ABSTRAK

Dalam upaya peningkatan kualitas perkerasan jalan adalah dengan menggunakan aspal modifikasi polimer. Plastik alam merupakan polimer jenis elastoner dengan harga yang relatif murah. Sebagai produsen Plastik alam, Indonesia perlu mencari alternatif pemanfaatan Plastik tersebut, termasuk memanfaatkanya sebagai bahan modifikasi aspal. Penilitian ini dilakukan dengan membuat 6 jenis Aspal yang dimodifikasi Plastik Alam yang masing – masing dengan variasi Plastik terbesar 2%, 3%, 5%, dengan kadar Aspal Optimum 3,75%. Pada hasil Penelitian yang dilakuakn hasil dari penembahan Plastik HDPE Sebagai bahan tambah pada lapis *Asphalt concrete – Binder Course (AC-BC).* Nilai rata-rata (*Bulk Density)* mengunakan Kadar Aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba Plastik HDPE 2%,3%,5%, Dapat nilai maksimul sebesar 2,487 gr/cc. Nilai (Stabilitas/*Stabulity)* mengunakan Kadar Aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba plastik HDPE 2%,3%,5%, Dapat nilai maksimum sebesar1595,7 kg, Dan nilai minumum sebesar735,8 kg. Berdasarkan Spesifikasi Bina Marga 2018 nilai (*Stability)* minumum 800 kg, Nilai rata-rata *Void In Mineral Aggregate (VMA)* mengunakan Kadar Aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba Plastik HDPE 2%,3%,5%, Dapat nilai maksimum sebesar 20,501%, Dan nilai Minimum sebesar 7,92%. Berdasarkan Spesifikasi Bina Marga 2018 nilai (*VMA)* minimum 14%. Nilai rata-rata *Voids Filleds (VFA)* mengunakan Kadar Aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba Plastik HDPE 2%,3%,5%, Dapat nilai maksimum sebesar 136,86%, Dan nilai mimum sebesar 27,67%. Berdasarkan Spesifikasi Bina Marga 2018 nila (*VFA)* minimum 65%. Nilai rata-rata *Air Voids (VIM)* mengunakan kadar aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba Plastik HDPE 2%,3%,5%, Dapat nilai maksimum sebesar 14,83%, Dan nilai minimum sebesar -2,92%. Berdasarkan Spesifikasi Bian Marga 2018 nilai *(VIM)* minimum 3 – 5 %.

Nilai rata-rata (Kelelehan/*Flow)* mengunakan Kadar Aspal 3%,3,5%,4%,4,5%,5% pengunan bahan tamba Plastik HDPE 2%,3%,5%, Dapat nilai maksimum sebesar 3,56 mm, Dan niali minimum sebesar 1,67 mm. Berdasarkan Spesifikasi Bina Marga 2018 (*Flow)* minimum 2 – 4 mm.

Kata Kunci : Aspalh Concrete – Binder Course (AC – BC), Perkerasan Jalan, Plastik HDPE.

ABSTRACT

In an effort to improve the quality of road pavement, polymer modified Asphalt can be used. Natural Plastik is a type of elestomeric polymer with a relative cheap price. As a producer natural Plastic, Indonesia needs to find alternative user for Plastik, Including using it a modified Asphalt material. This research was counducted by making 6 types asphalt Modified wit Natural Plastic, With the largest Plastik variation of 2%,3%,5% With an Optimum Asphalt content 3,75%. In research conducted, the results adding HDPE Plastic as an additional material to the Asphalt – Binder Course (AC-BC). In the results conducted, the results of adding HDPE Plastik as an additional material to the Asphalt Concrete – Binder Course (AC-BC), average Value (Bulk Density) using Asphalt Content 3%,3,5%,4%,4,5%,5% using additional HDPE Plastic material 2%,3%,5%, can get maximum Value 2,487 gr/cc. Value (Stability) using Asphalt Content 3%,3,5%,4%,4,5%,5% using additional HDPE Plastic material 2%,3%,5%, Can get maximum Value 1595,7 kg, and minimum Value 735,8 kg. Based on the 2018 Bina Marga Specifications, the minimum value (Stability) is 800 kg. The average value of void in Mineral Areggate (VMA) using Asphalt Conetent of 3%,3,5%,4%,4,5%,5% using additional HDPE Plastik material of 2%,3%,5%, can get maximum Value 20.501%, and minimum Value 7,92%. Based On The 2018 Bina Marga Specifications, the minimum value (VMA) is 14%. The Average value of Voids Filleds (VFA) using Asphalt Content of 3%,3,5%,4%,4,5%,5%, using additional HDPE Plastic material of 2%,3%,5%, maximum Value 136,86%, and minimum Value27,67%. Based On The 2018 Bina Marga Specifications, the minimum value (VFA) is 65%. The average value of Air Voids (VIM) using Aspahlt content of 3%,3,5%,4%,4,5%,5% using additional HDPE Plastic material 2%,3%,5% can get a maximum value of 14,83% and minumum value of -2,92%. Based On The 2018 Bina Marga Specifications, the minimum value (VIM) is a 3 -5 %.

The average value (Flow) using Asphalt Content 3%,3,5%,4%,4,5%,5%, using additional HDPE Plastic material 2%,3%,5%, Can get a maximum value of 3,56 mm, and a minimum value of 1,67 mm. Based On The 2018 Bina Marga Specifications (Flow) minimum 2 – 4 mm.

Keywords : Aspalt Concrete – Binder Course (AC – BC), road paving, HDPE Plastic.