

## BAB IV

# PENUTUP

Pada pembangunan Kapal *Tug Boat* 2 x 3850 HP pesanan TNI-AL di Unit Galangan Jakarta IV PT. DKB, pengendalian ketelitian dan produksi serta keselamatan kerja lebih sering secara kualitatif daripada kuantitatif, karena beraneka ragamnya produk, fungsi dan prosedur yang harus diperhatikan. Oleh karena itu timbul kasus-kasus yang menyebabkan perbedaan pendapat antara badan klasifikasi, pemilik kapal (*Owner*), galangan, dan produsen dengan kepentingannya masing-masing.

### IV.1. KENDALI MUTU

1. Material mesin dan perlengkapan dari seluruh rencana umum Pembangunan Kapal *Tug Boat* pesanan TNI Angkatan Laut RI di UGJ IV PT. DKB di dalam ketentuan *Korean Industrial Standar* (KS) dan atau *Japanese Industrial Standard* ( JIS ), Standar Teknik Galangan tempat pembangunan kapal dan atau mengikuti *Korean Manufacturer's Standard* dan dibawah pengawasan Biro Klasifikasi, dan Spesifikasi dari Negara Indonesia.
2. Tingkat-tingkat ketelitian (Standar Galangan ) yang diadopsi oleh galangan kapal UGJ IV PT. DKB yaitu :
  - 1) ISO 9001: 2000 (LR)
  - 2) *Japanese Industrial Standard* ( JIS ).

- 3) Standar Mutu Pembangunan Kapal Baru, IPERINDO  
( Ikatan Perusahaan Industri Kapal Nasional Indonesia )
  - i. Standar mutu pekerjaan lambung.
  - ii. Standar teknis pekerjaan Listrik.
  - iii. Standar mutu Pekerjaan Out fitting dan Mesin.
- 4) *Marine Regulation of the Indonesian Government.*
3. Proses produksi dengan ketelitian yang lebih tinggi pada tahap - tahap tertentu pembangunan kapal, diharapkan pada akhir produksi akan dihasilkan produk dengan mutu sesuai dengan persyaratan yang diminta baik oleh pemilik kapal ( *Owner* ) maupun peraturan-peraturan dari badan klasifikasi, dan badan terkait lainnya.

## IV.2. KESELAMATAN

1. Untuk meningkatkan produktifitas kerja para karyawan, yang pada gilirannya akan meningkatkan kesejahteraan karyawan maka salah satu faktor adalah meningkatkan kegiatan keselamatan dan kesehatan kerja.
2. Dalam rangka meningkatkan produktifitas kerja para karyawan UGJ IV PT. DKB, maka dipandang perlu untuk diterbitkan pedoman keselamatan dan kesehatan kerja, pencegahan, pengamanan dan pemadam bahaya kebakaran ( SK General Manager UGJ IV PT. DKB No. 017 /SK / UPJ-4/ DKB / 2001 ).

