

BAB V

PENUTUP

A. Kesimpulan

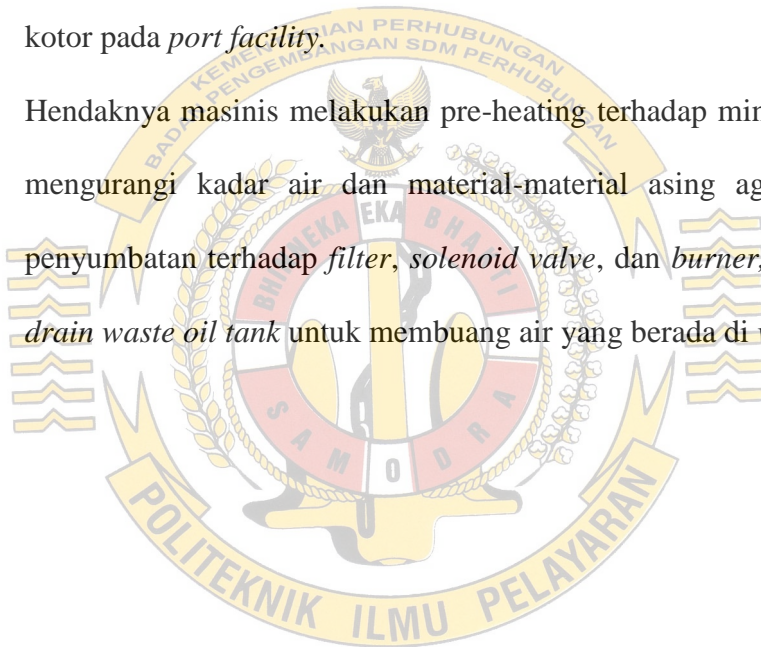
Berdasarkan hasil penelitian dan pengolahan data yang telah diperoleh pada hasil analisa resiko perawatan sistem *incinerator* maka dapat diambil kesimpulan sebagai berikut:

1. Faktor-faktor yang menyebabkan tidak normalnya kerja *incinerator* adalah kurangnya perawatan terhadap bagian-bagian *incinerator* dan kurangnya *spare part* yang ada di atas kapal guna menunjang kerja *incinerator* agar bekerja dengan normal.
2. Dampak yang terjadi akibat tidak normalnya kerja *incinerator* yaitu *maintenance* yang tidak sesuai dengan PMS, banyaknya jumlah minyak kotor, *incinerator* akan *shut down* atau *trip* apabila gangguan tersebut terjadi saat sistem *incinerator* sedang beroperasi, dan hal tersebut akan dapat berakibat pada jumlah minyak kotor yang menumpuk dan perlu dibuang pada *port facility*, sehingga perusahaan perlu mengeluarkan biaya tambahan yang seharusnya tidak perlu.
3. Upaya yang dilakukan untuk mengatasi tidak normalnya kerja *incinerator* adalah dengan pemanasan minyak kotor yang ada di *waste oil tank*, dan melakukan perbaikan segera saat *incinerator* terjadi alarm yang dapat diketahui dari warna pembakaran, temperatur yang melebihi batas dan *alarm*.

B. Saran

Berdasarkan masalah di atas maka Penulis dapat memberikan saran yaitu:

1. Hendaknya masinis melakukan perawatan terhadap komponen *incinerator* yang memiliki tingkat kegagalan/masalah yang tinggi dan melakukan requisition untuk *spare part incinerator* guna menunjang operasional *incinerator* agar bekerja dengan baik.
2. Hendaknya para masinis bisa manage jumlah *waste oil* yang ada di kapal dengan cara melakukan perawatan terhadap *incinerator* agar perusahaan tidak mengeluarkan biaya tambahan untuk membuang minyak kotor pada *port facility*.
3. Hendaknya masinis melakukan pre-heating terhadap minyak kotor untuk mengurangi kadar air dan material-material asing agar tidak terjadi penyumbatan terhadap *filter*, *solenoid valve*, dan *burner*, dan melakukan *drain waste oil tank* untuk membuang air yang berada di *waste oil tank*.



