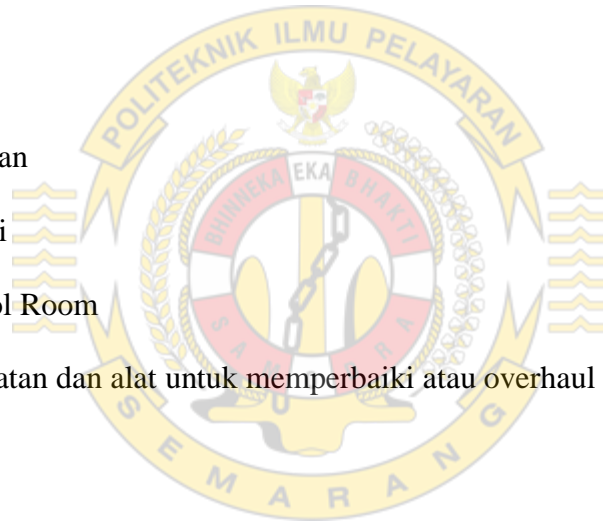


**LAMPIRAN 1**  
**HASIL WAWANCARA**

Cuplikan hasil wawancara Penulis bersama Masinis di MV. Armada Serasi yang dilaksanakan pada saat Penulis melaksanakan praktek laut.

Teknik : Wawancara  
Penulis/*Engine Cadet* : Hendra wirawan  
Masinis I : Marthen Tendi  
Tempat : Engine Control Room



Wawancara dilakukan saat menyiapkan peralatan dan alat untuk memperbaiki atau overhaul turbocharger, berikut hasil wawancara tersebut :

Cadet : “mohon ijin bass, mau tanya?”

Masisi I : “Iya det, tanya apa?”

Cadet : “kenapa crankshaft mesin induk mengalami keretakan ?”

Masisi I : “karena pelumasan yang keluar dari lubang crankshaft mengalami penurunan tekanan minyak det ”

Cadet : “kok bisa bass, kenapa?”

Masisi I : “karena minyak lumas yang keluar dari lubang crankshaft mengalami penyumbatan det”

Cadet : “Knapa bisa begitu bass, kan masinis I yang bertanggung jawab atas kinerja Mesin Induk ?”

Masisi I : “iya det benar, karena saya lalai dalam perawatan filter det, ”

Cadet : “Oh seperti itu iya bass?”

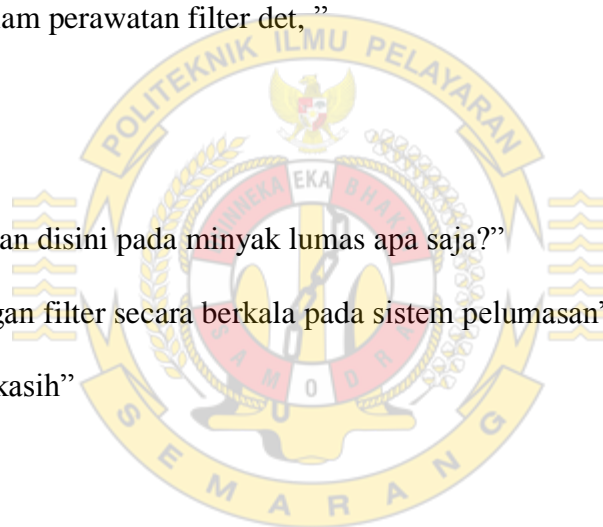
Masisi I : “Iya Man”

Cadet : “bass, kalo perawatan yang dilakukan disini pada minyak lumas apa saja?”

