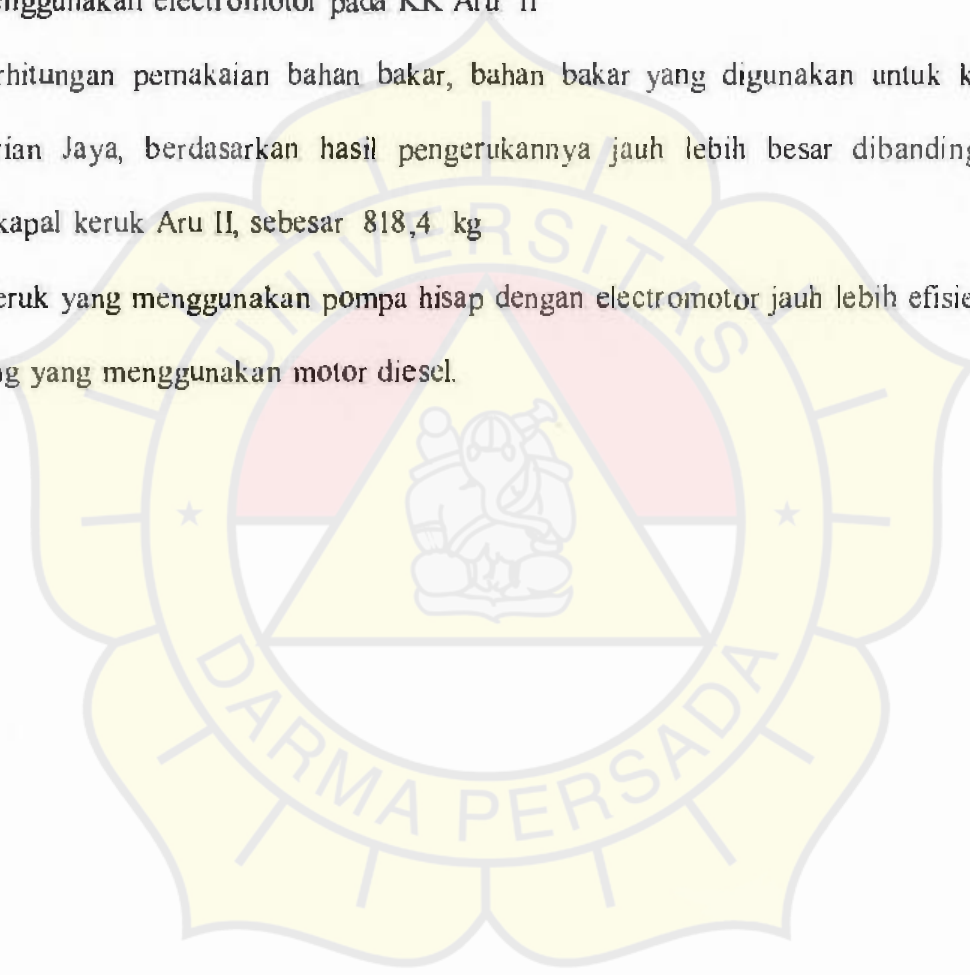


## BAB IV

### KESIMPULAN

Dari pembahasan dan perhitungan dapat disimpulkan hal-hal sebagai berikut:

1. Dalam hal perawatan pompa hisap yang tenaga penggeraknya motor diesel memerlukan perhatian khusus sejumlah crew kapal, dibanding dengan pompa hisap yang menggunakan electromotor pada KK Aru II
2. Dari perhitungan pemakaian bahan bakar, bahan bakar yang digunakan untuk kapal keruk Irian Jaya, berdasarkan hasil pengerukannya jauh lebih besar dibandingkan dengan kapal keruk Aru II, sebesar 818,4 kg
3. Kapal keruk yang menggunakan pompa hisap dengan electromotor jauh lebih efisien dibanding yang menggunakan motor diesel.



## OHM'S LAW

THE RATE OF THE FLOW OF THE CURRENT IS EQUAL TO ELECTROMOTIVE FORCE DIVIDED BY RESISTANCE.

ELECTROMOTIVE FORCE = VOLTS = "E"  
 CURRENT = AMPERES = "I"  
 RESISTANCE = OHMS = "R"      AMPERES =  $\frac{\text{VOLTS}}{\text{OHMS}}$

### SERIES CIRCUIT

A SERIES CIRCUIT IS A CIRCUIT THAT HAS ONLY ONE PATH THROUGH WHICH THE ELECTRONS MAY FLOW.  
 NOTE: "T" STANDS FOR TOTAL.

$$E_T = E_1 + E_2 + E_3$$

$$I_T = I_1 = I_2 = I_3$$

$$R_T = R_1 + R_2 + R_3$$

### PARALLEL CIRCUIT

A PARALLEL CIRCUIT IS A CIRCUIT THAT HAS MORE THAN ONE PATH THROUGH WHICH THE ELECTRONS MAY FLOW.

$$E_T = E_1 = E_2 = E_3$$

$$I_T = I_1 + I_2 + I_3$$

$$\frac{1}{R_T} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$



NOTE: FOR A PARALLEL CIRCUIT HAVING ONLY TWO RESISTORS, THE FOLLOWING FORMULA MAY BE USED.

$$R_T = \frac{R_1 \times R_2}{R_1 + R_2}$$

## LOW VOLTAGE CABLE

Type : NYFGbY - 0,6/1 kV SII.0211-78 (SPLN 43-2 : 1981)  
 (PVC Insulated, Galvanized Flat Steel Wire Armoured, PVC Sheathed)  
 Size : 5 x 5 ..... 50 mm<sup>2</sup>.