DAFTAR PUSTAKA

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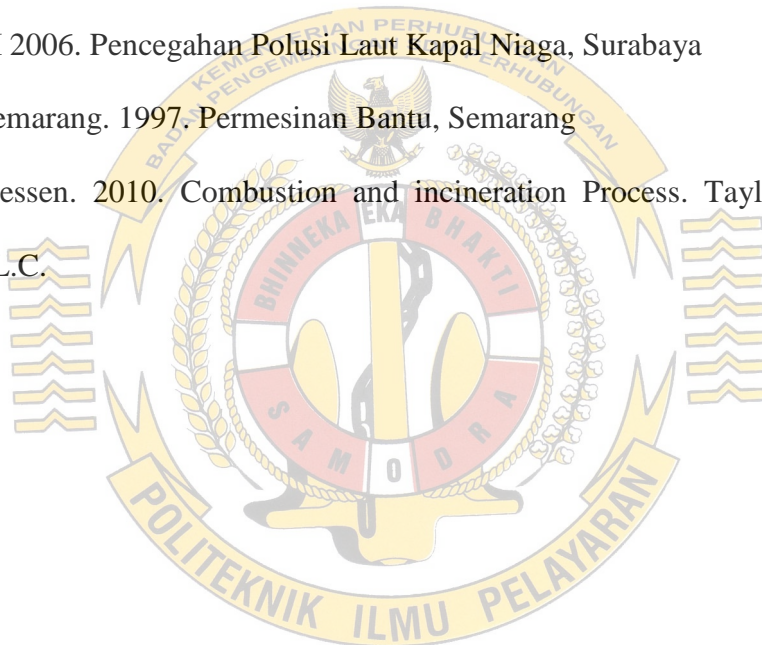
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Lampiran: jadwal perawatan komponen *incinerator*

No	Item	Periodically maintenance
1	Cooling fan	Once a year
2	Waste oil solenoid valve	Weekly
3	Auxiliary burner	Monthly
4	Incinerator chamber	Weekly
5	Waste oil burner	Weekly
6	Flame eye	Daily
7	Exhaust gas thermostat	Once a year
8	Waste oil pump	Once a year
9	Filter	Daily



WAWANCARA

Wawancara yang saya lakukan di kapal MT. Sara terhadap beberapa responden untuk memperoleh informasi sebagai bukti dan data primer bagi skripsi yang saya buat, sehingga diperoleh data yang mendukung terhadap penelitian yang saya lakukan. Adapun wawancara yang saya lakukan terhadap responden adalah sebagai berikut:

Wawancara mengenai faktor-faktor yang menyebabkan tidak normalnya kerja *incinerator*

Wawancara terhadap *chief engineer*

Cadet : *Good evening sir*

Chief Engineer : *Good Evening Annas*

Cadet : *I'm sorry for disturbing your rest time sir, but i really wanna ask you some question about our beloved incinerator, would you mind to help me out ?*

Chief Engineer : *No problem, at least I can share my knowledge with you.*

Cadet : *Since our incinerator lately working abnormally, what kind of factor do you think causing our incinerator running abnormal sir ?*

Chief Engineer : *Depending on my experience, there are a lot of factors causing incinerator running abnormal such like clogged burner, clogged solenoid valve, clogged filter, abnormal cooling fan, incinerator chamber, worn off flame eye, worn off thermocouple.*

Cadet : *Thank you for your information sir.*

Wawancara terhadap *second engineer*

Cadet : Good morning sir

Second Engineer : Annas, good morning what's going on

Cadet : I'm sorry for disturbing your rest time sir, but i really wanna ask you some question about our beloved incinerator, would you mind to help me out ?

Second Engineer : ok go ahead, i'll tell you what you need

Cadet : Since our incinerator lately working abnormally, what kind of factor do you think causing our incinerator running abnormal sir ?

Second Engineer : on our ship what i observed that causing and the factors that incinerator running abnormal was clogged burner, clogged solenoid valve, clogged filter, incinerator chamber.

Cadet : Thank you sir

Wawancara dengan fourth engineer

Cadet : Good morning handsome guy

Fourth Engineer : Oh hello handsome guy

Cadet : can i ask you some question about our incinerator.