Masisi I : “Disini hanya membersihkan saringan filter secara berkala pada sistem pelumasan”

Cadet : “Oh seperti itu bass, ya siap terimakasih”

Masisi I : “Sama-sama det,”





**Correlations**

		item_1	item_2	item_3	item_4	item_5	skor_total
item_1	Pearson Correlation	1	.091	.335**	.108	.282*	.634**
	Sig. (2-tailed)		.462	.006	.383	.021	.000
	N	67	67	67	67	67	67
item_2	Pearson Correlation	.091	1	.218	-.056	.149	.499**
	Sig. (2-tailed)	.462		.077	.652	.228	.000
	N	67	67	67	67	67	67
item_3	Pearson Correlation	.335**	.218	1	.014	.174	.635**
	Sig. (2-tailed)	.006	.077		.908	.159	.000
	N	67	67	67	67	67	67
item_4	Pearson Correlation	.108	-.056	.014	1	.228	.441**
	Sig. (2-tailed)	.383	.652	.908		.063	.000
	N	67	67	67	67	67	67
item_5	Pearson Correlation	.282*	.149	.174	.228	1	.634**
	Sig. (2-tailed)	.021	.228	.159	.063		.000
	N	67	67	67	67	67	67
skor_total	Pearson Correlation	.634**	.499**	.635**	.441**	.634**	1

LAMPIRAN II  
HASIL UJI SPSS

Sig. (2-tailed)	.000	.000	.000	.000	.000	
N	67	67	67	67	67	67

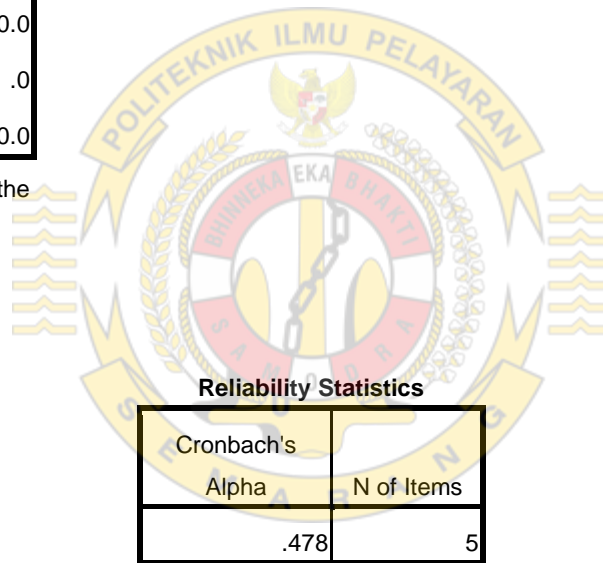
\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Case Processing Summary**

		N	%
Cases	Valid	67	100.0
	Excluded <sup>a</sup>	0	.0
	Total	67	100.0

a. Listwise deletion based on all variables in the procedure.



**Reliability Statistics**

Cronbach's Alpha	N of Items
.478	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item_1	17.90	1.489	.354	.356
item_2	17.99	1.682	.166	.482
item_3	17.88	1.440	.314	.379
item_4	17.84	1.776	.111	.513
item_5	17.90	1.489	.354	.356

#### Case Processing Summary

		N	%
Cases	Valid	67	100.0
	Excluded <sup>a</sup>	0	.0
	Total	67	100.0

a. Listwise deletion based on all variables in the procedure.

#### Reliability Statistics

Cronbach's Alpha	N of Items
.432	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item_1	17.85	1.523	.319	.317
item_2	17.69	1.673	.104	.464
item_3	17.67	1.466	.235	.370
item_4	17.69	1.643	.158	.424
item_5	17.70	1.364	.324	.296

**Correlations**

		item_1	item_2	item_3	item_4	item_5	skor_total
item_1	Pearson Correlation	1	.108	.085	.245*	.297*	.590**
	Sig. (2-tailed)		.385	.494	.046	.015	.000

