# DAFTAR ISI

[*ABSTRACT* viii](#_Toc144748715)

[KATA PENGANTAR ix](#_Toc144748716)

[DAFTAR ISI xi](#_Toc144748717)

[DAFTAR GAMBAR xiii](#_Toc144748718)

[DAFTAR TABEL xiv](#_Toc144748719)

[DAFTAR RUMUS xv](#_Toc144748720)

[BAB I 1](#_Toc144748721)

[PENDAHULUAN 1](#_Toc144748722)

[A. LATAR BELAKANG 1](#_Toc144748723)

[B. IDENTIFIKASI MASALAH 2](#_Toc144748724)

[C. RUMUSAN MASALAH 2](#_Toc144748725)

[D. MAKSUD DAN TUJUAN 3](#_Toc144748726)

[E. BATASAN MASALAH 3](#_Toc144748727)

[F. SISTEMATIKA PENULISAN 3](#_Toc144748728)

[BAB II 6](#_Toc144748729)

[GAMBARAN UMUM 6](#_Toc144748730)

[A. KONDISI GEOGRAFI PROVINSI SULAWESI SELATAN 6](#_Toc144748731)

[B. KONDISI WILAYAH ADMINISTRATIF DAERAH PROVINSI SULAWESI SELATAN 7](#_Toc144748732)

[C. KONDISI DEMOGRAFI DAERAH PROVINSI SULAWESI SELATAN 8](#_Toc144748733)

[D. KONDISI WILAYAH STUDI 10](#_Toc144748734)

[E. KONDISI EKSISTING 22](#_Toc144748735)

[BAB III 25](#_Toc144748736)

[KAJIAN PUSTAKA 25](#_Toc144748737)

[A. ASPEK LEGALITAS 25](#_Toc144748738)

[B. ASPEK TEKNIS 31](#_Toc144748739)

[BAB IV 35](#_Toc144748740)

[METODE PENELITIAN 35](#_Toc144748741)

[A. ALUR PIKIR 35](#_Toc144748742)

[B. BAGAN ALIR PENELITIAN 37](#_Toc144748743)

[C. TEKNIK PENGUMPULAN DATA 38](#_Toc144748744)

[D. TEKNIK ANALISIS DATA 39](#_Toc144748745)

[E. LOKASI DAN JADWAL PENELITIAN 39](#_Toc144748746)

[BAB V 40](#_Toc144748747)

[ANALISA DAN PEMBAHASAN 40](#_Toc144748748)

[A. ANALISIS KEBUTUHAN SARANA 40](#_Toc144748749)

[B. ANALISIS MENGHITUNG JUMLAH FREKUENSI KA 46](#_Toc144748750)

[C. ANALISIS KETERSEDIAAN SARANA SIAP GUNA 47](#_Toc144748751)

[BAB VI 51](#_Toc144748752)

[KESIMPULAN DAN SARAN 51](#_Toc144748753)

[A. KESIMPULAN 51](#_Toc144748754)

[B. SARAN 51](#_Toc144748755)

[DAFTAR PUSTAKA 53](#_Toc144748756)

# DAFTAR GAMBAR

[**Gambar II. 1** Peta Administrasi Sulawesi Selatan 7](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723894)

[**Gambar II. 2** Grafik Jumlah Penduduk Sulawesi Selatan 9](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723895)

[**Gambar II. 3** Peta Wilayah Studi Lintas Maros – Garongkong 10](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723896)

[**Gambar II. 4** Bantalan Beton KM 13](#_Toc143723897)

[**Gambar II. 5** Bantalan Kayu KM 15](#_Toc143723898)

[**Gambar II. 6** Penambat Fast-Clip KM 17](#_Toc143723899)

[**Gambar II. 7** Penambat E-Clip KM 17](#_Toc143723900)

[**Gambar II. 8** Lebar Jalan Rel 1435 mm 19](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723901)

[**Gambar II. 9** Pelabuhan Garongkong 22](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723902)

[**Gambar II. 10** PT Semen Tonasa 23](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723903)

[**Gambar III. 1** Lokomotif CC 205 28](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143868355)

[**Gambar III. 2** Gerbong Tangki (GK) 29](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143868356)

[**Gambar III. 3** Proses transportasi semen curah 30](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143868357)

[**Gambar V. 1** Waktu Peredaran Kereta Api 46](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143723906)

# DAFTAR TABEL

[**Tabel II. 1** Data kondisi jalan rel lintas Maros - Garongkong 12](#_Toc143869224)

[**Tabel II. 2** Data bantalan rel lintas Maros - Garongkong 15](#_Toc143869225)

[**Tabel II. 3** Data penambat rel lintas Maros - Garongkong 18](#_Toc143869226)

[**Tabel II. 4** Data lengkung rel lintas Maros - Garongkong 20](#_Toc143869227)

[**Tabel II. 5** Data kelas jalan rel lintas Maros - Garongkong 21](#_Toc143869228)

[**Tabel III. 1** Data teknik lokomotif 32](#_Toc143869229)

[**Tabel III. 2** Data perhitungan gaya tarik lokomotf 41](#_Toc143869230)

[**Tabel III. 3** Perhitungan hambatan lokomotif dan gerbong 43](#_Toc143869231)

[**Tabel III. 4** Perhitungan beban tarik loko dan jumlah gerbong 44](#_Toc143869232)

[**Tabel III. 5** Perhitungan secara keseluruhan 44](#_Toc143869233)

[**Tabel III. 6** Perhitungan ketersediaan sarana 49](#_Toc143869234)

# DAFTAR RUMUS

[**Rumus III. 1** Gaya Tarik lokomotif 31](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869235)

[**Rumus III. 2** Hambatan lokomotif I 32](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869236)

[**Rumus III. 3** Hambatan spesifik lokomotif 33](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869237)

[**Rumus III. 4** Hambatan lokomotif II 33](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869238)

[**Rumus III. 5** Hambatan gerbong 33](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869239)

[**Rumus III. 6** Beban tarik lokomotif 34](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869240)

[**Rumus III. 7** Jumlah rangkaian yang dapat ditarik lokomotif 34](file:///F:\Data%20E\KULIAH\PTDI-STTD\MTP%203.2\PKL%20SULSEL%202023\DATA%20KKW\BISMILLAH%20DONE\BISMILLAH_PRINT_DRAFT%20KKW.docx#_Toc143869241)