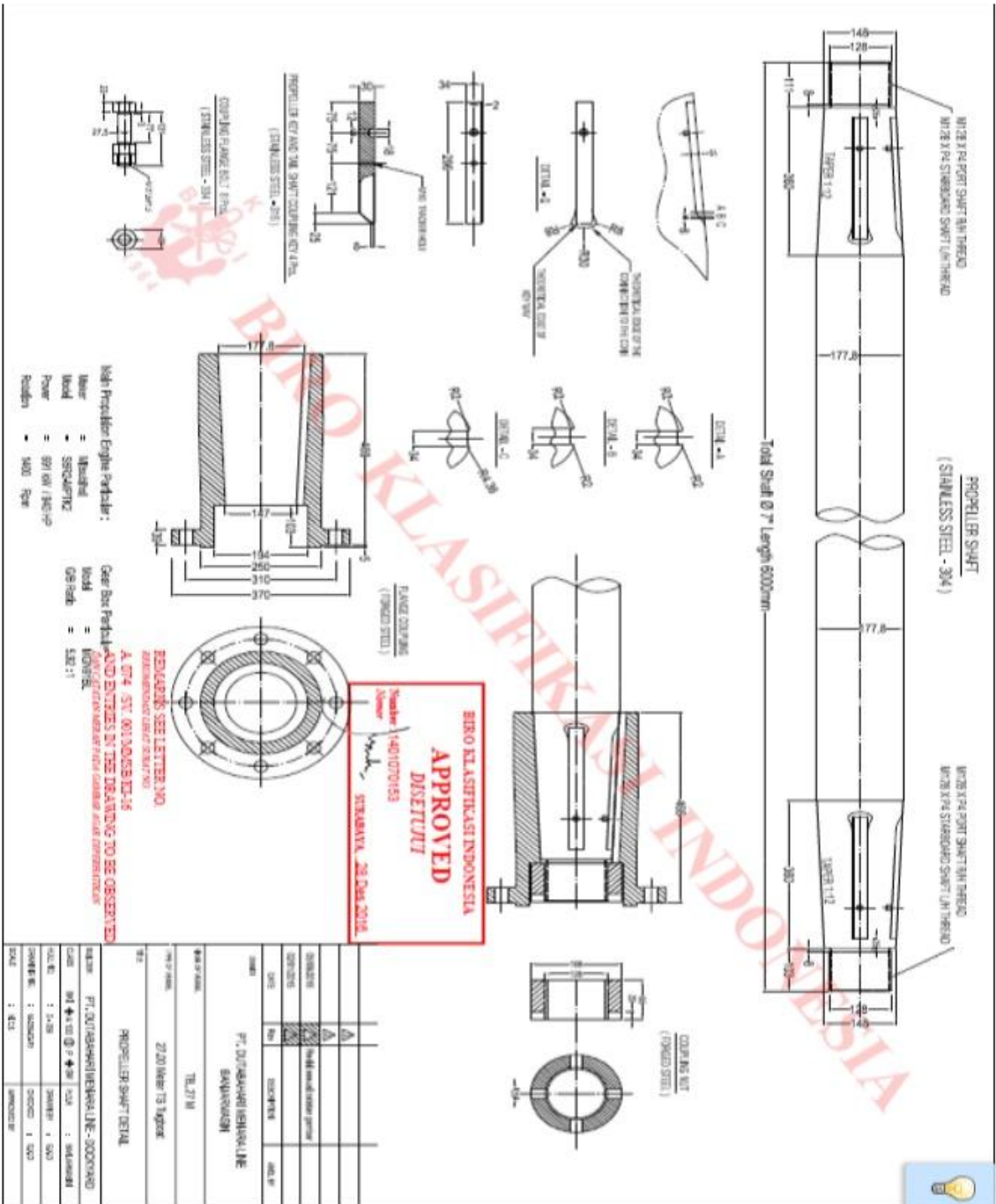


# LAMPIRAN

# Lampiran 1 Ukuran Shaft propeller



## Lampiran 2 Spesifikasi Kapal Tugboat 27 M



### Tugboat - 27m

#### Specifications

##### GENERAL

Classifications	BKI RINA
Type	Twin Screw Tug
Main Engine	2x 1100 HP
Materials	ABS GRA
GRT / NR	207 / 63
Bollard Pull	20 T
Design speed	12 Knots @ 100% MCR

##### DIMENSIONS

Length Over All	27.00M
Breath Moulded	8.20M
Depth Moulded	4.00M
Design Draft	3.00M
Compiement	12 Men

##### TANK CAPACITY

Fresh Water tank cap	43m <sup>3</sup>
Ballast Tank	20.7m <sup>3</sup>
Fuel Oil tank capacity	129.8 m <sup>3</sup>
Dirty Oil Tank	5.5m <sup>3</sup>
Sewage	3m <sup>3</sup>