Fourth Engineer : yes you can, i can tell for all day long

Cadet : what kind of factors that causing incinerator running abnormal sir

Fourth Engineer : well as you know, during our duty and our observer the factor was clogged burner, worn off solenoid valve, clogged filter, and the cement chamber was already ruin that's the factor

Cadet : *Thank you for your information*

Wawancara mengenai dampak tidak normalnya kerja *incinerator*

Wawancara terhadap *chief engineer*

Cadet : *Good evening sir*

Chief Engineer : *Good Evening Annas*

Cadet : *May i know what is the impact for abnormal incinerator*

Chief Engineer : *Depending on my experience, the impact can causing oil pollution not on environment but on engine room that causing a lot of cleaning, more working outside PMS, more waste oil onboard, that is the impact*

Cadet : *Thank you for your information sir.*

Wawancara terhadap *second engineer*

Cadet : *Good morning sir*

Second Engineer : *Annas, good morning what's going on*

Cadet : *May i know what is the impact for abnormal incinerator*

Second Engineer : *As you know that will cause more work for us, and more waste oil onboard and we may need extra tank or spaces to accumulate waste oil*

Cadet : *Thank you for your information sir*

Wawancara dengan *fourth engineer*

Cadet : *Good morning handsome guy*

Fourth Engineer : *Oh hello handsome guy*

Cadet : *May i know what is the impact for abnormal incinerator*

Fourth Engineer : *As you know and what we've been through we have a lot of waste oil during that time, and more work outside the PMS, that's what you got if incinerator running abnormal*

Cadet : *Thank you for your information*

Wawancara mengenai upaya yang dilakukan

Wawancara terhadap *chief engineer*

Cadet : *Good evening sir*

Chief Engineer : *Good Evening Annas*

Cadet : *And what effort we have to do*

Chief Engineer : *What you have to do is stop the incinerator and analyze and recognize the alarm and do as manual book says*

Cadet : *Thank you for your information sir.*

Wawancara terhadap *second engineer*

Cadet : *Good morning sir*

Second Engineer : *Annas, good morning what's going on*

Cadet : *And what effort we have to do*

Second Engineer : *You have to stop the incinerator and inspect the burner, filter, and solenoid valve, during finish running you also check the chamber for foreign material*

Cadet : *Thank you for your information sir*

Wawancara dengan *fourth engineer*

Cadet : *Good morning handsome guy*

Fourth Engineer : *Oh hello handsome guy*

Cadet : *And what effort we have to do*

Fourth Engineer : *We have to stop the incinerator and inspect the burner, filter, and solenoid alve, during finish running you also check the chamber for foreign material, and don't forget to record it and log book*

