SARI

Industri baja merupakan salah satu indrustri strategis di Indonesia. Namun, sampai saat ini bahan baku industri baja masih menggunakan besi impor. Berdasarkan penelitian sebelumnya, diketahui bahwa pasir besi di Cipatujah dan Cikalong, Tasikmalaya, Jawa Barat memiliki potensi dalam pemanfaatannya sebagai sumberdaya industri baja, sehingga dilakukan penelitian mengenai karakteristik pasir besi di kedua daerah tersebut dengan metode penelitian berupa perhitungan derajat kemagnetan (MD), perhitungan bobot isi (SG), analisis mineralogi butir ayak, analisis mikroskopi bijih, analisis XRF, analisis ICP-OES, dan analisis mikro-XRF. Berdasarkan hasil dari penelitian tersebut, diketahui bahwa endapan pasir besi di kedua daerah memiliki warna yang gelap dengan ukuran butir bervariasi dari *coarse* hingga *very fine* sand. Nilai MD Kabuoaten Tasikmalaya memiliki kisaran nilai MD 0,408–55,8% dan SG 1,47–4,17 gr/cm^3. Mineral yang dijumpai di kedua kecamatan adalah magnetit, ilmenit, hematit, piroksen, amfibol, garnet, kuarsa, ankerit, zirkon, dan plagioklas. Selain itu, dijumpai pula fragmen batuan, cangkang kerang/fosil, serta lempung. Kelimpahan magnetit bertambah seiring dengan titik pemboran yang semakin menjauhi pantai, dan semakin banyak sungai yang memasok material endapan, maka kandungan magnetitnya juga akan semakin tinggi. Pasir besi daerah Cipatujah dan Cikalong, Tasikmalaya secara umum berasal dari batuan vulkanik berkomposisi intermediet–mafik Gunung Cikuray dan Formasi Jampang, yang berasal dari tatanan tektonik *continental arc* dengan maturitas sedimen rendah.

Kata Kunci: Pasir besi, Tasikmalaya, magnetit

ABSTRACT

Steel industry is one of the strategic industry in Indonesia. Unfortunately, so far, this industry used imported raw material. Based on previous research, iron sand deposits in Cipatujah and Cikalong, West Java have potential for their appliance as resources of the industry. Thus, a research was conducted on the characteristics of iron sands in these two areas with methods of calculating magnetic degrees, calculating specific gravity, mineralogy analysis of sieved grains, ore microscopy analysis, XRF analysis, ICP-OES analysis, and micro-XRF analysis. From this research, it is known that iron sand deposits in both areas have dark colors with grain sizes varying from coarse to very fine sand. The value of MD on Tasikmalaya has range from 0.408–55.8% and SG 1.47–4.17 gr/cm^3. Various minerals, such as magnetite, ilmenite, hematite, pyroxene, amphibole, garnet, quartz, ankerit, and plagioclase were found. Other than that, rock fragment, fossils, and clay also composing the iron sand. The abundance of magnetites increases as drilling strengthens the coast, and the more rivers that provide sediment materials, the higher magnetic content are. Iron sands in Cipatujah and Cikalong, Tasikmalaya generally originate from intermediate–mafic volcanic rock of Mount Cikuray and Jampang Formation from continental arc tectonic setting and have low sediment maturity.

Keywords: *Iron sand, Tasikmalaya, magnetite*