

Daftar Pustaka

- Annita, Raih. 2019. *Sistem Informasi Beban Pekerjaan Pemotongan dan Pengelasan Konstruksi Lambung Kapal Ferry Ro-Ro 300 GT*. Skripsi Program Studi Strata Satu Departemen Teknik Perkapalan Fakultas Teknik. Skripsi. Makassar: Universitas Hasanuddin.
- Azhar Susanto. 2002. *Sistem Informasi Manajemen*, Edisi 2. Lingga Jaya Bandung
- Bagui, Sikha, dan Earp, Richard. 2003. *Database Design Using Entity-Relationship Diagrams*. Auerbach Publications : Florida.
- Eyres, D.J. 2001. *Ship Construction, Fifth Edition*. Woburn: Butterworth-Heinenmann.
- Gaol, Chr. Jimmy L. 2008. *Sistem Informasi Manajemen: Pemahaman dan Aplikasi*. PT Grasindo.
- Handoko, T. (1991). *Manajemen. Personalia dan Sumber daya Manusia*. Penerbit BPFY Yogyakarta : Yogyakarta
- Lembang, Clara Ampu. 2020. *DESAIN INTEGRASI SISTEM INFORMASI MATERIAL PRODUKSI KAPAL DI GALANGAN KAPAL PT (Persero) INDUSTRI KAPAL INDONESIA MAKASSAR*. Skripsi Program Studi S1 Teknik Perkapalan Fakultas Teknik Universitas Hasanuddin.
- Ma'ruf. B. (2014a). *Inovasi Teknologi Untuk Mendukung Program Tol Laut dan Daya saing Industri kapal nasional*, Seminar Nasional Sains dan Teknologi Terapan II, Insitut Teknologi Adi Tama, Surabaya
- Nasya G, Rahmatia. 2018. *Perencanaan Jaringan Kerja Perakitan Blok Lambung Kapal Ferry Roro 750 GT yang Terintegrasi dengan Sistem Perpipa-an Bahan Bakar dan Minyak Pelumas*. Skripsi Program Studi Strata Satu Departemen Teknik Perkapalan Fakultas Teknik. Skripsi. Makassar: Universitas Hasanuddin.
- Sucipto. 2017. *Perancangan Active Database Sistem pada Sistem Informasi Pelayanan Harga Pasar*. Universitas Nusantara PGRI : Kediri.
- Sukoharsono, Eko Ganis. 2008. *Sistem Informasi Manajemen*. Surya Pena Gemilang : Malang.
- Wahyuddin. 2011. *Buku Ajar Teknologi Produksi Kapal*. Makassar: Lembaga Kajian Pengembangan Pendidikan Universitas Hasanuddin.

Yuli A, Rahmawati. 2007. *Penerapan Analisis Jaringan Kerja Untuk Optimalisasi Perencanaan Produksi Dengan Metode Jalur Kritis*. Skripsi. Yogyakarta: Universitas Sanata Dharma.

LAMPIRAN

Lampiran 1 Tabel *Schedule* Perakitan Blok

| PRE | Project Name | Start Date | Workdays | End Date |
|-----|--|--|----------|-----------|
| 0 | Pembangunan Block NB-002-2 | | | |
| 1 | Fabrikasi | | | |
| 1.1 | Fabrikasi | 1/10/2022 | 1 | 1/10/2022 |
| 2 | 1 | Pembangunan Panel Deck | | |
| 2.1 | 1.1 Sub Assembly Plat Deck | 1/11/2022 | 3 | 1/13/2022 |
| 2.2 | 2.1 Sub Assembly Transver Deck Beam dan Longitudinal Deck Beam | 1/14/2022 | 6 | 1/19/2022 |
| 2.3 | 2.2 Sub Assembly Sub Panel Deck 1 dan 2 & Pilar | 1/20/2022 | 2 | 1/21/2022 |
| 3 | 1 | Pembangunan Panel Bottom | | |
| 3.1 | 1.1 Perakitan Sub Panel Bottom 1 | 1/22/2022 | 13 | 2/3/2022 |
| 3.2 | 3.1 Perakitan Sub Panel Bottom 2 | 2/4/2022 | 10 | 2/13/2022 |
| 3.3 | 3.1 Perakitan Sub Panel Bottom 3 | 2/14/2022 | 9 | 2/22/2022 |
| 3.4 | 3.3 Sub Assembly Sub Panel Bottom 1,2 dan 3 | 2/23/2022 | 3 | 2/25/2022 |
| 4 | 1 | Pembangunan Panel Sisi Starboard | | |
| 4.1 | 1.1 Perakitan Sub Panel SB 1 | 2/26/2022 | 2 | 2/27/2022 |
| 4.2 | 4.1 Perakitan Sub Panel SB 2 | 2/28/2022 | 4 | 3/3/2022 |
| 4.3 | 4.2 Perakitan Sub Panel SB 3 | 3/4/2022 | 1 | 3/4/2022 |
| 4.4 | 4.3 Sub Assembly Sub Panel 1,2 dan 3 | 3/5/2022 | 1 | 3/5/2022 |
| 5 | 1 | Pembangunan Panel Sisi Portside | | |
| 5.1 | 1.1 Perakitan Sub Panel PS 1 | 3/6/2022 | 2 | 3/7/2022 |
| 5.2 | 5.1 Perakitan Sub Panel PS 2 | 3/8/2022 | 4 | 3/11/2022 |
| 5.3 | 5.2 Perakitan Sub Panel PS 3 | 3/12/2022 | 1 | 3/12/2022 |
| 5.4 | 5.3 Perakitan Sub Panel PS 1, 2, & 3 | 3/13/2022 | 1 | 3/13/2022 |
| 6 | 3,4,5 | Assembly Panel Bottom dan Dua Panel Sisi | | |
| 6.1 | 3.4 Assembly Panel Bottom dan Panel Sisi | 3/14/2022 | 4 | 3/17/2022 |
| 7 | 6 | Assembly Panel Deck | | |
| 7.1 | 6.1 Assembly Panel Deck | 3/18/2022 | 1 | 3/18/2022 |