	N	67	67	67	67	67	67
item_2	Pearson Correlation	.108	1	.112	-.019	.057	.460**
	Sig. (2-tailed)	.385		.369	.876	.646	.000
	N	67	67	67	67	67	67
item_3	Pearson Correlation	.085	.112	1	.064	.275*	.583**
	Sig. (2-tailed)	.494	.369		.605	.024	.000
	N	67	67	67	67	67	67
item_4	Pearson Correlation	.245*	-.019	.064	1	.115	.487**
	Sig. (2-tailed)	.046	.876	.605		.356	.000
	N	67	67	67	67	67	67
item_5	Pearson Correlation	.297*	.057	.275*	.115	1	.647**
	Sig. (2-tailed)	.015	.646	.024	.356		.000
	N	67	67	67	67	67	67
skor_total	Pearson Correlation	.590**	.460**	.583**	.487**	.647**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	67	67	67	67	67	67

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\* . Correlation is significant at the 0.01 level (2-tailed).



### Case Processing Summary

		N	%
Cases	Valid	67	100.0
	Excluded <sup>a</sup>	0	.0
	Total	67	100.0

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

Cronbach's Alpha	N of Items
.454	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item_1	17.88	1.440	.265	.381
item_2	17.75	1.495	.214	.417
item_3	17.90	1.519	.196	.429
item_4	17.88	1.501	.175	.447
item_5	17.85	1.341	.355	.314

**Correlations**

		item_1	item_2	item_3	item_4	item_5	skor_total
item_1	Pearson Correlation	1	.155	.176	.083	.216	.577**
	Sig. (2-tailed)		.210	.154	.504	.079	.000
	N	67	67	67	67	67	67
item_2	Pearson Correlation	.155	1	.007	.204	.146	.538**

	Sig. (2-tailed)	.210		.953	.098	.238	.000
	N	67	67	67	67	67	67
item_3	Pearson Correlation	.176	.007	1	-.007	.306*	.521**
	Sig. (2-tailed)	.154	.953		.956	.012	.000
	N	67	67	67	67	67	67
item_4	Pearson Correlation	.083	.204	-.007	1	.147	.524**
	Sig. (2-tailed)	.504	.098	.956		.234	.000
	N	67	67	67	67	67	67
item_5	Pearson Correlation	.216	.146	.306*	.147	1	.645**
	Sig. (2-tailed)	.079	.238	.012	.234		.000
	N	67	67	67	67	67	67
skor_total	Pearson Correlation	.577**	.538**	.521**	.524**	.645**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	67	67	67	67	67	67

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

#### Case Processing Summary

	N	%

Cases	Valid	67	100.0
	Excluded <sup>a</sup>	0	.0
	Total	67	100.0

a. Listwise deletion based on all variables in the procedure.

**Reliability Statistics**

Cronbach's Alpha	N of Items
.454	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
item_1	17.88	1.440	.265	.381
item_2	17.75	1.495	.214	.417
item_3	17.90	1.519	.196	.429