Cadet : *Thank you for your information*



CREW LIST

Arrival Departure

1. Name of Ship			2. Port of <u>Arrival</u> / <u>Departure</u>					3. Date of <u>Arrival/Departure</u>	
LADY KATHLEEN			HONG KONG					16-Oct-2015	
4. Nationality of Ship			5. Port arrived from			6. Nature and No. of Identity		12. Place Signed-on	13. Date Signed-on
SINGAPORE			ZHUHAI			Document / Validity			
7. No.	8. Family Name, Given Name	9. Rank / Rating	10. Nationality	11. Date of Birth	Place of Birth	Passport Number	Date of Expiry		
1	GARCIANO SUNNY AMBLOZA	MASTER	FILIPINO	31 Aug 1967	BACOLOD CITY	EC2228278	27 Sep 2019	BALINGASAG PHILIPPINES	28 Agu 2015
2	BANAYAT RAYMUND FLORES	C/O	FILIPINO	21 Nov 1973	SAN FERNANDO LAU	EB4187116	30 Nov 2016	ILIGAN, PHILIPPINES	07 Okt 2015
3	ALDAY WILSON DE TORRES	2/O	FILIPINO	12 Dec 1975	SN JOSE BATANGAS	EC3596610	04 Mar 2020	BATAAN, PHILIPPINES	29 Apr 2015
4	AHMAD CHAERUL HERMAN	3/O	INDONESIAN	16 Aug 1987	PATTEDONG	A9248161	30 Oct 2019	VUNG TAU, VIETNAM.	21 Agu 2015
5	AUSTRIA DIEGO TORRES	C/E	FILIPINO	22 Apr 1974	CONSOLACION CEBU	EC2369477	09 Okt 2019	NAGA, PHILIPPINES	17 Sep 2015
6	DE GUZMAN JAIME TORRALBA	2/E	FILIPINO	05 Oct 1964	ZAMBOANGA CITY	EB4036541	09 Nov 2016	DAVAO, PHILIPPINES	25 Jul 2015
7	DELA MALAKAI	3/E	CITIZEN OF THE REPUBLIC OF THE FIJI ISLANDS	27 Oct 1980	SUVA, FIJI	734678	18 Jan 2018	MERAK, INDONESIA	16 Mar 2015
8	ALIB HARNIS WIJANARKO	Asst. Engr	INDONESIAN	03 Aug 1988	KENDAL	W795388	02 Feb 2016	TOKUYAMA, JAPAN	15 Mei 2015
9	CALISAGAN DIOPHIL MAGALSO	AB1	FILIPINO	15 Dec 1975	S OSMEÑA ZAM DN	EB3816663	06 Oct 2016	BATAAN, PHILIPPINES	29 Apr 2015
10	PAGUNTALAN ROGER ERNA	AB 2	FILIPINO	28 Oct 1986	CAUAYAN NEG OC	EB4186218	30 Nov 2016	TOKUYAMA, JAPAN	04 Feb 2015
11	SORIANO RICHARD DACASIN	AB 3	FILIPINO	23 Oct 1988	MALASIQUIL PGN	EB6136161	14 Aug 2017	BATAAN, PHILIPPINES	29 Apr 2015
12	MOE KYAW THU	OLR 1	MYANMAR	12 Aug 1982	YANGON	MA216713	17 May 2018	TOKUYAMA, JAPAN	15 Mei 2015
13	LASANGUE GLENN PAGDATO	OLR 2	FILIPINO	05 Sep 1981	CABATUAN ILOILO	EC3802704	26 Mar 2020	DAVAO, PHILIPPINES.	25 Jul 2015
14	RICKY TRISNO	OLR 3	INDONESIAN	11 Feb 1967	JAKARTA	A3580601	13 Agu 2017	VUNG TAU, VIETNAM.	21 Agu 2015
15	VITASA JUAN JOHN OLIPANO	C/CK	FILIPINO	29 Aug 1965	MAJAYJAY LAGUNA	EB5952836	16 Jul 2017	MERAK, INDONESIA	20 Feb 2015
16	SAW KE BLUT HSER	DTR	MYANMAR	9 April 1990	YANGON	MA628642	07 Apr 2019	TOKUYAMA, JAPAN	15 Mei 2015
17	AUNG MYAT KYAW	ETR	MYANMAR	29 Nov 1992	YANGON	MA014249	27 Dec 2017	TOKUYAMA, JAPAN	17 Nov 2014
18	YOHANES DAVIT KRISTIAN	DCDT	INDONESIAN	26 APR 1994	SLEMAN	A7898108	07 Apr 2019	BATAAN, PHILIPPINES	12 Jan 2015
19	ANNAS TIAN ARAFIDHA	ECDT	INDONESIAN	18 JULI 1994	CILACAP	A8189501	19 MAY 2019	BATAAN, PHILIPPINES	12 Jan 2015
Remark: all seaman are male including master									

14. Date and Signature by Master, authorized agent or Officer

16-Okt-15

CAPT. GARCIANO SUNNY AMBLOZA
Master LPG/C Lady Kathleen

SHIP'S PARTICULARS

Ship's Name **LADY KATHLEEN**
Type of Ship Liquefied Gas Tanker (Minimum Design Temp. 0°C)
Classification Lloyd's Register
IMO No. / Official No. **9167411 / 391812**
Port of Registry Flag **Singapore / Singapore**
Call sign / MMSI **9VHV5 / 565 040 000**
Owner Esplanade Park Shipping Co. Pte. Ltd.
Building Yard Tachibana Ship Building and engineering Ltd, Hoyo hama, Tokushima, Japan (Hull on 811)
Kell laid / Delivered 19th January 1998 / 6th November 1998

COMUNICATIONS

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MAIN DIMENSIONS

Length overall	99.60 m	Length Btw PP	92.08 m
Breadth Moulded	15.50 m	Extra Breadth	15.532m
Highest Point Above Keel	30.30 (16.2m Forward of the stern)	Depth	7.45 m
Parallel body(from manifold)	Loaded : F = 21.12m /A = 27.08m	FWA (Fresh Water Allowance) =	0.125 m
	Ballast : F = 18.65m /A = 22.65 m	TPC (Tonnes Per Centimeters) =	12.83t/cm
	Lightship : F = 14.78m /A = 17.54m		