Lampiran 2 PWBS pada blok HS5

| ID Material | Nama Material | Jenis Material | Nama Panel | Kode | Frame | Posisi | Length | Lebar | tebal | Tinggi | Jumlah | Luasan | Volume | Berat |
|-------------------------------|------------------|----------------|-----------------|------|-------|--------|--------|-------|-------|--------|--------|--------|----------|--------------|
| NB-002-2-10PL- PB-BP-1P | Plat Bottom 10PL | Baja | Panel Bottom PB | PB | BP | 1P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PB-BP-2P | Plat Bottom 10PL | Baja | Panel Bottom PB | PB | BP | 2P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PB-BP-1S | Plat Bottom 10PL | Baja | Panel Bottom PB | PB | BP | 1P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PB-BP-2S | Plat Bottom 10PL | Baja | Panel Bottom PB | PB | BP | 2P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PB-BP-CL | Plat Bottom 10PL | Baja | Panel Bottom PB | PB | BP | CL | 3000 | 1600 | 10 | | | | 48000000 | 0.35325 |
| NB-002-2-8PL-FR1- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 1 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR2- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 2 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR3- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 3 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR5- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 5 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR6- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 6 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR7- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 7 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR9- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 9 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR10- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 10 | 1P | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR1- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 1 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR2- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 2 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR3- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 3 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR5- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 5 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR6- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 6 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR7- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 7 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR9- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 9 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR10- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 10 | 1S | 1400 | 750 | 8 | | | | 8400000 | 0.06594 |
| NB-002-2-8PL-FR4- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 4 | 1P | 1488 | 1426 | 8 | | | | 16975104 | 0.1332545664 |
| NB-002-2-8PL-FR8- PB-1P | Plat 8PL | Baja | Panel Bottom PB | PB | 8 | 1P | 1488 | 1426 | 8 | | | | 16975104 | 0.1332545664 |
| NB-002-2-8PL-FR4- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 4 | 1S | 1488 | 1426 | 8 | | | | 16975104 | 0.1332545664 |
| NB-002-2-8PL-FR8- PB-1S | Plat 8PL | Baja | Panel Bottom PB | PB | 8 | 1S | 1488 | 1426 | 8 | | | | 16975104 | 0.1332545664 |
| NB-002-2-RF-AB6PL-FR1- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 1 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR2- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 2 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR3- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 3 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR5- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 5 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR6- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 6 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR7- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 7 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR9- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 9 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR10- PB-2P | Profil AB 6PL | Baja | Panel Bottom PB | PB | 10 | 2P | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR1- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 1 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR2- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 2 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR3- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 3 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR5- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 5 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR6- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 6 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR7- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 7 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR9- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 9 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |
| NB-002-2-RF-AB6PL-FR10- PB-2S | Profil AB 6PL | Baja | Panel Bottom PB | PB | 10 | 2S | 75 | 75 | 6 | 2621 | | | 2264544 | 0.0177766704 |

| | | | | | | | | | | | | | | |
|-------------------------------|-------------------|------|-----------------|----|----|----|------|------|---|------|--|--|----------|--------------|
| NB-002-2-8PL-FR1- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 1 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR2- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 2 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR3- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 3 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR5- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 5 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR6- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 6 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR7- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 7 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR9- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 9 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR10- PB-2P | Plat 8PL | Baja | Panel Bottom PB | PB | 10 | 2P | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR1- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 1 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR2- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 2 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR3- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 3 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR5- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 5 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR6- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 6 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR7- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 7 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR9- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 9 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-8PL-FR10- PB-2S | Plat 8PL | Baja | Panel Bottom PB | PB | 10 | 2S | 1200 | 440 | 8 | | | | 4224000 | 0.0331584 |
| NB-002-2-ST-AB6PL-FR1- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 1 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR2- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 2 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR3- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 3 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR5- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 5 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR6- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 6 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR7- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 7 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR9- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 9 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR10- PB-2P | Profil AB6PL | Baja | Panel Bottom PB | PB | 10 | 2P | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-8PL-FR4- PB-3P | Plat LH 8PL | Baja | Panel Bottom PB | PB | 4 | 3P | 1993 | 1360 | 8 | | | | 21683840 | 0.170218144 |
| NB-002-2-8PL-FR8- PB-3P | Plat LH 8PL | Baja | Panel Bottom PB | PB | 8 | 3P | 1993 | 1360 | 8 | | | | 21683840 | 0.170218144 |
| NB-002-2-8PL-FR4- PB-3S | Plat LH 8PL | Baja | Panel Bottom PB | PB | 4 | 3S | 1993 | 1360 | 8 | | | | 21683840 | 0.170218144 |
| NB-002-2-8PL-FR8- PB-3S | Plat LH 8PL | Baja | Panel Bottom PB | PB | 8 | 3S | 1993 | 1360 | 8 | | | | 21683840 | 0.170218144 |
| NB-002-2-ST-AB6PL-FR1- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 1 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR2- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 2 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR3- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 3 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR5- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 5 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR6- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 6 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR7- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 7 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR9- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 9 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-ST-AB6PL-FR10- PB-2S | Profil AB6PL | Baja | Panel Bottom PB | PB | 10 | 2S | 75 | 75 | 6 | 1137 | | | 982368 | 0.0077115888 |
| NB-002-2-8PL- PB-BP-3P | Inner Bottom Plat | Baja | Panel Bottom PB | PB | BP | 3P | 3000 | 1243 | 8 | | | | 29832000 | 0.2341812 |
| NB-002-2-8PL- PB-BP-3S | Inner Bottom Plat | Baja | Panel Bottom PB | PB | BP | 3S | 3000 | 1243 | 8 | | | | 29832000 | 0.2341812 |
| NB-002-2-8PL- PB-BP-2S | Inner Bottom Plat | Baja | Panel Bottom PB | PB | BP | 2S | 3000 | 1500 | 8 | | | | 36000000 | 0.2341812 |
| NB-002-2-8PL- PB-BP-CL | Inner Bottom Plat | Baja | Panel Bottom PB | PB | BP | CL | 3000 | 1500 | 8 | | | | 36000000 | 0.2341812 |
| NB-002-2-8PL- PB-BP-2P | Inner Bottom Plat | Baja | Panel Bottom PB | PB | BP | 2P | 3000 | 1500 | 8 | | | | 36000000 | 0.2341812 |
| NB-002-2-8PL-FR1A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 1 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR2A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 2 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR3A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 3 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR5A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 5 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR6A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 6 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |

