

GAMBAR 1


**PT. KARYA SUMBER ENERGY
SHIP'S PARTICULARS**

NAME MV ENERGY PROSPERITY		KEEL LAID 9-Feb-98	SATELLITE COMMUNICATION	
CALL SIGN 3 F Q K 5	LAUNCHED 30-Mar-98	NIM-C 437305613		
FLAG PANAMA	DELIVERED 29-May-98	E-MAIL energy_prosperity@fo.cepsatmail.com		
PORT OF REGISTRY PANAMA	SHIPYARD SASEBO HEAVY INDUSTRIES CO LTD	PHONE (007) 870 77399 1041 (FBB)		
OFFICIAL NUMBER 4516013	HULL NO 421	FAX		
IMO NUMBER 9186924		TELEX		
CLASS SOCIETY NK		MMSI 373056000		
CLASSIFICATION CHARACTER NS*(BULK CARRIER)(ESP)MNS*		EX NAME MV OAK WAVE		
P & I CLUB AMERICAN STEAMSHIP		CS / FLAG PANAMA		

OWNERS FIORENZA PTE LTD	OPERATORS PT KARYA SUMBER ENERGY, JL KALI BESAR BARAT NO 37 JAKARTA BARAT - 11230 INDONESIA +62216910382, PIC SUHAFRINAL, MOBILE PHONE +6281381699009, EMAIL, suha@indoshipping.com, dpa.kse1@gmail.com	TLP
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PRINCIPAL DIMENSIONS	
LOA	229.00 M
LBP	218.00 M
BREADTH	36.53 M
DEPTH (molded)	18.50 M
HEIGHT (maximum)	46.85 M
BRIDGE FRONT - BOW	196.8 M
BRIDGE FRONT - STERN	32.2 M

TONNAGE	
NET	23928 MT
GROSS	43022 MT
GROSS Reduced (Rr: 13495)	NA

LOAD LINE INFORMATION		FREEBOARD	DRAFT	DWT
TROPICAL FRESH	5181	13.078 M	79,799	
FRESH	5428	13.111 M	77,828	
TROPICAL	5455	13.084 M	79,844	
SUMMER	5722	12.817 M	77,828	
WINTER	5989	12.550 M	75,814	
LIGHT SHIP T= 10,957 MT		TPC = 75.42 M		

TANK CAPACITIES (cbm)		
CARGO HOLD CAPACITY		BLST TKS (100 %)
GRAIN (M3)	BALE (M3)	F.P.Tk 2420
NO.1 11240	NO.1	NO.1P/S 1282
NO.2 13717	NO.2	NO.2P/S 1746
NO.3 13608	NO.3	NO.3P/S 3498
NO.4 13525	NO.4	NO.4P/S 1748
NO.5 13639	NO.5	NO.5P/S 1748
NO.6 13702	NO.6	NO.6P/S 1708
NO.7 12361	NO.7	APT 567
		NO.4CH 13525
TOTAL 91792	TOTAL	TOTAL 28242

MACHINERY / PROPELLER / RUDDER		BUNKER TANKS M³	WINCHES / WINDLASS / ROPES / EMERGENCY TOWING
MAIN ENGINE MITSUBI B&W 5980MC X 1 SET	M.C.R 9895 kw (13400 ps) x 102 rpm	1 FO TK 619	FWD AFT PARTICULARS
NSR 8377 kw (11390 ps) x 96.6 rpm	MAX CRITICAL RANGE 51 - 60 RPM	2 FO TK 892	WINCHES 2 (d. drmm) 2 (d. dr)
AUX. BOILER TYPE composite boiler	GENERATOR (3 sets) 3 x 680 PS @ 900 rpm	3 FO TK 995	MRG Ropes 6 6 15t x 15 m/min
GENERATOR (3 sets) 3 x 680 PS @ 900 rpm	EMER D.G. 1 x 80 KW @ 1800 rpm	SET TK 15	Winch BHC
PROPELLER 5-Blade, fix pitch, D= 4,950 mm	RUDDER Material forged steel KSF45	SER TK 15	WINDLASS 2 NIL 29.5 t x 6 m/min
STEERING GEAR ELECTRO-HYDROLIC. DFT-125	FW GENERATOR CAP 20 T/Day	TOTAL 2536	FIRE WIRE N/A N/A
		DOT 193	ANCHOR 2 0 stockless 7875 kg x 2 set
		DOT (S) -	EMG. TOWING 2 N.A.
		1 DO Srv 5.0	
		2 DO Srv 5.0	
		TOTAL	