#### IV.3. KESIMPULAN DANSARAN

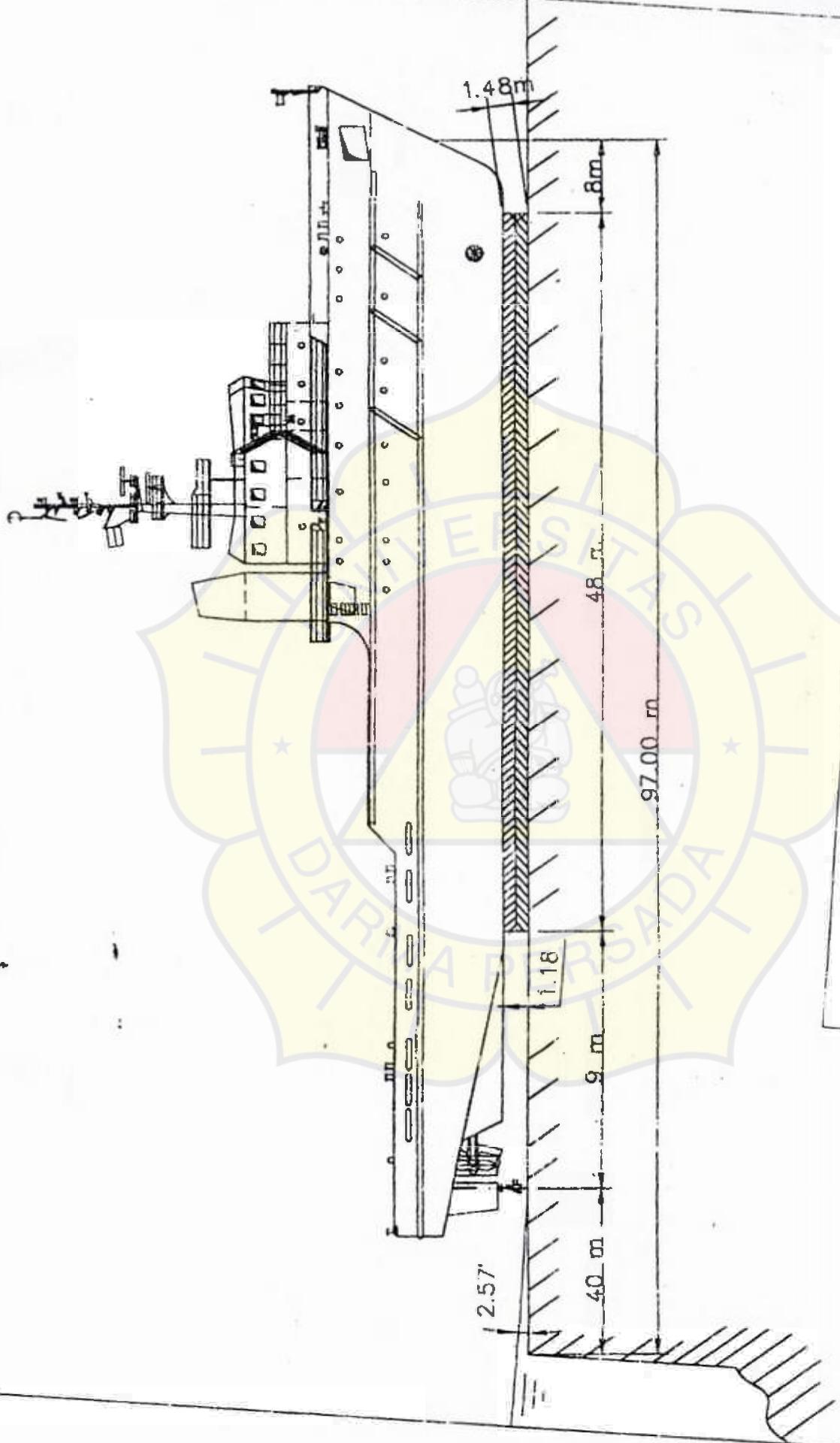
Untuk menuju kearah perbaikan dan kesempurnaan kerja bidang perkapalan khususnya pada UGJ IV PT. DKB, maka :

1. Perlu dibuat patokan-patokan yang dapat dipakai sebagai standar untuk diputuskan bersama untuk mengatasi perbedaan pendapat antara badan klasifikasi, pemilik kapal (*Owner*), galangan dan produsen material dengan kepentingannya masing-masing.
2. Perlunya meningkatkan keterampilan karyawan baik berupa kegiatan-kegiatan khusus seperti pelatihan/*training* maupun cara-cara profesional lainnya.
3. Alat ukur & uji serta alat-alat keselamatan perlu untuk di *kalibrasi* dan diujicobakan.

Dengan selesainya tugas akhir/skripsi ini , maka diharapkan jika terdapat kekurangan dan kesalahan pada tugas akhir/skripsi ini, untuk diberikan kritik dan saran yang sifatnya membangun dan akan diterima sebagai pelengkap.