| | | | | | | | | | | | | | | |
|---------------------------|------------------------|------|-----------------|----|----|----|------|------|----|--|--|--|-----------|--------------|
| NB-002-2-8PL-FR7A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 7 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR9A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 9 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR10A- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 10 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR1B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 1 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR2B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 2 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR3B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 3 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR5B PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 5 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR6B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 6 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR7B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 7 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR9B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 9 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR10B- PB-2P | Bracket 8PL | Baja | Panel Bottom PB | PB | 10 | 2P | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR1A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 1 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR2A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 2 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR3A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 3 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR5A PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 5 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR6A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 6 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR7A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 7 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR9A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 9 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR10A- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 10 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR1B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 1 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR2B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 2 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR3B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 3 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR5B PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 5 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR6B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 6 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR7B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 7 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR9B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 9 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-FR10B- PB-2S | Bracket 8PL | Baja | Panel Bottom PB | PB | 10 | 2S | 150 | 150 | 8 | | | | 180000 | 0.001413 |
| NB-002-2-8PL-IBP- PB-2P | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 2S | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-8PL-IBP- PB-3P | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 3S | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-8PL-IBP- PB-2S | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 2S | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-8PL-IBP- PB-3S | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 3S | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-8PL-IBP- PB-CL1 | Plat 8 (866 x 3000) | Baja | Panel Bottom PB | PB | | CL | 3000 | 866 | 8 | | | | 20784000 | 0.1631544 |
| NB-002-2-8PL-IBP- PB-CL2 | Plat 8 (866 x 3000) | Baja | Panel Bottom PB | PB | | CL | 3000 | 866 | 8 | | | | 20784000 | 0.1631544 |
| NB-002-2-8PL-IBP- PB-2P | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 2P | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-8PL-IBP- PB-3P | Plat 8 (1500x3000) | Baja | Panel Bottom PB | PB | | 3P | 3000 | 1500 | 8 | | | | 36000000 | 0.2826 |
| NB-002-2-10PL-BP- PB-1S | Plat 10 (1500x6000) BP | Baja | Panel Bottom PB | PB | | 1S | 6000 | 1500 | 10 | | | | 90000000 | 0.7065 |
| NB-002-2-10PL-BP- PB-2S | Plat 10 (800x6000) BP | Baja | Panel Bottom PB | PB | | 2S | 6000 | 800 | 10 | | | | 48000000 | 0.3768 |
| NB-002-2-10PL-BGP- PB-3S | Plat 10 (Bilga) | Baja | Panel Bottom PB | PB | | 3S | 1000 | | 10 | | | | 117973388 | 0.9260910958 |
| NB-002-2-8PL- PB-SG-1P | Side Girder 8PL | Baja | Panel Bottom PB | PB | SG | CL | 6000 | 691 | 8 | | | | 33168000 | 0.2603688 |
| NB-002-2-9PL- PB-SG-3P | Side Girder 9PL | Baja | Panel Bottom PB | PB | SG | 2P | 6000 | 691 | 9 | | | | 37314000 | 0.2929149 |

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|--------------------------|-------------------------|------|-----------------|----|----|------|------|------|----|--|--|--|-----------|--------------|
| NB-002-2-9PL- PB-SG-2P | Side Girder 9PL | Baja | Panel Bottom PB | PB | SG | 2S | 6000 | 691 | 9 | | | | 37314000 | 0.2929149 |
| NB-002-2-PL-FR1- PB-1P | Plat LH | Baja | Panel Bottom PB | PB | 1 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR2- PB-1P | Plat LH | Baja | Panel Bottom PB | PB | 2 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR3- PB-1P | Plat LH | Baja | Panel Bottom PB | PB | 3 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR4- PB-1P | Plat LH | Baja | Panel Bottom PB | PB | 4 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR5- PB-1P | Plat LH | Baja | Panel Bottom PB | PB | 5 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-8PL-FR2- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 2 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR3- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 3 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR4- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 4 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR5- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 5 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR6- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 6 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR7- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 7 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR8- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 8 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR9- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 9 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR10- PB-2P | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 10 | 2P | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR1- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 1 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR2- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 2 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR3- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 3 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR4- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 5 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR5- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 6 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR6- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 7 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR7- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 8 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR8- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 9 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR9- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 10 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-8PL-FR10- PB-2S | Plat Segitiga Melintang | Baja | Panel Bottom PB | PB | 1 | 2S | | | | | | | 8006168 | 0.0628484188 |
| NB-002-2-10PL-BP- PB-1P | Plat 10 (1500x6000) | Baja | Panel Bottom PB | PB | 1P | 6000 | 1500 | 10 | | | | | 90000000 | 0.7065 |
| NB-002-2-10PL-BP- PB-2P | Plat 10 (800x6000) | Baja | Panel Bottom PB | PB | 2P | 6000 | 800 | 10 | | | | | 48000000 | 0.3768 |
| NB-002-2-10PL-BGP-PB-3P | Plat 10 (Bilga) | Baja | Panel Bottom PB | PB | 3P | 1000 | | 10 | | | | | 117973388 | 0.9260910958 |
| NB-002-2-8PL- PB-SG-1S | Side Girder 8PL | Baja | Panel Bottom PB | PB | SG | CL | 6000 | 691 | 8 | | | | 33168000 | 0.2603688 |
| NB-002-2-9PL- PB-SG-3S | Side Girder 9PL | Baja | Panel Bottom PB | PB | SG | 2P | 6000 | 691 | 9 | | | | 37314000 | 0.2929149 |
| NB-002-2-9PL- PB-SG-2S | Side Girder 9PL | Baja | Panel Bottom PB | PB | SG | 2S | 6000 | 691 | 9 | | | | 37314000 | 0.2929149 |
| NB-002-2-PL-FR1- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 1 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR2- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 2 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR3- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 3 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR4- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 4 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR5- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 5 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR6- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 6 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR7- PB-1S | Plat LH | Baja | Panel Bottom PB | PB | 7 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR8-PSB-1S | Plat LH | Baja | Panel Bottom PB | PB | 8 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR9-PSB-1S | Plat LH | Baja | Panel Bottom PB | PB | 9 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-PL-FR10-PSB-1S | Plat LH | Baja | Panel Bottom PB | PB | 10 | 1P | | | | | | | 8132222 | 0.063837943 |
| NB-002-2-10PL- PD-DP-CL | Deck Plate 10PL | Baja | Panel Deck PD | PD | DP | CL | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PD-DP-1S | Deck Plate 10PL | Baja | Panel Deck PD | PD | DP | 1S | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PD-DP-2S | Deck Plate 10PL | Baja | Panel Deck PD | PD | DP | 2S | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL- PD-DP-1P | Deck Plate 10PL | Baja | Panel Deck PD | PD | DP | 1P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |

