

## 广西南宁地区所产世界级球粘土的矿床特征与合理开发利用

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摘要: 广西南宁地区以维罗—淡坡矿区为主的球粘土产于新生代第四纪的更新统(Q3), 曾由广西第四地质队详查证明为一大型矿床(探明储量2 000多万吨)。经研究主要由无序高岭石组成, 多为湖沼盆地胶体沉积假六方片状高岭石, 尚未固结成岩或无重结晶有序化粘结性好。其粒度极细, 平均0.94 μm, 故可塑性指数高达47~53, 耐火度达1 750~1 790 °C, 其质量好, 矿体平均高岭石含量89%~94%, 比英美球粘土的高岭石的含量要高, 储量大, 易露天开采, 实为中国球粘土之最, 可与英、美所产大型优质球粘土矿媲美, 特称其为世界级球粘土。该矿近年已由农民土法开采以用于耐火材料的生产, 今后应大规模现代化开采, 作为科技含量高的各种填料及涂料的原料以满足国内外的需要。

关键词: 球粘土; 地质; 矿床特征; 合理应用; 南宁

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### Characteristics and rational development and utilization of a world-class ball clay deposit in the Nanning area, Guangxi

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Abstract: The Weiluo ball clay deposit occurs in the Pleistocene in the Nanning area, Guangxi. It has been proven a large clay deposit with reserves of more than two million tons by Guangxi No. 4 Geological Party. The ball clay consists of disordered kaolinite, mostly occurring as pseudo-hexagonal flaky kaolinite deposited as colloidal sediments in lake and bog basins. It is unconsolidated or not recrystallized, showing a high degree of ordering and high cohesiveness. The ball clay is very fine in grain size, being 0.94 μm on the average. The index of plasticity is up to 47-53 and the refractoriness is up to 1 750-1 790 °C. The average content of kaolinite in the clay layers is 89%-94%, higher than that in ball clay deposits in Britain and the United States. The ball clay has large reserves and easily open-mined; so it is the best of this kind in China and comparable to the high-quality ball clay mined in Britain and the United States. However, it is being mined by the local people using the indigenous method for refractory material uses. It should be mined on a large scale with the modern techniques and sold as high-tech fillers and coating materials to supply domestic and international markets.

Key words: ball clay; geology; characteristics of ball clay deposit; rational use; Nanning