
ABSTRAK

ANALISIS PRODUKTIVITAS ALAT BERAT PADA PEKERJAAN GALIAN DAN TIMBUNAN PROYEK JALAN MANDALIKA URBAN AND TOURISM INFRASTRUKTURE PROJECT PACKAGE 1 (Ruas QR4 STA 22+000 S/d 22+575)

(Studi Kasus)

**Ruben Kocu
2112181125**

Ir. H. Chandra Afriade Siregar, ST. MT.

Paket I Antara ITDC Dengan Joint Venture PT. Pembangunan Perumahan (Persero) – PT Wijaya Karya (Persero) – PT Bunga Raya Lestari (BRL) Melalui Kontrak Ini, PT. PP-WIKA-BRL (KSO) Akan Segera Memulai Pekerjaan Konstruksi Infrastruktur Dasar Di Area Barat Dan Tengah The Mandalika.

Kontrak Paket I Meliputi Pekerjaan Infrastruktur Dasar Antara Lain Pekerjaan Jaringan Jalan Lengkap Dengan Drainase, Box Utilitas, Lanskap Dan Penerangan Jalan, Pekerjaan Normalisasi Sungai Berikut Tempat Evakuasi Sementara Dan Pintu Air, Pekerjaan Pembangunan Fasilitas Amenity Core Dan Gerbang Kawasan, Serta Pembangunan Jaringan Pipa Air Bersih, Jaringan Pipa Air Kotor, Dan Jaringan Pipa Air Irigasi.

Dari Sekian Pekerjaan Ini Akan di Bahas Oleh Peneliti Terkait Proses Pekerjaan Ruas Jalan Yang Menghubungkan Ke Sirkuit Mandalika Dengan Pengerjaan Produktivitas Alat Berat Pada Pekerjaan Galian Dan Timbunan Dengan Waktu Pelaksanaan Pekerjaan Tanah Dilapangan Menggunakan Waktu Total Yaitu 35 Hari Kalender Untuk Tanah Dipindahkan, Sedangkan Tanah Yang Dipadatkan Yaitu 73 Hari Kalender. Pelaksanaan Pekerjaan Pembuatan Badan Jalan Sirkuit Mandalika Penggunaan Alat Berat. Pemilihan Dan Penentuan Alat Yang Tepat Agar Peralatan Dapat Beroperasi Secara Efektif.

Penelitian Ini Menggunakan Teori Produktivitas Alat Berat, Penentu Jenis Dan Jumlah Alat Sesuai Dengan Medan Lokasi, Jenis Tanah Yang Akan Digali Dan

Dipadatkan.

Komposisi Alat Berat Yang Dipakai Akan Mempengaruhi Jumlah Alat Dan Waktu Pekerjaan Alat Berat Yang Optimum Pada Pelaksanaan Pekerjaan Tanah Jalan Mandalika Sepanjang 650 Meter Pada (Ruas QR4 STA 22+000 S/D 22+575) Jam Kerja Alat Berat Menggunakan Jam Kerja Normal Yaitu 10 Jam, Metode Perhitungan Yang Dilakukan Dengan Cara Trial and Error. Dari Trial Perhitungan Produksi Alat Berat Dengan Mengambil Dua Alternatif.

Hasil Perolehan Jumlah Alat Dan Waktu Optimum Yang Diperlukan Untuk Penyelesaian Pekerjaan Tanah Didapatkan Alternative Kedua Yaitu Pada Tanah Dipindahkan 8 Unit Excavator, 5 Unit Bulldozer, Dan 16 Unit Dump Truck Waktu Penyelesaiannya 28 Hari/280 Jam Kerja, Sedangkan Tanah Dipadatkan 6 Unit Bulldozer, 5 Unit Vibrator Roller, Dan 8 Unit Dump Truck Waktu Penyelesaiannya 54 Hari/540 Jam Kerja. Sehingga Pekerjaan Mengalami Percepatan

7 Hari Dari Pekerjaan Tanah Dipindahkan Dan Tanah Dipadatkan 19 Hari Dari Pekerjaan Yang Di Lapangan.

Kata – Kunci: Produktivitas Alat Berat, Komposisi Alat Berat, Waktu Kerja Alat

ABSTRACT

ANALYSIS OF HEAVY EQUIPMENT PRODUCTIVITY ON QUICKING AND HEAD WORKS MANDALIKA URBAN AND TOURISM INFRASTRUKTURE PROJECT PACKAGE 1 PROJECT (Ruas QR4 STA 22+000 S/d 22+575)

(Case study)

Ruben Kocu

2112181125

Ir. H. Chandra Afriade Siregar, ST. MT.

Package I Between ITDC And Joint Venture PT. Housing Development (Persero) – PT Wijaya Karya (Persero) – PT Bunga Raya Lestari (BRL) Through This Contract, PT. PP-WIKA-BRL (KSO) Will Soon Begin Construction Of Basic Infrastructure In The West And Central Areas Of The Mandalika.

The Package I Contract Covers Basic Infrastructure Works Including Road Network Work Complete With Drainage, Utility Boxes, Landscape And Street Lighting, River Normalization Work Along With Temporary Evacuation Sites And Sluice Gates, Construction Of Amenity Core Facilities And Area Gates, As Well As Construction Of Clean Water Pipelines, Sewerage Pipelines, And Irrigation Water Pipelines.

Of All This Work, Researchers Will Discuss The Process Of Road Work Connecting To The Mandalika Circuit With Heavy Equipment Productivity Work On Excavation And Embankment Work With The Time Of Carrying Out Earthworks In The Field Using A Total Time Of 35 Calendar Days For The Soil To Be Moved, While The Compacted Soil I.E. 73 Calendar Days. Implementation Of Work On The Construction Of The Mandalika Circuit Road Using Heavy Equipment. Selection And Determination Of The Right Tool So That The Equipment Can Operate Effectively. This Study Uses The Theory Of Heavy Equipment Productivity, Determining The Type And Number Of Equipment According To The Terrain, The

Type Of Soil To Be Excavated And Compacted.

The Composition Of The Heavy Equipment Used Will Affect The Number Of Tools And The Optimum Working Time Of Heavy Equipment In The

Implementation Of The 650 Meter Mandalika Road Earthworks At (Ruas QR4 STA 22+000 S/d 22+575) The Working Hours Of Heavy Equipment Use Normal Working Hours Of 10 Hours, Calculation Method Is Done By Trial And Error. From The Trial Calculation Of Heavy Equipment Production By Taking Two Alternatives. The Results Of The Acquisition Of The Number Of Tools And The Optimum Time Required For The Completion Of Earthworks Obtained A Second Alternative, Namely The Land Was Moved 8 Units Of Excavators, 5 Units Of Bulldozers, And 16 Units Of Dump Trucks, The Completion Time Was 28 Days/280 Hours Of Work, While The Soil Was Compacted 6 Units Of Bulldozers, 5 Vibrator Roller Units, And 8 Units Of Dump Trucks, The Completion Time Is 54 Days/540 Working Hours. So That Work Accelerates 7 Days Of Earthworks

Being Removed And Soil Compacted 19 Days Of Working In The Field.

Keywords: Productivity Of Heavy Equipment, Composition Of Heavy Equipment, Working Time Of Equipment