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|------------------------------|------------------------|------|---------------|----|----|----|------|------|----|------|---|--|----------|-------------|
| NB-002-2-10PL- PD-DP-2P | Deck Plate 10PL | Baja | Panel Deck PD | PD | DP | 2P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-SCH-FR4- PD-2P | Pipa | Baja | Panel Deck PD | PD | 4 | 2P | | | | | | | | 0.5 |
| NB-002-2-SCH-FR8- PD-2P | Pipa | Baja | Panel Deck PD | PD | 8 | 2P | | | | | | | | 0.5 |
| NB-002-2-SCH-FR4- PD-2S | Pipa | Baja | Panel Deck PD | PD | 4 | 2S | | | | | | | | 0.5 |
| NB-002-2-SCH-FR8- PD-2S | Pipa | Baja | Panel Deck PD | PD | 8 | 2S | | | | | | | | 0.5 |
| NB-002-2-8PL-FR1- PD-1P | Bracket | Baja | Panel Deck PD | PD | 1 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR2- PD-1P | Bracket | Baja | Panel Deck PD | PD | 2 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR3- PD-1P | Bracket | Baja | Panel Deck PD | PD | 3 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR5- PD-1P | Bracket | Baja | Panel Deck PD | PD | 5 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR6- PD-1P | Bracket | Baja | Panel Deck PD | PD | 6 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR7- PD-1P | Bracket | Baja | Panel Deck PD | PD | 7 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR9- PD-1P | Bracket | Baja | Panel Deck PD | PD | 9 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR10- PD-1P | Bracket | Baja | Panel Deck PD | PD | 10 | 1P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR1- PD-2P | Bracket | Baja | Panel Deck PD | PD | 1 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR2- PD-2P | Bracket | Baja | Panel Deck PD | PD | 2 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR3- PD-2P | Bracket | Baja | Panel Deck PD | PD | 3 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR5- PD-2P | Bracket | Baja | Panel Deck PD | PD | 5 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR6- PD-2P | Bracket | Baja | Panel Deck PD | PD | 6 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR7- PD-2P | Bracket | Baja | Panel Deck PD | PD | 7 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR9- PD-2P | Bracket | Baja | Panel Deck PD | PD | 9 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR10- PD-2P | Bracket | Baja | Panel Deck PD | PD | 10 | 2P | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR1- PD-1S | Bracket | Baja | Panel Deck PD | PD | 1 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR2- PD-1S | Bracket | Baja | Panel Deck PD | PD | 2 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR3- PD-1S | Bracket | Baja | Panel Deck PD | PD | 3 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR5- PD-1S | Bracket | Baja | Panel Deck PD | PD | 5 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR6- PD-1S | Bracket | Baja | Panel Deck PD | PD | 6 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR7- PD-1S | Bracket | Baja | Panel Deck PD | PD | 7 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR9- PD-1S | Bracket | Baja | Panel Deck PD | PD | 9 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR10- PD-1S | Bracket | Baja | Panel Deck PD | PD | 10 | 1S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR1- PD-2S | Bracket | Baja | Panel Deck PD | PD | 1 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR2- PD-2S | Bracket | Baja | Panel Deck PD | PD | 2 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR3- PD-2S | Bracket | Baja | Panel Deck PD | PD | 3 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR5- PD-2S | Bracket | Baja | Panel Deck PD | PD | 5 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR6- PD-2S | Bracket | Baja | Panel Deck PD | PD | 6 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR7- PD-2S | Bracket | Baja | Panel Deck PD | PD | 7 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR9- PD-2S | Bracket | Baja | Panel Deck PD | PD | 9 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-8PL-FR10- PD-2S | Bracket | Baja | Panel Deck PD | PD | 10 | 2S | | | 8 | | 2 | | 210476 | 0.003304473 |
| NB-002-2-DG-T10PL-FR4- PD-CL | Transverse Deck Girder | Baja | Panel Deck PD | PD | 4 | CL | 250 | 150 | 10 | 7000 | | | 27300000 | 0.214305 |
| NB-002-2-DG-T10PL-FR8- PD-CL | Transverse Deck Girder | Baja | Panel Deck PD | PD | 8 | CL | 250 | 150 | 10 | 7000 | | | 27300000 | 0.214305 |
| NB-002-2-DB-AB8PL-FR1- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 1 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR2- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 2 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR3- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 3 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR5- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 5 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR6- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 6 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR7- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 7 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |

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|-------------------------------|--------------------------|------|---------------|-----|----|----|------|------|----|------|--|--|----------|--------------|
| NB-002-2-DB-AB8PL-FR9- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 9 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DB-AB8PL-FR10- PD-CL | Transverse Deck Beam | Baja | Panel Deck PD | PD | 10 | CL | 75 | 75 | 8 | 7000 | | | 7952000 | 0.0624232 |
| NB-002-2-DG-T9PL- PD-1P | Profil T Girder | Baja | Panel Deck PD | PD | | 1P | 250 | 150 | 9 | 3000 | | | 10557000 | 0.08287245 |
| NB-002-2-DG-T9PL- PD-1S | Profil T Girder | Baja | Panel Deck PD | PD | | 1S | 250 | 150 | 9 | 3000 | | | 10557000 | 0.08287245 |
| NB-002-2-DG-T6PL-FR4-PPS-3P | Profil T 6PL Deck Girder | Baja | Panel Sisi PS | PPS | 4 | 3P | 246 | 150 | 6 | 3327 | | | 7785180 | 0.061113663 |
| NB-002-2-DG-T6PL-FR8-PPS-3P | Profil T 6PL Deck Girder | Baja | Panel Sisi PS | PPS | 8 | 3P | 246 | 150 | 6 | 3327 | | | 7785180 | 0.061113663 |
| NB-002-2-DG-T6PL- PPS-2P | Deck Girder T 6PL | Baja | Panel Sisi PS | PPS | | 2P | 246 | 150 | 6 | 3000 | | | 7020000 | 0.055107 |
| NB-002-2-8PL-FR1- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 1 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 2 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 3 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 5 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 6 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 7 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 9 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR110- PPS-1P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 10 | 1P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR1- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 1 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 2 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 3 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 5 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 6 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 7 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 9 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR110- PPS-2P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 10 | 2P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR1- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 1 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 2 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 3 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 5 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 6 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 7 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 9 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR110- PPS-3P | Bracket 8PL DB | Baja | Panel Sisi PS | PPS | 10 | 3P | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-10PL-DP- PPS-2P | Plat Deck 10 PL | Baja | Panel Sisi PS | PPS | DP | 2P | 3000 | 1753 | 10 | | | | 52590000 | 0.4128315 |
| NB-002-2-10PL- PPS-DP-1P | Plat Deck 10 PL | Baja | Panel Sisi PS | PPS | DP | 1P | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-MF-AB6PL-FR1-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 1 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR2-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 2 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR3-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 3 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR5-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 5 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR6-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 6 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR7-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 7 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR9-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 9 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR10-PPS-2P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 10 | 2P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR1-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 1 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR2-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 2 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR3-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 3 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR5-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 5 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |

