

RINGKASAN

PT. Indominco Mandiri yang berlokasi di Kota Bontang, Provinsi Kalimantan Timur merupakan perusahaan yang bergerak dalam bidang pertambangan batubara. Dalam salah satu kegiatannya PT. Indominco Mandiri melakukan kegiatan pencampuran batubara untuk memenuhi kualitas permintaan konsumen salah satunya di *Coal processing Plant 3 permanent* (CPP 3P). Kegiatan pencampuran batubara di *Coal processing Plant 3 permanent* (CPP 3P) dilakukan untuk menghasilkan produk Indominco Mandiri *East Block Medium Total Sulfur* (IMM EB MTS) dengan kriteria Nilai Kalori (CV) sebesar ≥ 6000 Kkal/Kg, *Total Sulfur* (TS) sebesar 0,8 – 1,65 %, dan Kadar Abu (*Ash*) sebesar $\leq 5,5$ %. dan Indominco Mandiri *East Block High Total Sulfur* (IMM EB HTS) dengan kriteria Nilai Kalori (CV) sebesar ≥ 5800 Kkal/Kg, *Total Sulfur* (TS) sebesar 1,65 – 2,2 %, dan Kadar Abu (*Ash*) sebesar $\leq 5,5$ %.

Seam batubara yang digunakan untuk kegiatan pencampuran batubara saat ini yaitu *seam* C13bc (CV = 6254, TS = 1,35 %, *Ash* = 2,8 %), *seam* C17w (CV = 5630, TS = 2,3 %, *Ash* = 4,35 %) yang berasal dari Pit 12B dan *seam* C15w (CV = 5715, TS = 2,38 %, *Ash* = 3,07 %), *seam* C14c (CV = 6274, TS = 1,52 %, *Ash* = 2,72 %) yang berasal dari *pit* 19D. Tetapi pada kenyataannya hasil pencampuran batubara untuk produk IMM EB MTS belum memenuhi kualitas permintaan konsumen dikarenakan *total sulfur* (TS) yang dihasilkan rata-rata sebesar 1,74 %. Untuk itu perlu dilakukan perbaikan perhitungan untuk produk tersebut.

Perbaikan perhitungan untuk produk IMM EB MTS dilakukan dengan menggunakan bantuan *program linier* metode simplek dengan *Software POM – QM For Windows*. Dari hasil perhitungan dengan menggunakan *software POM-QM for Windows* didapatkan empat alternatif pencampuran batubara untuk menghasilkan produk IMM EB MTS, diantaranya adalah :

1. Alternatif 1 = *Seam* C13bc (8210,52 ton) + *Seam* C17w (3789,47 ton)
2. Alternatif 2 = *Seam* C13bc (8504,85 ton) + *Seam* C15w (3495,14 ton)
3. Alternatif 3 = *Seam* C17w (2000 ton) + *Seam* C14c (10000 ton)
4. Alternatif 4 = *Seam* C15w (1813,95 ton) + *Seam* C14c (10186,05 ton)

ABSTRACT

Indominco Mandiri Ltd. located in Bontang City, the Province of East Borneo (Kalimantan) is the coal mining company. One of the activities of Indominco Mandiri Ltd. is coal blending to meet the consumer demand, which is Coal Processing Plant 3 Permanent (CPP 3P). Coal blending activity on CPP 3P is conducted to produce indominco mandiri products which is Indominco Mandiri East Block Medium Total Sulfur (IMM EB MTS) With the criteria of Calorie Value (CV) ≥ 6000 Kkal/Kg, Total Sulfur (TS) 0,8 - 1,65% and Ash Content (Ash) $\leq 5,5\%$ and Indominco Mandiri East Block High Total Sulfur (IMM EB HTS) With criteria of Calorie Value (CV) ≥ 5800 Kkal/Kg, Total Sulfur (TS) 1,65 – 2,2 % and Ash Content (Ash) $\leq 5,5\%$.

Coal seam that are used for the coal blending activities nowadays is, Seam C13Bc (CV: 6254, TS: 1,35%, Ash 2,8%) and Seam C17w (CV: 5630, TS: 2,3%, Ash 4,35%) which is generated from Pit 12B, seam C15w (CV: 5715, TS: 2,38%, Ash 3,07%) and seam C14c (CV: 6274, TS: 1,52%, Ash 2,75%) generated from Pit 19D. In fact, the results of coal blending for IMM EB MTS product is doesn't meet the needs of the consumer demand yet, because of the total sulfur produced average is 1,74%. so, there should be an improvement calculation for that matter.

The calculation improvement for IMM EB MTS is conducted using support of linier program simplex method with software POM-QM for windows. The calculation results using software POM-QM for windows has been found 4 (four) coal blending alternatives to produce IMM EB MTS products which is :

1. Alternative 1 = *Seam* C13bc (8210,52 ton) + *Seam* C17w (3789,47 ton)
2. Alternative 2 = *Seam* C13bc (8504,85 ton) + *Seam* C15w (3495,14 ton)
3. Alternative 3 = *Seam* C17w (2000 ton) + *Seam* C14c (10000 ton)
4. Alternative 4 = *Seam* C15w (1813,95 ton) + *Seam* C14c (10186,05 ton)