## DAFTAR PUSTAKA

1. *Building Specification of 7500 BHP Ocean-Going Tug Boat*, Buyer : Indonesian Navy ; Builder : PT. Dok & Perkapalan Kodja Bahari, March 1, Tahun 2000.
2. *Japan Shipbuilding Quality Standard (JSQS)*, Society of Naval Architect of Japan, Tahun 1994.
3. *Rules for the Classification and Construction of Seagoing Steel Ships*, BKI (Biro Klasifikasi Indonesia), Tahun 1996.
4. SK. General Manager JGI IV PT. DKB (Persero), Nomor : 017 / SK / UPJ-4/ DKB/ 2901, 19 Februari 2001.
5. *Standar Mutu Galangan Indonesia*, IPERINDO (Ikatan Perusahaan Industri Kapal Nasional Indonesia, Tahun 1999.



PT. DOK & PERKAPALAN KODJA BAHARI  
( PERSERO )

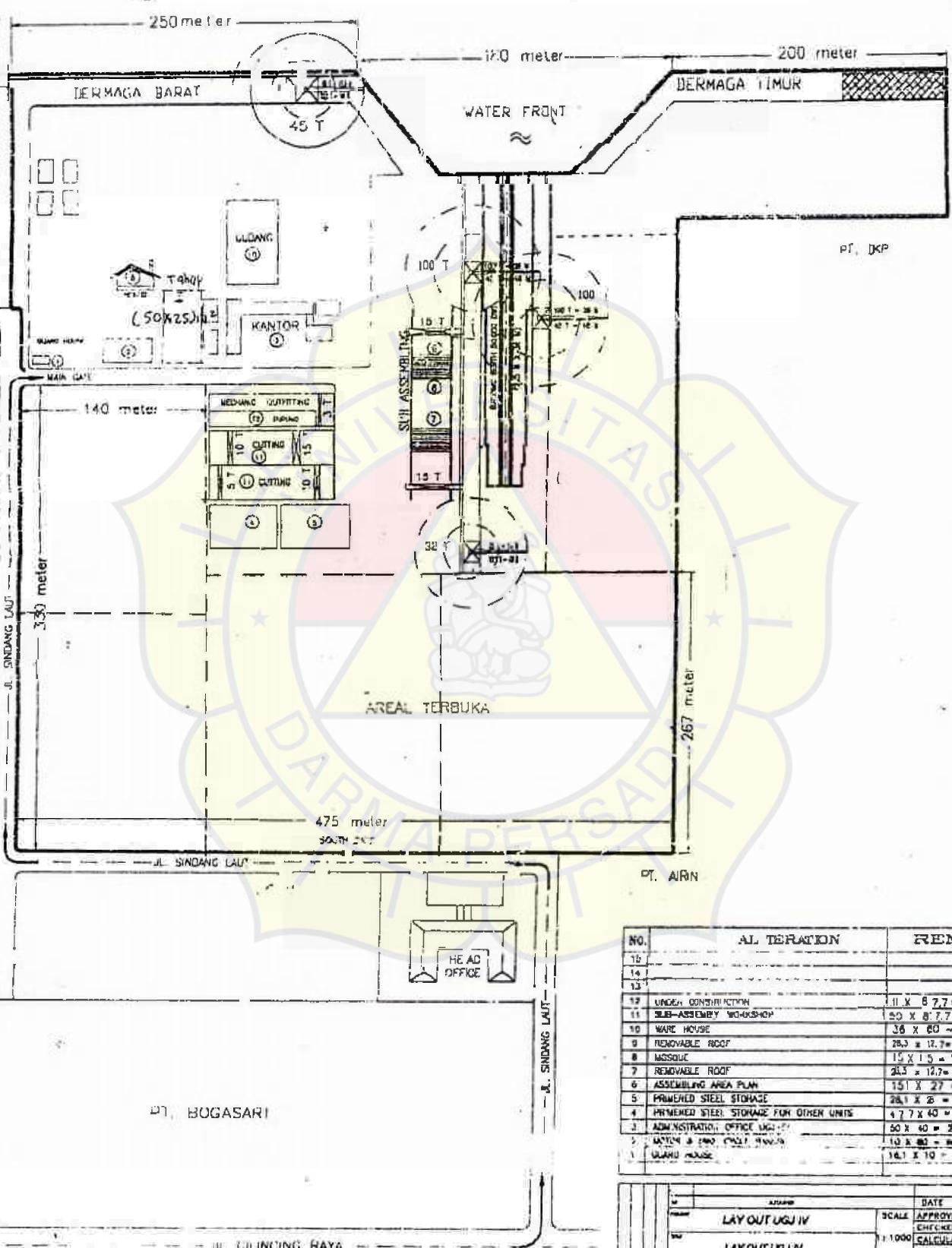
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YARD NO.  
DKB/1239/JKT

DRAWING NO.