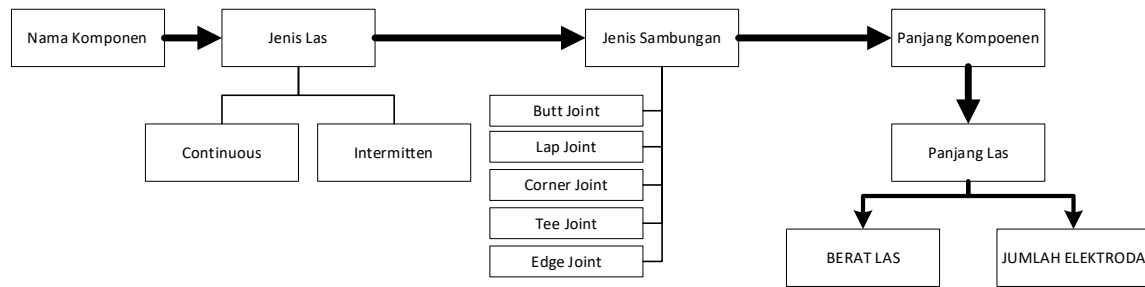
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|-------------------------------|--------------------------|------|---------------|-----|----|----|------|------|----|------|--|--|----------|---------------|
| NB-002-2-MF-AB6PL-FR6-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 6 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR7-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 7 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR9-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 9 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR10-PPS-3P | Profil Angel Bar | Baja | Panel Sisi PS | PPS | 10 | 3P | 75 | 75 | 6 | 2732 | | | 2360448 | 0.0185295168 |
| NB-002-2-8PL-FR1-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 1 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR2-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 2 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR3-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 3 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR5-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 5 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR6-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 6 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR7-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 7 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR9-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 9 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR10-PPS-3P | Bracket 8PL MF | Baja | Panel Sisi PS | PPS | 10 | 3P | | | 8 | | | | 344645 | 0.00270546325 |
| NB-002-2-WF-T6PL-FR4-PPS-2P | Profil T | Baja | Panel Sisi PS | PPS | 4 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR8-PPS-2P | Profil T | Baja | Panel Sisi PS | PPS | 8 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR12-PPS-2P | Profil T | Baja | Panel Sisi PS | PPS | 12 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR12-PPS-2P | Profil T | Baja | Panel Sisi PS | PPS | 12 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR4-PPS-3P | Profil T | Baja | Panel Sisi PS | PPS | 4 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR8-PPS-3P | Profil T | Baja | Panel Sisi PS | PPS | 8 | 3P | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-DB-AB6PL-FR1-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 1 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR2-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 2 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR3-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 3 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR5-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 5 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR6-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 6 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR7-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 7 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR9-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 9 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR10-PPS-3P | Profil L 6PL Deck Beam | Baja | Panel Sisi PS | PPS | 10 | 3P | 75 | 75 | 6 | 3327 | | | 2874528 | 0.0225650448 |
| NB-002-2-WF-T6PL-FR4-PSB-2S | Profil T | Baja | Panel Sisi PS | PSB | 4 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR8-PSB-2S | Profil T | Baja | Panel Sisi PS | PSB | 8 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR12-PSB-2S | Profil T | Baja | Panel Sisi PS | PSB | 12 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR8-PSB-3S | Profil T | Baja | Panel Sisi PS | PSB | 8 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR4-PSB-3S | Profil T | Baja | Panel Sisi PS | PSB | 4 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-WF-T6PL-FR12-PSB-3S | Profil T | Baja | Panel Sisi PS | PSB | 12 | 3S | 246 | 150 | 6 | 2238 | | | 5236920 | 0.041109822 |
| NB-002-2-10PL-PSB-SS1-3P | Plat 10 (1500x3000) SS | Baja | Panel Sisi PS | PPS | SS | 3S | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-10PL-PSB-SS2-3P | Plat 10 (1083x3000) SS | Baja | Panel Sisi PS | PPS | SS | 3S | 3000 | 1083 | 10 | | | | 32490000 | 0.2550465 |
| NB-002-2-10PL-PPS-SS1-2P | Plat 10 (1500x3000) BH | Baja | Panel Sisi PS | PPS | SS | 3S | 3000 | 1500 | 10 | | | | 45000000 | 0.35325 |
| NB-002-2-DG-T6PL-FR4-PSB-3S | Profil T 6PL Deck Girder | Baja | Panel Sisi SB | PSB | 4 | 3S | 246 | 150 | 6 | 3327 | | | 7785180 | 0.061113663 |
| NB-002-2-DG-T6PL-FR8-PSB-3S | Profil T 6PL Deck Girder | Baja | Panel Sisi SB | PSB | 4 | 3S | 246 | 150 | 6 | 3327 | | | 7785180 | 0.061113663 |
| NB-002-2-DG-T6PL- PSB-2S | Deck Girder T 6PL | Baja | Panel Sisi SB | PSB | | 2S | 246 | 150 | 6 | 3000 | | | 7020000 | 0.055107 |
| NB-002-2-8PL-FR1- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 1 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 2 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 3 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 5 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 6 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 7 | 1S | | | 8 | | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9- PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 9 | 1S | | | 8 | | | | 210476 | 0.0016522366 |

