PERENCANAAN PENJADWALAN JEMBATAN MENGGUNAKAN METODE *PRECEDENCE DIAGRAM METHODE* (PDM)

(Studi Kasus: Jembatan *Mainroad* Sayung pada Jalan Tol Semarang-Demak)

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ABSTRAK

Pada pembangunan jembatan Mainroad Sayung yang menggunakan beton prategang pada balok PC-I *Girder*. Terdapat pemasangan balok girder ke atas abutment atau pilar biasa disebut *Erection*. Pemilihan metode *erection* harus sesuai dengan kondisi sekitar area jembatan. Penelitian ini bertujuan untuk mengetahui bagaimana metode pelaksanaan pekerjaan *Launcher Gantry*, bagaimana hubungan antar pekerjaaan dan pengaruh, bagaimana hasil penjadwalan terhadap lintasan kritis pada proyek jembatan *Mainroad* Sayung dengan menggunakan metode *Precedence Diagramming Method* (PDM). Dengan menggunakan kurva S proyek sebagai acuan dan menganalisis mengggunakan Ms. *Project.* Berdasarkan hasil analisis penjadwalan yang didapatkan pekerjaan yang dilalui jalur kritis proyek jembatan *Mainroad* Sayung pada Jalan Tol Semarang Demak sebanyak 15 pekerjaan yang meliputi Bitumen Lapis Resap Pengikat (Prime Coat), Pekerjaan no.52, Bitumen Lapis Resap Pengikat (Tack Coat), Pekerjaan no.53, Asphalt Concrete Binder Course, Pekerjaan no.54, Beton Struktur Kelas A-1-3 (Slab SOP Precast) no. 65, Beton Struktur Kelas A-1-3 (Kepala Pier Beton Pratekan) no. 66, Beton Struktur Kelas B-1-2 (Diafragma Beton bertulang) no. 68, Beton Struktur Kelas B-1-6 (Beton Penghalang/Barrier/Parapet) no. 73, Steel Deck (Bekisting Lantai Jembatan) no. 76, Gelagar PCI Bentang Nominal 15,8 m, H= 1,7 m Pemasangan, no.78, Gelagar PCI Bentang Nominal 25,8 m, H= 1,7 m Pemasangan, no.81, Gelagar PCI Bentang Nominal 30,8 m, H= 1,7 m Pemasangan, no.85, Gelagar PCI Bentang Nominal 35,8 m, H= 1,7 m Pemasangan, no.87, Elastomeric Bearing Pad 450 x 500 x 60 (Mov.) no, 98, Elastomeric Bearing Pad 450 x 500 x 60 (Fix.) no, 99, Angkur SOP no. 105.

Kata kunci: *Precedence Diagramming Method* (PDM), Penjadwalan Proyek, Launcher

BRIDGE SCHEDULING PLANNING USING THE PRECEDENCE DIAGRAM METHOD (PDM)

(Case Study: Sayung Mainroad Bridge on the Semarang-Demak Toll Road)

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ABSTRACT

The construction of the Mainroad Sayung bridge uses prestressed concrete on PC-I Girder beams. There is installation of girder beams onto abutments or pillars which are commonly called Erections. The choice of erection method must be in accordance with the conditions around the bridge area. This study aims to find out the method of carrying out the Gantry Launcher work, what is the relationship between work and influence, how is the result of scheduling the critical path on the Mainroad Sayung bridge project using the Precedence Diagramming Method (PDM) using the project's S curve as a reference and analyzing using Ms Project. Based on the results of the analysis, 15 jobs were obtained for the scheduling that passed the critical path of the Mainroad Sayung bridge project on the Semarang Demak Toll Road which included Prime Coat Bitumen, Job No. 52, Tack Coat Bitumen, Work no.53, Asphalt Concrete Binder Course, Work no.54, Structural Concrete Class A-1-3 (Slab SOP Precast) no. 65, Structural Concrete Class A-1-3 (Prestressed Concrete Pier Head) no. 66, Structural Concrete Class B-1-2 (Reinforced Concrete Diaphragm) no. 68, Structural Concrete Class B-1-6 (Concrete Barrier/Parapet) no. 73, Steel Deck (Bridge Floor Formwork) no. 76, PCI girder Nominal Span 15.8 m, H= 1.7 m Installation, no.78, PCI girder Nominal Span 25.8 m, H= 1.7 m Installation, no.81, PCI girder Nominal Span 30, 8 m, H= 1.7 m Mounting, no.85, PCI Girder Nominal Span 35.8 m, H= 1.7 m Mounting, no.87, Elastomeric Bearing Pad 450 x 500 x 60 (Mov.) no, 98, Elastomeric Bearing Pad 450 x 500 x 60 (Fix.) no, 99, Angkur SOP no. 105.

***Keywords**: Precedence Diagramming Method (PDM), Project Scheduling, Launcher*