ABSTRAK

ANALISIS PERBANDINGAN STABILITAS DAN *FLOW* CAMPURAN ASPAL SHELL, EXXON DAN PERTAMINA BERDASARKAN PENGUJIAN *MARSHALL*

Radius Pranoto, Dimas Ariezky Susetyo, Branhar Gatfir, Risqi Alfarisi

Pentingnya Pengujian Stabilitas dan *Flow* dalam Menentukan Kualitas Campuran Aspal Panas untuk menentukan kualitas aspal karena stabilitas menunjukkan seberapa baik campuran aspal menahan beban sebelum runtuh, dan *flow* menunjukkan besarnya penurunan atau deformasi yang terjadi pada lapis aspal beton akibat menahan beban. Atas dasar hal tersebut, penelitian karakteristik sifat fisik aspal dari berbagai *quarry* menjadi relevan untuk memberikan wawasan tentang adaptabilitas aspal terhadap kondisi lingkungan tertentu. Penelitian ini dilakukan di laboratorium CV Global Engineering. Pengujian yang akan dilakukan dalam penelitian ini adalah pengujian stabilitas dan *flow* berdasarkan metode *marshall* dengan pengujian-pengujian lainnya seperti daktilitas, viskositas, titik lembek, titik nyala dan titik bakar, penetrasi, serta berat jenis aspal, dan juga mengetahui apakah aspal-aspal tersebut memenuhi atau tidak memenuhi spesifikasi yang disyaratkan sesuai dengan Standar Nasional Indonesia (SNI). Berdasarkan hasil pengujian yang dilakukan terhadap aspal Shell, aspal Exxon, aspal Pertamina serta aspal dari berbagai PT, dapat disimpulkan bahwasanya Semua *quarry* aspal yang diuji peneliti memenuhi spesifikasi Standar Nasional Indonesia SNI 2432:2011 dan juga memenuhi SNI 06-2489-1991 atau ASTM D1559.

KATA KUNCI : Metode *Marshall*, Aspal, Stabilitas, *Flow, Quarry*.

ABSTRACT

A Comparative Analysis of Asphalt Shell, Exxon, and Pertamina Mixture Stability and Flow Characteristics Using the Marshall Test Method

Radius Pranoto, Dimas Ariezky Susetyo, Branhar Gatfir, Risqi Alfarisi

The Significance of Stability and Flow Testing in Assessing the Quality of Hot Mix Asphalt The evaluation of hot mix asphalt quality critically depends on the assessment of its stability and flow characteristics. Stability indicates the ability of the asphalt mixture to resist applied loads before structural failure occurs, whereas flow represents the degree of deformation experienced by the asphalt concrete layer under loading conditions. In this context, the investigation of the physical properties of asphalt sourced from various quarries becomes essential to provide insights into its adaptability to different environmental conditions. This study was conducted at the laboratory of CV Global Engineering. The testing procedures employed include Marshall stability and flow tests, supplemented by additional evaluations such as ductility, viscosity, softening point, flash point, fire point, penetration, and specific gravity assessments. The objective is to determine whether the asphalt samples comply with the specifications set forth by the Indonesian National Standards (SNI). Based on the test results of Shell asphalt, Exxon asphalt, Pertamina asphalt, and asphalt from various suppliers, it can be concluded that all tested asphalt sources conform to the requirements of SNI 2432:2011 and also meet the criteria outlined in SNI 06-2489-1991 or ASTM D1559.

KEY WORDS : *Marshall method, Asphalt, Stability, Flow, Quarry.*