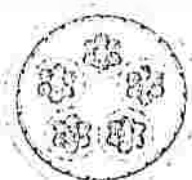


TABLE : 25

FIVE - CORES  
 0,6/1 kV COPPER CONDUCTOR  
 FLAT STEEL WIRE AND TAPE ARMOURED CABLE  
 MECHANICAL CHARACTERISTICS

Number of cores	Size	Conductor		Insulation Thickness	Vertical Clearance	Approx. Overall Dia.	Approx. Weight	Standard Length	Delivery Unit
		Construction	No. of wires						
(k)	mm <sup>2</sup>	-	-	mm	mm	mm	kg/km.	m.	-
5	1.5	re (rm)	1 (7)	0.8	1.8	16.4	556	500	OF UM
	2.5	re (rm)	1 (7)	0.9	1.8	17.7	644	500	
	4	re (rm)	1 (7)	1.0	1.8	19.5	775	500	
	6	re (rm)	1 (7)	1.0	1.8	20.0	1089	500	
	10	re (rm)	1 (7)	1.0	2.0	20.5	1387	500	
	16	re (rm)	1 (7)	1.0	2.0	28.7	1916	500	
	25	rm	7	1.2	2.0	33.0	2732	500	
	35	rm	7 (19)	1.2	2.0	37.0	3302	500	
	50	rm	19	1.4	2.2	42.0	4413	500	

## ELECTRICAL CHARACTERISTICS

Number of cores	Size	Resistance at 20°C		Current Carrying Capacity		Short Circuit Current at 1 Sec	Test Voltage
		Conductor	Insulation	In Ground	In Air		
		DC Calculated	M. Ohm, km	A	A	kA	kV/10 min
5	1.5	12.1	62	24	18	0.17	4
	2.5	7.28	57	32	25	0.29	4
	4	4.56	52	41	34	0.46	4
	6	3.03	44	52	44	0.70	4
	10 ✓	1.81	36	69 ✓	60 ✓	1.16	4
	16	1.14	26	89	80	1.86	4
	25	0.74	26	116	105	2.91	4
	25 ✓	0.524	22	138 ✓	130 ✓	4.07	4
	50	0.387	22	165	160	5.81	4

R01/079:

E12.03: GAE - No Fuse Breaker (Auto Breakers) with Thermal Overload and Magnetic Short Circuit Fix Tripping, 3 pole, Seri X3

Type	Ampere	Interrupting Capacity (KA) 380 V/ 50 Hz	No. Kode	Harga Rp.
G53 NFB	10	2,5	E1.E12.03.101	50.600
G53 NFB	15	2,5	E1.E12.03.102	50.600
G53 NFB	20	2,5	E1.E12.03.103	50.600
G53 NFB	30	2,5	E1.E12.03.104	50.600
G53 NFB	40	2,5	E1.E12.03.105	50.600
G53 NFB	50	2,5	E1.E12.03.106	50.600
G53 NFB	60	2,5	E1.E12.03.107	50.600
G103NFB	60	5	E1.E12.03.108	71.500
G103NFB	75	5	E1.E12.03.109	71.500
G103NFB	100	5	E1.E12.03.110	71.500
G203NFB	125	10	E1.E12.03.111	157.300
G203NFB	150	10	E1.E12.03.112	157.300
G203NFB	175	10	E1.E12.03.113	157.300
G203NFB	200	10	E1.E12.03.114	157.300
G203NFB	225	10	E1.E12.03.115	157.300
G403NFB	250	18	E1.E12.03.116	409.200
G403NFB	300	18	E1.E12.03.117	409.200
G403NFB	350	18	E1.E12.03.118	409.200
G403NFB	400	18	E1.E12.03.119	409.200

RUPA-RUPA SWITCHING MATERIALS  
SIGNAL LAMP HOLDER DLL

E12.04: Microswitch (AEG)

Type	Actuator	Ampere	No. Kode	Harga Rp.
MS 6 2	Plunger	6	E1.E12.04.008	22.000

400000 - Limit Switches

Rating: 6A

Contact: 1 NO/ 1 NC

Type	Actuator	No. Kode	Harga Rp.
83.840.0	Plunger	E1.E12.04.201	26.400
83.846.0	Spring	E1.E12.04.204	29.700
83.843.0	Rotating Head/Basic	E1.E12.04.205	26.400

Level Roller Actuator for Limit switch 83.843.0

Type	Actuator	No. Kode	Harga Rp.
79210776	Bend Roller	E1.E12.04.251	5.500
79210585	Straight Roller	E1.E12.04.252	5.500



Harga- harga barang ini adalah harga Jakarta, berlaku tidak mengikat dan  
berlaku untuk pembelian langsung ke pabrik atau distributor.

## DAFTAR PUSTAKA

1. A.R. Margunadi (Pengantar Umum Electroteknik )
2. Austhin H. Church. Zulkifli Harahap ( Pompa dan Blower Sentrifugal )
3. DEPDIBUD 1977 PENDIDIKAN MENENGAH TEKNOLOGI ( Motor Bakar )
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6. J. Trommelmans ( Prinsip-Prinsip Mesin Diesel )

