

FLUX GRADE ULTRABASICS IN THE VICINITY OF GROWING IRON AND STEEL INDUSTRIES OF ORISSA STATE, INDIA

'RAY P, CHAND P K, 'BEHERA S'Utkal University, Bhubaneswar, Orissa, India
Directorate of Geology, Bhubaneswar, Orissa, India

Ultrabasic rocks are intrusive into Dhanjori quartzites of Iron Ore Super Group around Baiganpal (85° 37' 32" E : 21° 08' 04" N) in form of a lopolith and Bandhuni Huli (85° 34' 37" E : 21° 11' 05" N) as sill like bodies, WNW of Sukinda Ultramafic Complex along the periphery of North Orissa Craton. Peridotites (mostly harzburgites) and pyroxenites (enstatite and hypersthene) alongwith dunite and serpentinite form a massive complex at the former covering more than 3 square kilometers area and a layered complex at the later covering more than 5 square kilometers. Serpentinisation has affected all the these rocks with development of microcrystalline chrysotile. Average chemical analyses of 30 samples show high magnesia (32 - 38%), low alkali (0.5%), low chromium oxide (0.5 - 1.3%) and silica ranging from 32 - 40%. This chemistry suggests that these rocks can be suitably used as good fluxing agents substituting dolomite and quartzite with little blending for the growing iron and steel industries around Jajpur Road - Duburi Belt of Orissa within a short distance from the above deposits.