item_4	17.88	1.501	.175	.447
item_5	17.85	1.341	.355	.314

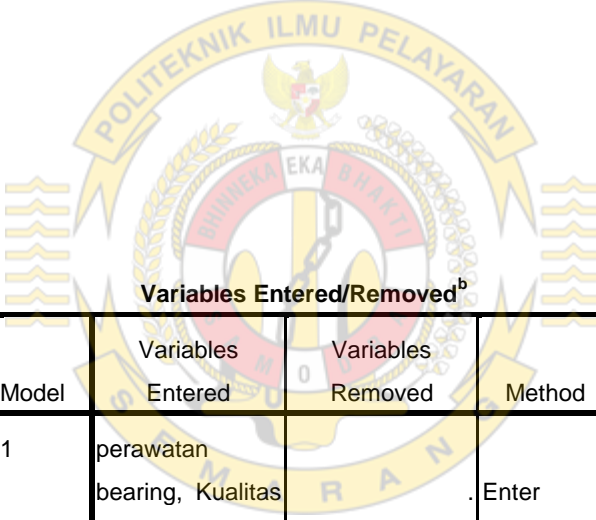
**Correlations**

		item_1	item_2	item_3	item_4	item_5	skor_total
item_1	Pearson Correlation	1	.155	.176	.083	.216	.577**
	Sig. (2-tailed)		.210	.154	.504	.079	.000
	N	67	67	67	67	67	67
item_2	Pearson Correlation	.155	1	.007	.204	.146	.538**
	Sig. (2-tailed)	.210		.953	.098	.238	.000
	N	67	67	67	67	67	67
item_3	Pearson Correlation	.176	.007	1	-.007	.306*	.521**
	Sig. (2-tailed)	.154	.953		.956	.012	.000
	N	67	67	67	67	67	67
item_4	Pearson Correlation	.083	.204	-.007	1	.147	.524**
	Sig. (2-tailed)	.504	.098	.956		.234	.000
	N	67	67	67	67	67	67
item_5	Pearson Correlation	.216	.146	.306*	.147	1	.645**

	Sig. (2-tailed)	.079	.238	.012	.234		.000
	N	67	67	67	67	67	67
skor_total	Pearson Correlation	.577**	.538**	.521**	.524**	.645**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	67	67	67	67	67	67

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).



**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	perawatan bearing, Kualitas minyak lumas <sup>a</sup>		. Enter

a. All requested variables entered.

b. Dependent Variable: kinerja crankshaft

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.657 <sup>a</sup>	.431	.414	1.08457

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.136	2	28.568	24.287	.000 <sup>a</sup>
	Residual	75.282	64	1.176		
	Total	132.418	66			

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.556	2.269		2.890	.005
	Kualitas minyak lumas	.385	.114	.401	3.370	.001
	perawatan bearing	.322	.116	.329	2.766	.007

a. Dependent Variable: kinerja crankshaft

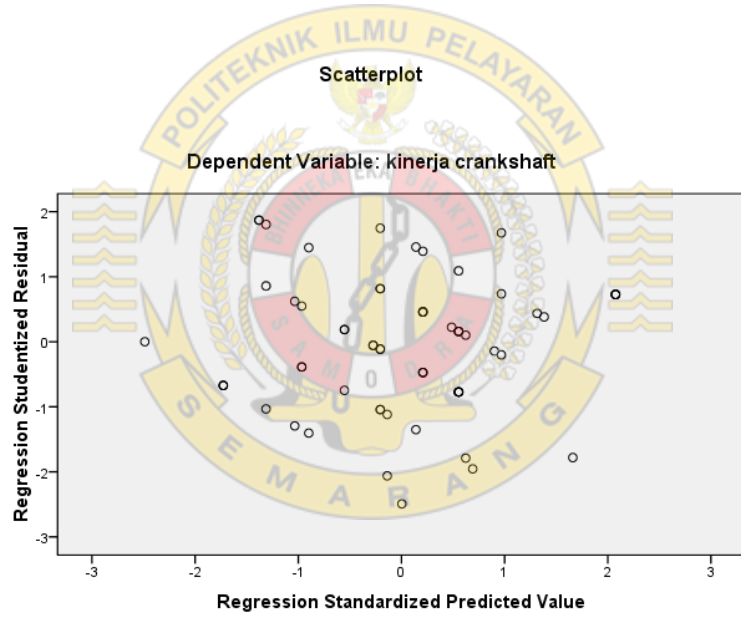
#### Residuals Statistics<sup>a</sup>

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	19.9989	24.2442	22.3134	.93043	67
Std. Predicted Value	-2.488	2.075	.000	1.000	67
Standard Error of Predicted Value	.137	.558	.217	.076	67
Adjusted Predicted Value	19.9988	24.1770	22.3280	.93839	67
Residual	-2.31700	1.97144	.00000	1.06801	67
Std. Residual	-2.136	1.818	.000	.985	67
Stud. Residual	-2.492	1.870	-.006	1.020	67
Deleted Residual	-3.15224	2.08619	-.01455	1.15049	67