##### DECK LAYOUT

Anchor	2 x 300 Kgs Stockless
Anchor chain	Diameter 19 mm x 247.5 meter
Winch	ROTOR Type TA/12m-4-B5 ECHTOP Hydraulic Double Gypsy
Fendering	Tyre fender, Half Pipe Fender

##### SAFETY EQUIPMENT

Windows & Scuttles	Marine windows & Scuttles
Safety equipment	According to class and government requirement
Fire fighting equipment	Fire alarm Gas detector PA system Tank level alarm Portable fire extinguisher Fire hydrant

##### PROPULSION SYSTEM

Main Engine	YANMAR- 6EY-17W/837KW/1450 RPM x 2
Gearbox	YANMAR (Kanzaki) YX-H - 500L /RATIO: 4.96 x 2
Generator	YAMAGEN - YTG75TLV-OM x 2 52KW/65 kva/1500RPM/380/220V/50Hz/3PH
Gear	1 Electro hydraulic steering gear 2 x 4 TM
Rudder	Steel 2 sets
Shafting & Stern tub	2 x 8" dia. Stainless steel shaft c/w standart accessories
Propeller	Four bladed fixed pitch -Mikado

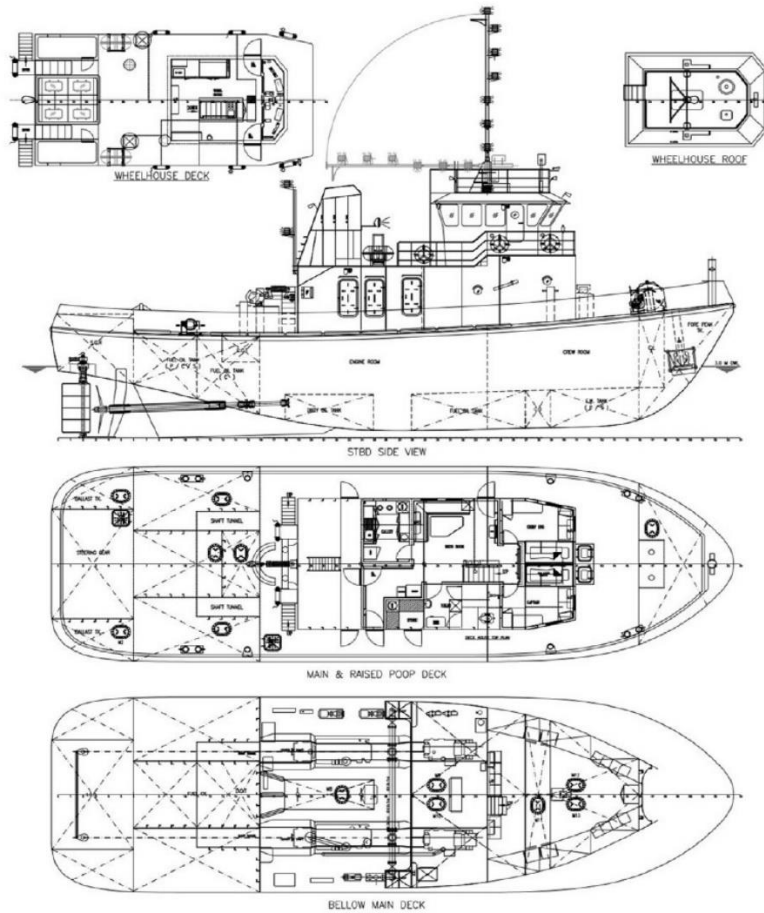
##### AUXILIARY EQUIPMENT

Navigation equipment	Complete set
Communication equipment	Complete set
Fresh Water Pump	Davey Model XP350p8C,RPM 2850/220-250V/2.BA/50Hz/ CAP 100L/M HEAD 12.5
Pump GS	EBARA PUMP; Model 65 x 50 FSHA; 300 l/m Head 50m (7.5 KW/380V/415W/2900RPM/50Hz/14.4/-8.29)
Bilge Pump	EBARA Pump ; Model 50 x 40 FSHA; Cap 200 l/m Head 40m (3.79KW/220V/380W/2950RPM/50Hz/12.7A)
Pump BEM	Model GL -32-5; Type, Capacity .65/71l/min/ Speed .1720 /1450RPM
Oil Water Separator	15p.p.m. ZHP -CYF -0.25m <sup>3</sup> /h

\* The above calculation are only preliminary design information.  
\* Image shown for reference purpose.

### Lampiran 3 Spesifikasi Kapal Tugboat 27 M

## General Arrangement



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