**LAY OUT UNIT PRODUKSI JAKARTA IV**  
**PT. DOK & PERKAPALAN KODJA DAHARI**  
**(PERSERO)**



# MASTER SCHEDULE

PROJECT : STD11 TNI-AL  
 YARD NO : DKW/1239/JKT  
 BUILDER : UPN - I 1& IV  
 BUILDING PERIOD : 18 MONTHS

No. FF QVRD L-AV01  
 Rev. 0  
 Date July ..... 2000  
 File

| ITEM  | Year Month | 2000  |        |        |        |        |        |        |        |        |         |         |         | 2001   |         |         |         |         |         |         |  |  |  |  |  | REMARKS |
|---|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|--------|---------|---------|---------|---------|---------|---------|--|--|--|--|--|---------|
|   |            | May 1 | June 2 | July 3 | Aug. 4 | Sep. 5 | Oct. 6 | Nov. 7 | Dec. 8 | Jan. 9 | Feb. 10 | Mar. 11 | Apr. 12 | May 13 | June 14 | July 15 | Aug. 16 | Sep. 17 | Oct. 18 | Nov. 19 |  |  |  |  |  |         |
| <b>GENERAL</b>  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Sign Contract   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Building Period   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Keel Laying   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Launching   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Testing, Commissioning, Familiarization   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Final Docking   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Sea Trials / Bollard Pull Test  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Delivery  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Procurement (steel profile)   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Drawing   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>HULL</b>   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Mould Lch   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Fabricating   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Assembling  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Erection  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Casting   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Painting  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>SHIP HANDLING SYSTEM</b>   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Mooring Equipment, Deck Machinery   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| Anchor Chain Capstans, Bollards, etc  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Towing and Tugger Winch   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Bow Thruster  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Steering Gear   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>SHIPS EQUIPMENT</b>  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - General Outfitting, Ladder, Window, Hatch, Manhole, Windows, Holes, Stores, etc |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Fire Fighting Equipment   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Life Saving Equipment   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Ballast & Barge System (ballast piping, pipe & fittings)                        |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Portable Diver and Sinker   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Diving Equipment  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>ACCOMMODATION</b>  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Living, Ceiling, Doors, Deck Covering, Windows, Paneling, Wheelhouse, etc       |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Heating, Ventilation & Air Conditioning System                                  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>MACHINERY MAIN COMPONENT</b>   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| Propulsion System Diesel Engine   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Main Engine   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Propeller and Shaft (Copp)  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Auxiliary Diesel Engines  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Harbour Diesel Engines  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>SYSTEM FOR MACH. MAIN EQUIPMENTS</b>   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Fuel Oil System   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Lube Oil System   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Cooling System  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Compressor Air System   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| (Starting gen. purpose & Inst. Air System)  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Automation System for Machinery   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| <b>ELECTRIC INSTALLATION, NAVIGATION &amp; COMMUNICATION SYSTEMS/SHIP SYSTEM</b>  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - MCB w/ GFI Protection System  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Cabling & Accessories   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Transformer, Battery Charger, Accumulator                                       |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Lighting, Search & Floodlight, Lamp, etc.                                       |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Motor & Starter, etc. w/ A.R.C.   |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Telecommunication: Envi. Telem., Talkback System Telephone System               |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Nav. Sys.: GyroCompass, EchoSounder, Sonar, Night Light, Radar, etc.            |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |
| - Radio Equipment VHF, SSB  |            |       |        |        |        |        |        |        |        |        |         |         |         |        |         |         |         |         |         |         |  |  |  |  |  |         |

- Materials & Equip. Arrival at Yard
- Activity
- Launching
- Delivery
- Keel laying

PT. DOK & PERKAPALAN KODIA BAHARI  
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 PT. DOK & PERKAPALAN KODIA BAHARI  
 Jl. PERSERIBUAN BULU DAN LAUT SANAWAN M.Sc. Eng.  
 Operation Director

