ABSTRACT

The loading process of material onto a belt conveyors requiring serious attention. If the material isn’t delivered onto the belt at the belt speed, they may be a turbulence in the mass of material at the loading point and this velocity difference will cause an impact wear on the belt. The velocity flow of material from loading chute on the moving belt surface should be controled properly until the velocity flow is equal with belt velocity with the result that material can be directed at the midle of belt surface so that the load can be simetrically.

Skirtboard is one of important component on the belt conveyor mechanism. The factors that influence on the skirtboard dimension calculation is material characteristic, inclination angle, operational capacity and material characteristic of chute loading, belt and skirtboard. The dimension that will be analysed is skirtboard length, skirtboard height and the space between skirtboard that whole of that will be influence by the given factors above.

The purpose on the belt conveyor equipped with skirtboard is in order to prevent over tracking of the material that fall from feeder or silo and decrease and minimalizing dusting from flow of material. Beside that, with the use of skirtboard on belt conveyor so it will expected the uniform velocity between material and belt speed. The design of the skirtboard will influenced by chute loading dimension, belt widht, inclination angle and material characteristic. The major factor of chute loading dimension to the skirtboard dimension is the length. More and more long the length of chute loading line then it will need more longer of skirtboard length. Increasing of inclination angle will affect on the decrease of the skirtboard length. Material characteristic with friction coejicient as the prime factor can influencing the length of skirtboard, increasing of friction coejicient value will affect on decreasing of skirtboard length thats needed to make the velocity between material and belt uniformly. The dimension of belt width is not significantly influence on the skirtboard length. The influence can be feel on the increasing of belt conveyor operational capacity.

Key word: Belt conveyor, belt conveyor inclination angle, removed material characteristic, chute loading dimension, belt and skirtboard.