| | | | | | | | | | | | | | |
|-------------------------------|------------------------|------|---------------|-----|----|----|------|------|----|------|--|----------|---------------|
| NB-002-2-8PL-FR110-PSB-1S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 10 | 15 | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR1-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 1 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 2 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 3 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 5 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 6 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 7 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 9 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR110-PSB-2S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 10 | 2S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR1-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 1 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR2-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 2 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR3-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 3 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR5-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 5 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR6-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 6 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR7-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 7 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR9-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 9 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-8PL-FR110-PSB-3S | Bracket 8PL DB | Baja | Panel Sisi SB | PSB | 10 | 3S | | | 8 | | | 210476 | 0.0016522366 |
| NB-002-2-10PL-DP-PSB-2S | Plat Deck 10 PL | Baja | Panel Sisi SB | PSB | DP | 2S | 3000 | 1753 | 10 | | | 52590000 | 0.4128315 |
| NB-002-2-10PL-PSB-DP-1S | Plat Deck 10 PL | Baja | Panel Sisi SB | PSB | DP | 1S | 3000 | 1500 | 10 | | | 45000000 | 0.35325 |
| NB-002-2-10PL-PSB-SS1-3S | Plat 10 (1500x3000) SS | Baja | Panel Sisi SB | PSB | SS | 3S | 3000 | 1500 | 10 | | | 45000000 | 0.35325 |
| NB-002-2-10PL-PSB-SS2-3S | Plat 10 (1083x3000) SS | Baja | Panel Sisi SB | PSB | SS | 3S | 3000 | 1083 | 10 | | | 32490000 | 0.2550465 |
| NB-002-2-10PL-PPS-SS1-2P | Plat 10 (1500x3000) BH | Baja | Panel Sisi SB | PSB | SS | 3S | 3000 | 1500 | 10 | | | 45000000 | 0.35325 |
| NB-002-2-MF-AB6PL-FR1-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 1 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR2-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 2 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR3-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 3 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR5-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 5 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR6-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 6 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR8-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 7 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR9-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 9 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR10-PSB-2S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 10 | 2S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR1-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 1 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR2-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 2 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR3-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 3 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR5-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 5 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR6-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 6 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR8-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 7 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR9-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 9 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-MF-AB6PL-FR10-PSB-3S | Profil Angel Bar | Baja | Panel Sisi SB | PSB | 10 | 3S | 75 | 75 | 6 | 2732 | | 2360448 | 0.0185295168 |
| NB-002-2-8PL-FR1-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 1 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR2-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 2 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR3-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 3 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR5-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 5 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR6-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 6 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR7-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 7 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR9-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 9 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-8PL-FR10-PSB-3S | Bracket 8PL MF | Baja | Panel Sisi SB | PSB | 10 | 3S | | | 8 | | | 344645 | 0.00270546325 |
| NB-002-2-DB-AB6PL-FR1-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 1 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR2-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 2 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR3-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 3 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR5-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 5 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR6-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 6 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR7-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 7 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR9-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 9 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |
| NB-002-2-DB-AB6PL-FR10-PSB-3S | Profil L 6PL Deck Beam | Baja | Panel Sisi SB | PSB | 10 | 3S | 75 | 75 | 6 | 3327 | | 2874528 | 0.0225650448 |

Lampiran 3 Beban Kerja Perakitan

| PRE | Project Name | Beban Kerja (%) | | | |
|-----|--|--|---------|---------|---------|
| | | Cutting | Lifting | Fitting | Welding |
| 0 | Pembangunan Block NB-002-2 | | | | |
| 1 | Fabrikasi | | | | |
| 1.1 | Fabrikasi | 100 | 37.52 | 0 | 0 |
| 2 | 1 | Pembangunan Panel Deck | | | |
| 2.1 | 1.1 Sub Assembly Plat Deck | 0 | 2.46 | 2.47 | 4.63 |
| 2.2 | 2.1 Sub Assembly Transver Deck Beam dan Longitudinal Deck Beam | 0 | 1.53 | 13.99 | 9.82 |
| 2.3 | 2.2 Sub Assembly Sub Panel Deck 1 dan 2 & Pilar | 0 | 2.55 | 0.56 | 2.34 |
| 3 | 1 | Pembangunan Panel Bottom | | | |
| 3.1 | 1.1 Perakitan Sub Panel Bottom 1 | 0 | 5.66 | 19.58 | 19.24 |
| 3.2 | 3.1 Perakitan Sub Panel Bottom 2 | 0 | 5.77 | 20.04 | 14.53 |
| 3.3 | 3.1 Perakitan Sub Panel Bottom 3 | 0 | 5.77 | 20.04 | 14.16 |
| 3.4 | 3.3 Sub Assembly Sub Panel Bottom 1,2 dan 3 | 0 | 0 | 5.22 | 4.84 |
| 4 | 1 | Pembangunan Panel Sisi Starboard | | | |
| 4.1 | 1.1 Perakitan Sub Panel SB 1 | 0 | 1.48 | 0.15 | 2.74 |
| 4.2 | 4.1 Perakitan Sub Panel SB 2 | 0 | 1.15 | 3.45 | 5.58 |
| 4.3 | 4.2 Perakitan Sub Panel SB 3 | 0 | 1.12 | 2.4 | 1.76 |
| 4.4 | 4.3 Sub Assembly Sub Panel 1,2 dan 3 | 0 | 0 | 0.92 | 1.46 |
| 5 | 1 | Pembangunan Panel Sisi Portside | | | |
| 5.1 | 1.1 Perakitan Sub Panel PS 1 | 0 | 1.48 | 0.7 | 2.74 |
| 5.2 | 5.1 Perakitan Sub Panel PS 2 | 0 | 1.15 | 4 | 5.58 |
| 5.3 | 5.2 Perakitan Sub Panel PS 3 | 0 | 1.12 | 2.4 | 1.76 |
| 5.4 | 5.3 Perakitan Sub Panel PS 1, 2, & 3 | 0 | 0 | 0.92 | 1.46 |
| 6 | 3,4,5 | Assembly Panel Bottom dan Dua Panel Sisi | | | |
| 6.1 | 3.4 Assembly Panel Bottom dan Panel Sisi | 0 | 24.7 | 1.3 | 5.4 |
| 7 | 6 | Assembly Panel Deck | | | |
| 7.1 | 6.1 Assembly Panel Deck | 0 | 6.54 | 1.85 | 1.95 |

Lampiran 4 Detail Perhitungan Kebutuhan Elektroda



- Nama Komponen = nama komponen konstruksi yang akan dilas
- Jenis Las = jenis sambungan las apakah *continious* (bersambung) atau *intermitten* (putus-putus).
- Panjang Komponen = panjang komponen yang akan di las
- Panjang Las = hasil perhitungna panjang las sesuai dengan jenis las dan sambungannya.

Untuk las *continious*, maka panjang komponen las adalah panjang las. Untuk las *intermitten*, panjang las memiliki rumus sebagai berikut.