BALLAST PUMPING SYSTEM				LIFE BOATS	
MAIN PUMPS	NO.	CAPACITY	HEAD	RPM	2 x 25 Persons
BALLAST PUMP	1	1300	25	1200	MAKER
BALLAST PUMP	2	1300	25	1200	SEKIGARA CO LTD
					Totally enclosed

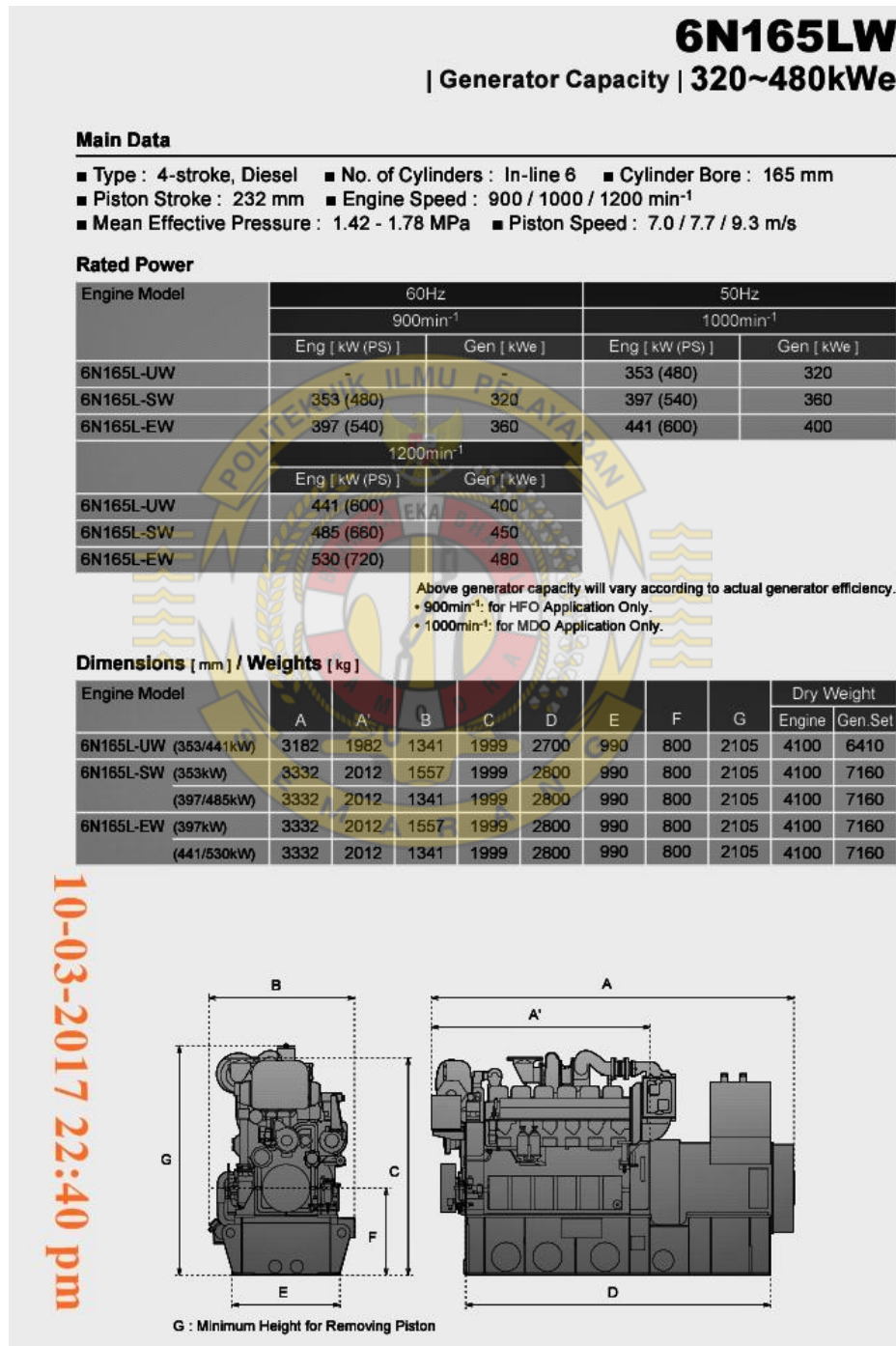
CRANES	
N/A	

FIRE FIGHTING SYSTEM	
E/RM	FIX CO2, FIRE HYDRANT, PORTABLE FOAM & DRY CHEM
CARGO/ DK AREA	FIRE HYDRANT

LUBE OIL TANK M3	
1 CYL OIL TANK	25.000M3
2 CYL OIL TANK	-
1 SYS OIL TANK	16.000M3
2 SYS OIL TANK	4.000M3
TOTAL	45.000M3

Ship Particular

GAMBAR 2



Diesel Generator Engine Particular

GAMBAR 3

OWNER'S MANUAL

1.2. BASIC TECHNICAL DATA

Form 1