Stud. Deleted Residual	-2.602	1.908	-.008	1.034	67
Mahal. Distance	.068	16.503	1.970	2.480	67
Cook's Distance	.000	.746	.028	.095	67
Centered Leverage Value	.001	.250	.030	.038	67

a. Dependent Variable: kinerja crankshaft



**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	perawatan bearing, Kualitas minyak lumas <sup>a</sup>		Enter

a. All requested variables entered.

b. Dependent Variable: kinerja crankshaft

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.657 <sup>a</sup>	.431	.414	1.08457

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.136	2	28.568	24.287	.000 <sup>a</sup>
	Residual	75.282	64	1.176		
	Total	132.418	66			

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.556	2.269		2.890	.005
	Kualitas minyak lumas	.385	.114	.401	3.370	.001
	perawatan bearing	.322	.116	.329	2.766	.007

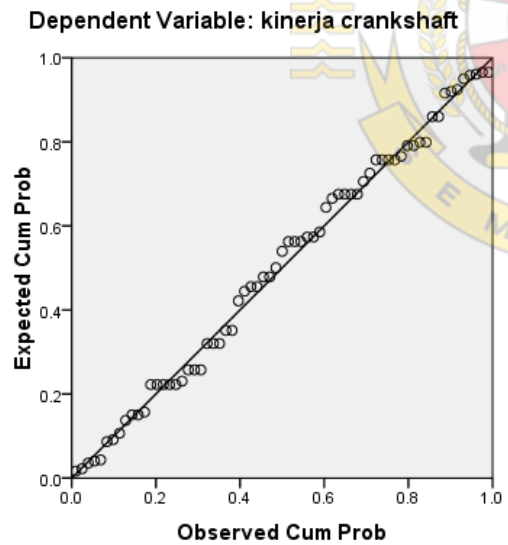
a. Dependent Variable: kinerja crankshaft

#### Residuals Statistics<sup>a</sup>

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	19.9989	24.2442	22.3134	.93043	67
Residual	-2.31700	1.97144	.00000	1.06801	67
Std. Predicted Value	-2.488	2.075	.000	1.000	67
Std. Residual	-2.136	1.818	.000	.985	67

a. Dependent Variable: kinerja crankshaft

Normal P-P Plot of Regression Standardized Residual



**One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		67
Normal Parameters <sup>a</sup>	Mean	.0000000
	Std. Deviation	1.06800685
Most Extreme Differences	Absolute	.059
	Positive	.059
	Negative	-.056
Kolmogorov-Smirnov Z		.485
Asymp. Sig. (2-tailed)		.973
a. Test distribution is Normal.		

**Variables Entered/Removed<sup>b</sup>**

Model	Variables Entered	Variables Removed	Method
1	perawatan bearing, Kualitas minyak lumas <sup>a</sup>		. Enter

a. All requested variables entered.

b. Dependent Variable: kinerja crankshaft

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.657 <sup>a</sup>	.431	.414	1.08457

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.136	2	28.568	24.287	.000 <sup>a</sup>

Residual	75.282	64	1.176	
Total	132.418	66		

a. Predictors: (Constant), perawatan bearing, Kualitas minyak lumas

b. Dependent Variable: kinerja crankshaft

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.556	2.269		2.890	.005
	Kualitas minyak lumas	.385	.114	.401	3.370	.001
	perawatan bearing	.322	.116	.329	2.766	.007

a. Dependent Variable: kinerja crankshaft

**Residuals Statistics<sup>a</sup>**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	19.9989	24.2442	22.3134	.93043	67