REGISTERED TONNAGE

	International	Suez Canal (ID)	Panama Canal
GRT	3465	3956.24	Total Volume 12267 m ³
NRT	1039	3128.08	2969

TONNAGES

	Draft	Freeboard	Displacement	Deadweight
Light Ship			2175.32 MT	
Fresh water	5.938 m	1.546 m	6456.19 MT	3902.43 MT
Summer	5.813 m	1.671 m	6456.76 MT	4281.44 MT
Winter	5.692 m	1.792 m	5928.32 MT	4126.75 MT
Winter North Atlantic	5.642 m	1.842 m	6238.45 MT	4064.13 MT

MTC 12.51

TANKER CAPACITY

Ballast tanks	1173.9 m ³	1203.2 MT (SW)	28.3% of DWT
Bunkers	HFO 408.4 m ³	MDO 75.9 m ³	
Cargo tanks 100%	Tank 1: 1763.881 m ³	Tank 2: 1763.923 m ³	Total: 3527.804 m ³
Fresh water tanks P / S	88.8 m cub. Port / Strb;	Total: 177.6 m cub	

MANIFOLDS

Distance bow to center of manifold	47.65 m	Distance shipside to manifold	2.50 m
Distance stern to center of manifold	51.95 m	Distance deck to center manifold	1.255 m
Distance between liquid and vapour lines	1.25 m	Height of manifold above the keel	8.705 m
Liquid Line	8"/300 (ANSI)		
Vapour Line	5"/300 (ANSI)		

MOORING EQUIPMENT

Windlass with Mooring Winch: 2 X 8.6 T X 6 M/min. & 5.0 T X 15 M/min. (Electric Hydraulic) (Brake Windlass 15.3/53.7T)
Mooring Winch : 2 X 15.3 T X 15 M/min. (Electric Hydraulic) (brake holding power winch 45 T)
Anchor : Cast steel stock less AC-14 Type, 2.640 M.T X 3 Nos. X 2 set chains (46mm X 8 Shackles)

MACHINERY

Cargo Pumps : 2 Nos. X 250M³/Hr X 120MTH X 1750RPM (Electric Motor Deep-well type)
Cargo Compressor : 1030M³/Hr X 18.4 kg/cm²g 3 sets (Electric motor driven, reciprocating, single, oil less type)
Ballast Pump : 2 Nos. X 190/80 M cub /Hr X 20/75 MTH X 1800RPM (Electric Motor Centrifugal)
Inert Gas Generator : Oil Fried; 250 M cub /HR X 9 kg/Cm² Dew Point= -40C (2 fans X 350 M cub /Hr)
Main Engine : Akasaka-UE, 6UEC 37 LA, Eng.No. 37269, 3300 BHP at 195RPM maximum / 2760.83 KW
Propeller / Bkr. Consumption : 3450mm (Dia.) X 2.290 m. Pitch (9.0M.T./Day, M.E. only at normal rating)
Speed : Service Speed at 90% of MCR designed draught: 12.9 knots (with 15% Sea-Margin)

Capt. Alain H. Yutangco
MASTER

DAFTAR RIWAYAT HIDUP

Nama : Annas Tian Arafidha
Tempat/tgl lahir : Cilacap, 18 Juli 1994
NIT : 49124620. T
Alamat Asal : Perum Taman Gading
Jl. Mataram 7 No. B 142/143
Cilacap, Cilacap Selatan
Agama : Islam
Pekerjaan : Taruna PIP Semarang
Status : Belum Kawin
Hobby : Renang
Orang Tua
Nama Ayah : Edi Sarwono
Pekerjaan : PNS
Nama Ibu : Sunaryati
Pekerjaan : PNS
Alamat : Perum Taman Gading
Jl. Mataram 7 No. B 142/143
Cilacap, Cilacap Selatan



Riwayat Pendidikan

1. SD Negeri Mertasinga 03 Cilacap Lulus Tahun 2006
2. SMP Negeri 07 Cilacap Lulus Tahun 2009
3. SMK Dr. Soetomo 01 Lulus Tahun 2012
4. Politeknik Ilmu Pelayaran Semarang 2012 Sampai Sekarang

Pengalaman Prala (Praktek Laut)

Kapal : MT. Lady Kathleen
Perusahaan : BERNHARD SCHULTE SHIPMANAGEMENT
Alamat : Jl. Pemuda No.61, Rawamangun, Jakarta .Timur.