

ABSTRAK

Coal mining plan location situated in the village of Satui, Satui district, Tanah Bumbu, South Kalimantan.

The main source of mine water on Coal mining plans by PT. Arutmin Indonesia is rain water. Ground water generally do not contribute to the plan because the mine water discharge coal excavation 2 m above the water table. Average daily rainfall - the highest average in July was 106,3 mm and the average rainfall - the lowest average in September is 44,9 mm. The magnitude of the maximum rainfall (rainfall plans) of 156,4 mm/day with a rainfall intensity of 54,81 mm/hour.

Area rainfall run off into water providers on site mining plan is divided into 4 rain catchments.

- a. Rain Catchment area I, area = 0,53 km²
- b. Rain Catchment area II, area = 0,098 km²
- c. Rain Catchment area III, area = 0,04 km²
- d. Rain Catchment area IV, area = 0,088 km²

Channel planned is a combination of mine drainage and mine dewatering. Open channel located inside and outside the mine openings. Form which will be designed trapezoidal shape. Open channel dimensions are designed as follows:

- a. Channel 1 : a = 1.2 m, b = 1.2 m, B = 3 m, h = 1 m
- b. Channel 2 : a = 1 m, b = 1.2 m, B = 3 m, h = 1 m
- c. Channel 3 : a = 2 m, b = 2 m, B = 4 m, h = 2 m
- d. Channel 4 : a = 2 m, b = 2 m, B = 4 m, h = 2 m

Rain water that flowed through the open channel and then get into the sump. Sump are placed on the ground floor mining (pit bottom). Sump made rectangular with dimensions of 9 m long, 7 m wide, and a depth of 6 m. After the water is pumped into settling ponds. Brand Sykes Pumps used XH100SS using HDPE pipe made from hard rubber (High Density Poly Ethylene) with 8 inch diameter suction pipe and output pipe 6 inches diameter, maximum capacity of 288 m³/hour. Number of pumps used 1 piece.

Settling ponds designed rectangular. Dimensions of the settling ponds is 30 m long, 15 m wide, and a depth of 5 m.