	CQ6230 SERIAL	C0632C
Max swing over bed	Ø 300 mm	Ø 320mm
Max swing over gap	Ø 430 mm	Ø 450mm
Max swing over cross slide	Ø 180 mm	Ø 180mm
Distance between centers	900 mm / 750 mm	1000 mm
Taper of spindle bore	38 mm	
Range of spindle speed	9 steps 75—1400 rpm / 18 steps 65-1810 rpm	
Taper of spindle bore	M.T. 5	
Taper of tailstock spindle	M.T. 3	
Max. travel of carriage	760mm / 560 mm	880 mm
Max. travel of cross slide	130 mm	
Max. travel of top slide	75 mm	
Max. travel of tailstock spindle	100 mm	
Motor power	1.1 KW / 1.5 KW	

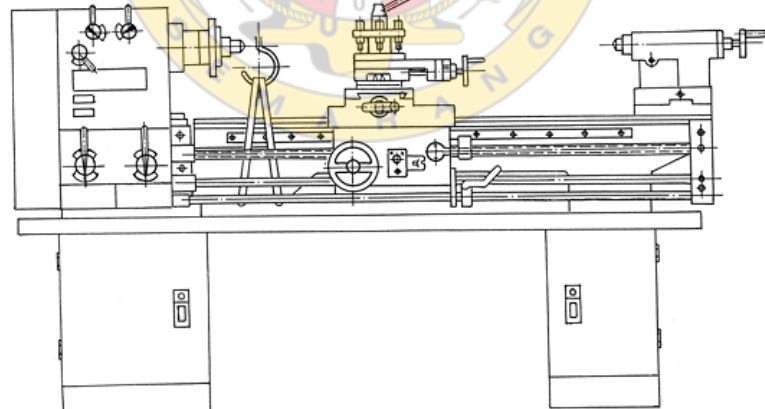
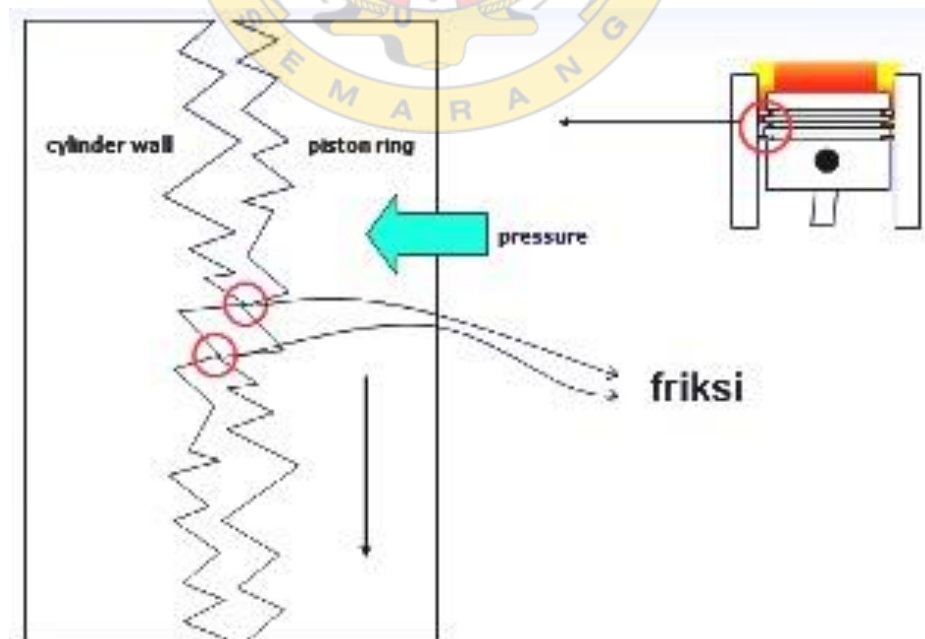