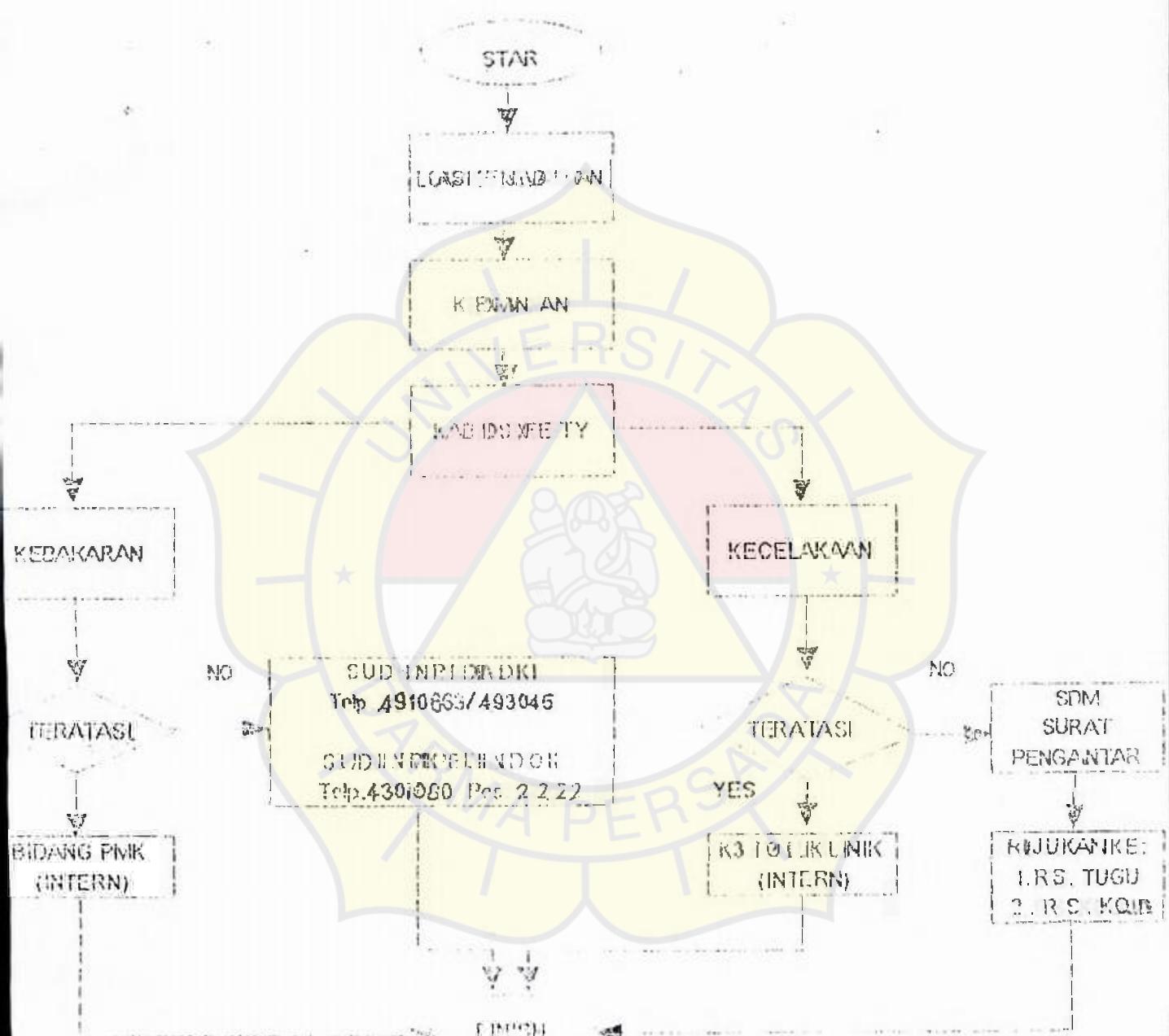
Jakarta, July, 21, 2000

(PERSENGERA)