Residual	-2.31700	1.97144	.00000	1.06801	67
Std. Predicted Value	-2.488	2.075	.000	1.000	67
Std. Residual	-2.136	1.818	.000	.985	67

a. Dependent Variable: kinerja crankshaft



### Lampiran III Kuesioner SPSS

NO	NAMA RESPONDEN	KUALITAS MINYAK LUMAS						INDIKATOR PERAWATAN BEARING						CRANKSHAFT					
		PERNYATAAN						PERNYATAAN						PERNYATAAN					
		1	2	3	4	5	JML	1	2	3	4	5	JML	1	2	3	4	5	JML
		1.	Prananda Eka N	5	5	5	4	5	24	4	5	5	4	5	23	5	5	4	5
2.	Agam Wijayanto	5	4	4	5	5	23	4	4	5	5	4	22	4	5	5	4	5	23
3.	Andang Prihandoko	5	5	5	5	4	24	5	4	5	5	5	24	5	5	4	5	5	24
4.	Anjata Besar	4	5	5	5	5	24	4	4	5	5	5	23	4	5	4	5	5	23
5.	Bekti Supriyanto	4	4	5	5	4	22	4	4	5	5	4	22	4	4	5	4	5	22
6.	Danang Dwi Setyo N	4	5	5	4	5	23	5	4	5	5	5	24	5	4	5	4	5	23
7.	David Marsela K	5	5	5	5	5	25	5	5	4	5	4	23	5	5	5	5	4	24



8.	Dhavid A	4	5	3	4	4	20	4	3	4	5	5	21	5	5	4	4	5	23
9.	Edi Sugiarto	4	4	5	5	4	22	4	5	4	4	5	22	5	4	4	5	4	22
10.	Gabriel Damasus B P	5	5	4	4	5	23	5	4	5	5	4	23	5	4	5	5	5	24
11.	Guruh Putra Hardika	5	5	4	4	4	22	4	5	4	4	5	22	5	4	5	5	4	23
12.	Hanif Aulawi	5	4	4	5	5	23	5	5	4	4	5	23	4	5	5	4	4	22
13.	I Wayan Ari Aditya	4	5	4	5	5	23	4	5	4	4	4	21	5	4	4	4	4	21
14.	Ilham Mustofa	4	4	4	5	4	21	4	5	4	5	5	23	4	5	4	5	4	22
15.	Ilham Rahmadi	5	4	5	4	5	23	4	5	5	4	5	23	5	5	4	4	5	23
16.	Johan Prabowo S	4	5	5	4	4	22	4	4	4	5	5	22	4	5	4	5	5	23
17.	Kastriman	5	4	5	5	4	23	4	5	5	5	4	23	5	4	5	4	5	23
18.	Khafidh Nur Hidayat	4	5	4	5	5	23	4	4	5	4	5	22	4	5	4	4	5	22
19.	Muhammad Irfan T	5	5	5	5	5	25	4	4	4	5	4	21	4	4	5	4	4	21
20.	D E Bahari	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25
21.	Anang Lutfi A	4	4	4	5	5	22	4	4	4	4	4	20	4	5	5	4	5	23
22.	Bima Pamula V	4	4	3	4	4	19	4	4	3	4	4	19	4	4	4	4	4	20
23.	Irwan	4	4	4	4	4	20	4	4	4	4	4	20	4	4	4	4	4	20
24.	Anwarul Masalik	4	5	5	4	4	22	4	4	5	4	4	21	5	5	4	4	4	22
25.	Fahmi Idris	4	4	5	5	4	22	4	5	4	5	4	22	4	4	4	5	4	21
26.	Ennovendra Akbar K P	4	4	4	4	4	20	4	4	5	4	5	22	4	4	4	4	4	20
27.	Satrio Bagus Dwi W	5	4	4	5	5	23	4	5	5	4	5	23	5	5	5	4	5	24
28.	Kurnia Sandy	4	4	5	5	4	22	4	5	4	5	4	22	4	4	4	4	5	21
29.	Andre Yusanto	4	4	4	4	4	20	4	4	4	5	4	21	4	4	5	5	5	23
30.	Rizal Adi K	4	4	5	4	4	21	4	4	4	4	4	20	5	4	5	4	4	22
31.	Dimas Ricky S	4	5	4	5	4	22	4	4	4	4	4	20	4	4	4	4	4	20
32.	Abluri	4	4	4	5	4	21	4	4	4	4	4	20	4	5	5	4	4	22
33.	Andi Kristiawan	5	4	4	4	4	21	4	4	4	4	4	20	4	4	4	4	4	20
34.	Andika Adi Nur K	5	4	4	5	5	23	5	4	4	4	5	22	4	5	4	5	5	23