- PK = Panjang Komponen
- A = panjang di kedua ujung masing-masing 250 mm
- B = Panjang 1 garis adalah 200 mm
- C = Panjang spasi adalah 150 mm
- Maka, didapatkan rumus matematika.
- $PL = (PK - 2A) / (B + C) \times B$
 $= ((PK - 500) / (350)) \times 200$
- Berat Las (BL) dapat dihitung dengan mengalikannya dengan berat jenis baja.
 - BJ = Berat Jenis Baja adalah 7.5×10^{-6}
 Maka Berat Las adalah.
 - $BL = PL * BJ$
- Jumlah Elektroda (JL),

- jika satu batang elektroda dapat melakukan las sepanjang 130 mm
- $JE = PL/130$

Lampiran 5 Perhitungan Kebutuhan Consumable

- Kebutuhan LPG & Gas

- Harga Oksigen/Tabung = Rp. 1.350.000,-
- Harga isi ulang/Tabung = Rp. 75.000,-
- Harga LPG/Tabung = Rp. 620.000,
- Tingkat konsumsi 1 tabung oksigen (6 m^3) = $3,67 \text{ m/m}^3$
- Tingkat konsumsi 1 tabung LPG (50 kg) = $8,8 \text{ m/kg}$

Maka,

- Tingkat konsumsi 1 tabung oksigen (6 m^3)
= $3,67 \text{ m/m}^3 \times 6 \text{ m}^3 = 22,02 \text{ m}$
- Tingkat konsumsi 1 tabung LPG (50kg)
= $8,8 \text{ m/kg} \times 50 \text{ kg} = 440 \text{ m}$

Maka,

- Kebutuhan oksigen = Panjang Pemotongan : 22,02 m
- Kebutuhan LPG = Panjang Pemotongan : 440 m

- Kebutuhan Cat dan Pasir Sandblasting

Kebutuhan Cat

- Massa Jenis Cat = $1,3 \text{ kg/liter}$
- Spreading Rate = $8,4 \text{ m}^2/\text{liter}$
- 1 kaleng = 5 kg

Maka,

- Jumlah kebutuhan
= $\left(\frac{\text{Luas Area (m}^2\text{)}}{\text{Spreading Rate}} \right) \times \text{Massa Jenis Cat} \times \text{Berat 1 kaleng}$

- Kebutuhan Pasir Sandblasting

o Penggunaan pasir = 3kg/m²

o Berat 1 karung = 50 kg

Maka,

o Kebutuhan Pasir = $\frac{Luas Area (m^2) \times 3kg/m^2}{50 kg}$ (Karung)

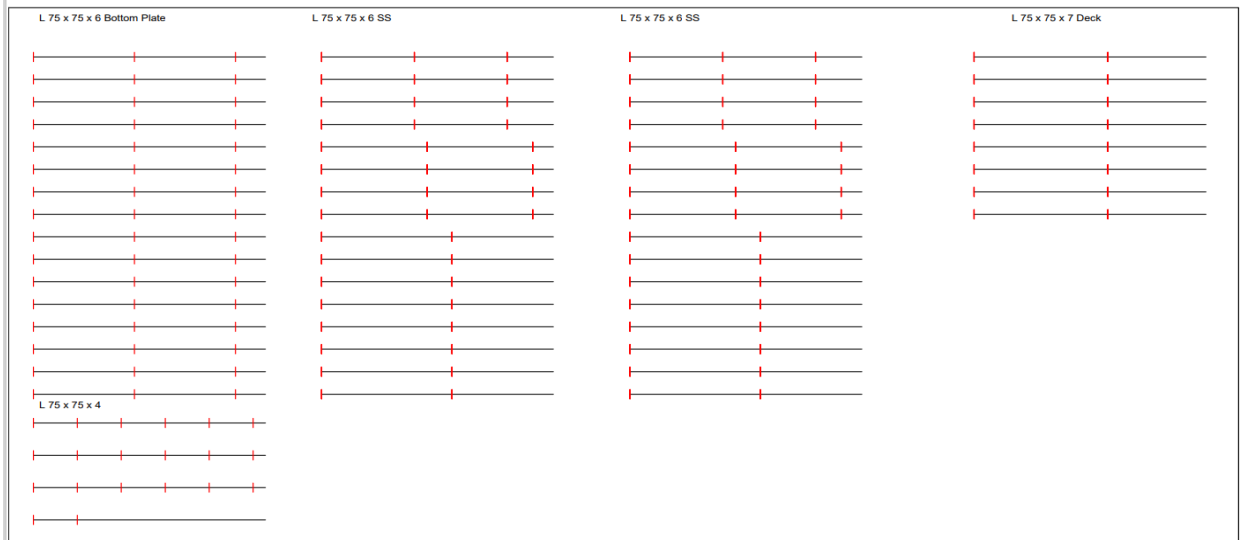
Lampiran 6 Panjang Pemotongan Pada setiap Perakitan