Fig.2 Position to hoist the lathe

GAMBAR 4



Abrasive Wear on Diesel Engine Generator's Cyliner Liner



Abrasive Wear Process

GAMBAR 5

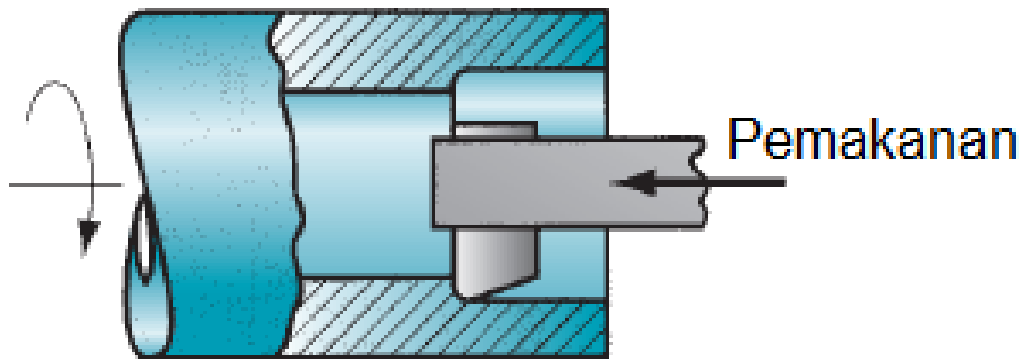


Spare Part Liner Silinder Yang Akan Dibubut

GAMBAR 6



Mesin Bubut Yang Digunakan

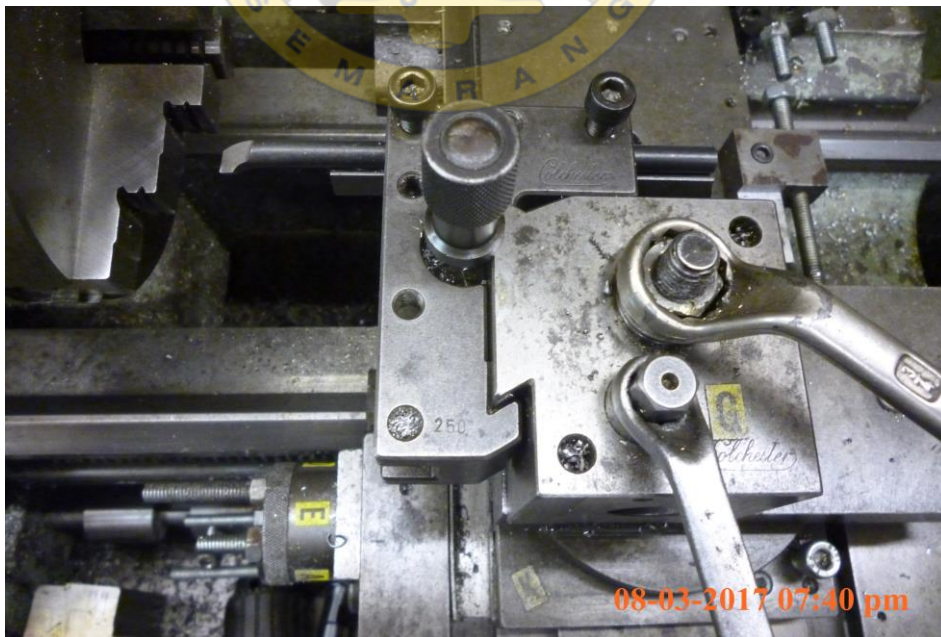


Metode Bubut Boring

GAMBAR 7



Pahat Bubut Dalam



Pemasangan Pahat

GAMBAR 8



Proses Bubut Terhadap Spare Part Liner Silinder

GAMBAR 9



Spare Part Liner Silinder Setelah Dibubut