nucleus of chromite surrounded by shell of serpentinized olivine. Each sheath of olivine is surrounded by a thin outer sheath of chromite and commonly contains several concentric layers of chromite.

Keywords: Orbicular structure, Chromitite, Sukinda ultramafic complex, Orissa.