| Urut | ID PLAT | P. Pemotongan | LPG | O2 | Biaya LPG | Biaya O2 |
|-------|-----------------------|--|-------|-------|-------------|----------------|
| 1.1 | PRO-NB-002-2-FAB-1.1 | Fabrikasi | | | | |
| 1.101 | NB-002-2-30ft-9-1 | 48000 | 0.109 | 2.18 | Rp71,940.00 | Rp3,106,500.00 |
| 1.102 | NB-002-2-20ft-12-1 | 17696 | 0.04 | 0.804 | Rp26,400.00 | Rp1,145,700.00 |
| 1.103 | NB-002-2-20ft-12-2 | 17280 | 0.039 | 0.785 | Rp25,740.00 | Rp1,118,625.00 |
| 1.104 | NB-002-2-30ft-8-1 | 11840 | 0.027 | 0.538 | Rp17,820.00 | Rp766,650.00 |
| 1.105 | NB-002-2-30ft-8-10 | 23765 | 0.054 | 1.079 | Rp35,640.00 | Rp1,537,575.00 |
| 1.106 | NB-002-2-30ft-8-11 | 26854 | 0.061 | 1.22 | Rp40,260.00 | Rp1,738,500.00 |
| 1.107 | NB-002-2-30ft-8-12 | 24000 | 0.055 | 1.09 | Rp36,300.00 | Rp1,553,250.00 |
| 1.108 | NB-002-2-30ft-8-2 | 19270 | 0.044 | 0.875 | Rp29,040.00 | Rp1,246,875.00 |
| 1.109 | NB-002-2-30ft-8-4 | 45050 | 0.102 | 2.046 | Rp67,320.00 | Rp2,915,550.00 |
| 1.11 | NB-002-2-30ft-8-5 | 52780 | 0.12 | 2.397 | Rp79,200.00 | Rp3,415,725.00 |
| 1.111 | NB-002-2-30ft-8-6 | 17600 | 0.04 | 0.799 | Rp26,400.00 | Rp1,138,575.00 |
| 1.112 | NB-002-2-30ft-8-7 | 16456 | 0.037 | 0.747 | Rp24,420.00 | Rp1,064,475.00 |
| 1.113 | NB-002-2-30ft-8-8 | 16456 | 0.037 | 0.747 | Rp24,420.00 | Rp1,064,475.00 |
| 1.114 | NB-002-2-30ft-8-9 | 25258 | 0.057 | 1.147 | Rp37,620.00 | Rp1,634,475.00 |
| 1.115 | NB-002-2-30ft-9-2 | 14555 | 0.033 | 0.661 | Rp21,780.00 | Rp941,925.00 |
| 1.116 | NB-002-2-30ft-8-3 | 46870 | 0.107 | 2.129 | Rp70,620.00 | Rp3,033,825.00 |
| 2.1 | PRO-NB-002-2- PD-2.1 | Sub Assembly Plat Deck | | | | |
| 2.2 | PRO-NB-002-2- PD-2.2 | Sub Assembly Transver Deck Beam dan Longitudinal Deck Beam | | | | |
| 2.3 | PRO-NB-002-2- PD-2.3 | Sub Assembly Sub Panel Deck 1 dan 2 & Pilar | | | | |
| 3.1 | PRO-NB-002-2- PB-3.1 | Perakitan Sub Panel Bottom 1 | | | | |
| 3.2 | PRO-NB-002-2- PB-3.2 | Perakitan Sub Panel Bottom 2 | | | | |
| 3.3 | PRO-NB-002-2- PB-3.3 | Perakitan Sub Panel Bottom 3 | | | | |
| 3.4 | PRO-NB-002-2- PB-3.4 | Sub Assembly Sub Panel Bottom 1,2 dan 3 | | | | |
| 4.1 | PRO-NB-002-2- PSB-4.1 | Perakitan Sub Panel SB 1 | | | | |
| 4.2 | PRO-NB-002-2- PSB-4.2 | Perakitan Sub Panel SB 2 | | | | |
| 4.3 | PRO-NB-002-2- PSB-4.3 | Perakitan Sub Panel SB 3 | | | | |
| 4.4 | PRO-NB-002-2- PSB-4.4 | Sub Assembly Sub Panel 1,2 dan 3 | | | | |
| 5.1 | PRO-NB-002-2- PPS-5.1 | Perakitan Sub Panel PS 1 | | | | |
| 5.2 | PRO-NB-002-2- PPS-5.2 | Perakitan Sub Panel PS 2 | | | | |
| 5.3 | PRO-NB-002-2- PPS-5.3 | Perakitan Sub Panel PS 3 | | | | |
| 5.4 | PRO-NB-002-2- PPS-5.4 | Perakitan Sub Panel PS 1, 2, & 3 | | | | |
| 6.1 | PRO-NB-002-2- AS1-6.1 | Assembly Panel Bottom dan Panel Sisi | | | | |
| 7.1 | PRO-NB-002-2- SB2-7.1 | Assembly Panel Deck | | | | |

Lampiran 7 Panjang Pengelasan pada Setiap Tahapan

| Project Name | | Pengelasan | | | |
|--------------|--|------------------|----------------|-----------------|----------------------|
| 0 | Pembangunan Block NB-002-2 | Panjang Las (mm) | Berat Las (kg) | Biaya Elektroda | Panjang Fitting (mm) |
| 1 | Fabrikasi | | | | |
| 1.1 | Pemeriksaan Material, Marking, Cutting | | | | 0 |
| 2 | Pembangunan Panel Deck | | | | |
| 2.1 | Sub Assembly Plat Deck | 75000 | 16.7205 | Rp61,100.53 | 26000 |
| 2.2 | Sub Assembly Transver Deck Beam dan Longitudinal Deck Beam | 159006 | 22.4675478 | Rp82,101.57 | 147468.2 |
| 2.3 | Sub Assembly Sub Panel Deck 1 dan 2 & Pilar | 37920 | 5.358096 | Rp19,579.71 | 5932.8 |
| 3 | Pembangunan Panel Bottom | | | | |
| 3.1 | Perakitan Sub Panel Bottom 1 | 311526 | 63.0470238 | Rp230,388.27 | 206379.36 |
| 3.2 | Perakitan Sub Panel Bottom 2 | 235200 | 52.26216 | Rp190,977.90 | 211284 |
| 3.3 | Perakitan Sub Panel Bottom 3 | 229200 | 50.18976 | Rp183,404.87 | 211284 |
| 3.4 | Sub Assembly Sub Panel Bottom 1,2 dan 3 | 78432 | 18.1474416 | Rp66,314.91 | 55072 |
| 4 | Pembangunan Panel Sisi Starboard | | | | |
| 4.1 | Perakitan Sub Panel SB 1 | 44349 | 8.5273137 | Rp31,160.76 | 1613.24 |
| 4.2 | Perakitan Sub Panel SB 2 | 90396 | 15.0337548 | Rp54,936.78 | 36368.36 |
| 4.3 | Perakitan Sub Panel SB 3 | 28500 | 4.02705 | Rp14,715.77 | 25320 |
| 4.4 | Sub Assembly Sub Panel 1,2 dan 3 | 23608 | 4.1406552 | Rp15,130.91 | 9656.96 |
| 5 | Pembangunan Panel Sisi Portside | | | | |
| 5.1 | Perakitan Sub Panel PS 1 | 44349 | 8.5273137 | Rp31,160.76 | 7413.24 |
| 5.2 | Perakitan Sub Panel PS 2 | 90396 | 15.0337548 | Rp54,936.78 | 42168.36 |
| 5.3 | Perakitan Sub Panel PS 3 | 28500 | 4.02705 | Rp14,715.77 | 25320 |
| 5.4 | Perakitan Sub Panel PS 1, 2, & 3 | 23608 | 4.1406552 | Rp15,130.91 | 9656.96 |
| 6 | Assembly Panel Bottom dan Dua Panel Sisi | | | | |
| 6.1 | Assembly Panel Bottom dan Panel Sisi | 87360 | 19.314768 | Rp70,580.58 | 13667.2 |
| 7 | Assembly Panel Deck | | | | |
| 7.1 | Assembly Panel Deck | 31500 | 8.97255 | Rp32,787.76 | 19483.2 |

Lampiran 8 Nesting Plan untuk Profile Angle Bar



Lampiran 9 Nesting Plan Plat