Minarude

BIDANG SAFETY  
UNIT PRODUKSI JAKARTA IV

FLOWCHART PENEINGGULANAGAN KEBAKARAN/  
KECELAKAAN KERJA



Jakarta 10 Oktober 2002

Kabid. SAFETY

EUFRI SANTOSO

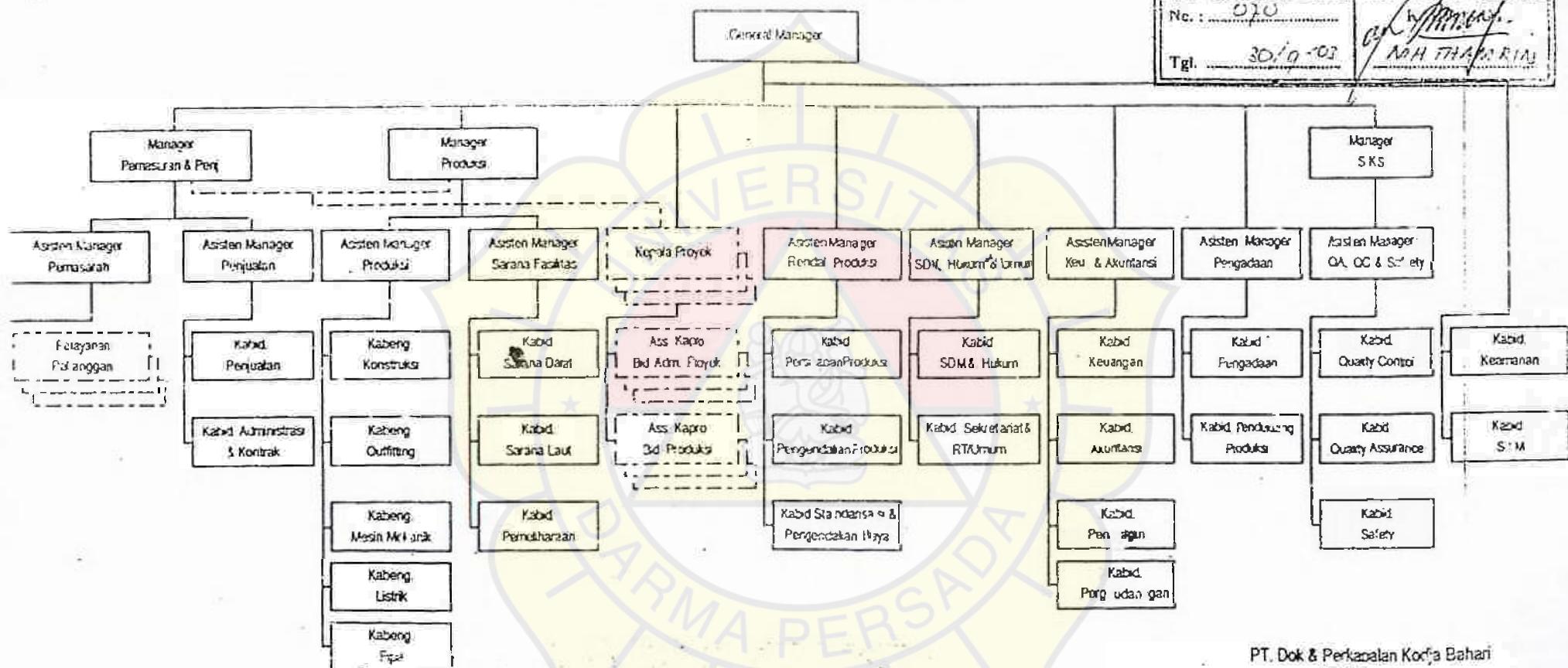
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YONG SYAERIL

# STRUKTUR ORGANISASI

## UNIT PRODUKSI JAKARTA IV



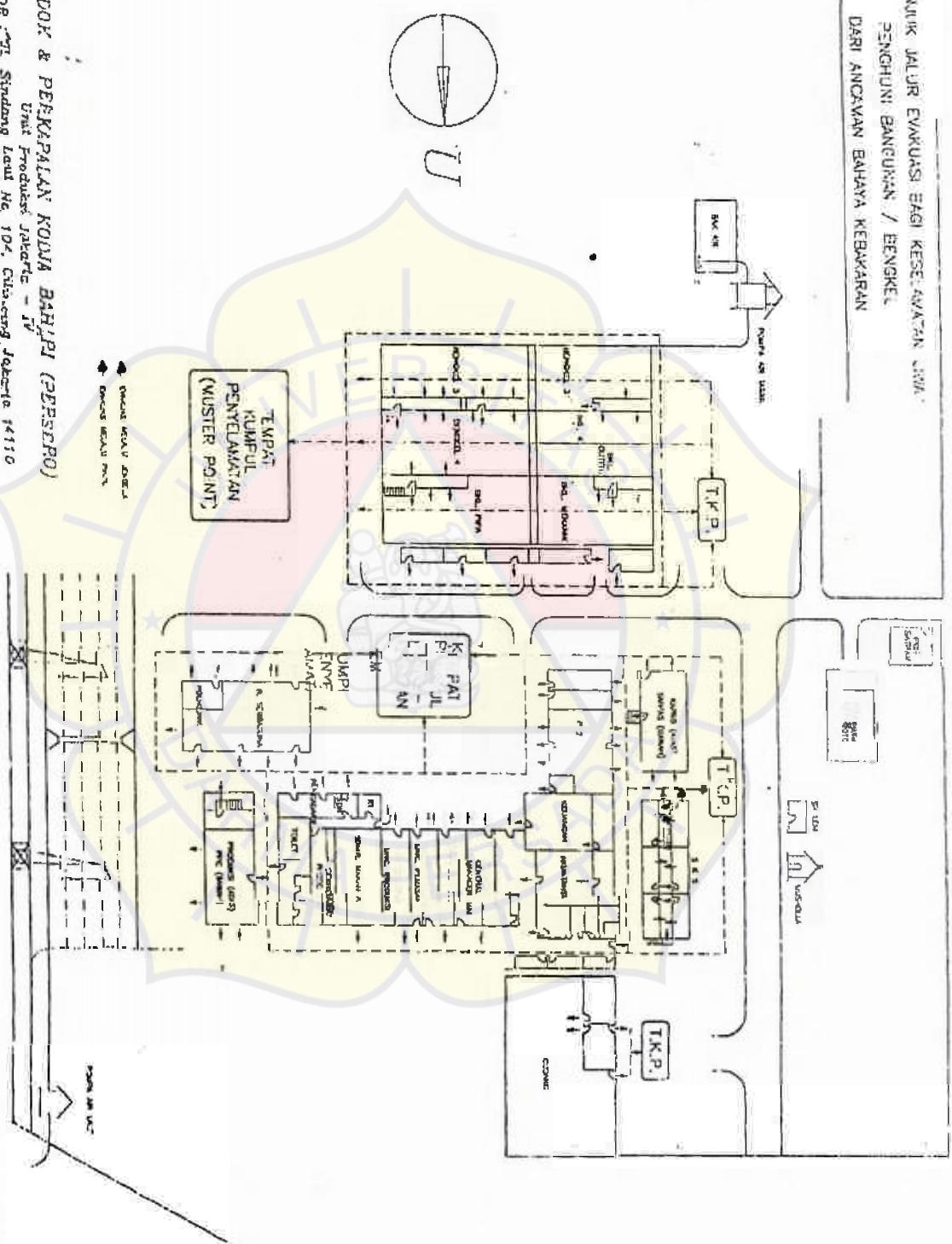
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| PT. DOK & PERKAPALAN KOJA BAHARI<br>(PERSERO) |               |
| No. : 079                                     | Tgl. 30/07/03 |
| M. H. THAUMIRIA                               |               |

PT. Dok & Perkapalan Koja Bahari  
(Persero)

**DKBS**  
SHIPYARD & ENGINEERING

Dok & Perkapalan Koja Bahari  
(PERSERO)

PETUNJUK JALUR EVAKUASI BAGI KESELAHATAN SIRIA  
PENGHUNI BANGUNAN / BENGKEL  
DARI ANCAWAN BAHAYA KEBAKARAN



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