35.	Achmad Sholihul F	4	4	4	5	4	21	5	4	4	5	5	23	4	5	5	4	4	22
36.	Achmad Sholikin	5	5	5	4	4	23	4	5	4	4	4	21	4	4	4	4	4	20
37.	Adhadi Pranoto	5	4	5	5	5	24	5	5	5	5	5	25	4	4	4	5	5	22
38.	Adi Surya Riono N	5	5	5	4	4	23	4	5	5	4	4	22	5	5	4	4	4	22
39.	Alexander Edison A T	5	4	4	5	4	22	4	5	5	4	3	21	5	5	4	3	4	21
40.	Alif Akbar Lukman H	4	5	4	5	5	23	4	4	5	5	5	23	4	5	5	5	4	23
41.	Andre Galih P H	4	4	4	4	4	20	4	5	4	4	5	22	4	4	5	4	5	22
42.	Andrianto	4	5	4	5	4	22	5	5	4	5	5	24	4	5	5	4	5	23
43.	Asnan Rois M	4	4	4	4	5	21	4	4	5	4	4	21	4	4	4	5	4	21
44.	Alvin Bagas Pratama	4	4	4	4	4	20	4	4	4	4	4	20	4	4	4	4	4	20
45.	Dimas Yoga A P	5	4	5	4	4	22	4	4	5	4	4	21	4	5	4	5	4	22
46.	Firdaus Hakiki	4	4	4	4	4	20	4	4	4	4	4	20	4	4	4	4	4	20
47.	Firman Subiyanto	4	4	4	4	5	21	4	4	4	5	4	21	4	4	5	4	4	21
48.	Hendri Priyanto	4	4	4	5	4	21	4	4	5	4	4	21	5	5	4	4	4	22
49.	Iqna Al Musyaddad	5	4	5	4	4	22	5	5	5	4	4	23	5	4	5	5	5	24
50.	Miftahul Huda	4	4	4	4	4	20	5	5	5	5	5	25	4	4	4	4	4	20
51.	Nanda Tendi Pratama	5	4	5	4	5	23	5	4	5	4	5	23	4	5	4	5	4	22
52.	Narenda A P	5	4	5	5	5	24	5	4	4	4	5	22	4	4	4	4	5	21
53.	Rabbani Aswan D	4	4	5	5	5	23	4	5	5	4	4	22	5	5	4	5	5	24
54.	Radifa Nuqi N	4	5	5	4	5	23	4	5	4	5	4	22	4	5	4	5	4	22
55.	Raka Chabib P	4	5	5	4	4	22	4	5	4	5	4	22	4	5	5	5	5	24
56.	Renaldo M	5	4	5	4	5	23	5	4	5	4	5	23	4	5	4	5	4	22
57.	Rendi Sukarno	5	5	4	5	4	23	4	5	5	4	5	23	5	4	4	5	4	22
58.	Satri R K	5	5	5	4	5	24	4	4	5	5	4	22	5	4	5	4	5	23
59.	Soni Hadi P	5	4	5	5	5	24	4	5	5	5	4	23	5	5	5	5	5	25
60.	Wahyu Febriyanto	5	4	5	5	4	23	4	5	5	4	5	23	4	5	4	5	4	22
61.	Wellin Sidarta M Z	5	4	5	4	4	22	4	5	5	4	5	23	4	5	4	4	4	21

62.	Zhahir Eka N	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25
63.	Yoga Purwa M	4	5	5	4	5	23	5	4	4	5	4	22	5	5	5	4	4	23
64.	Widi N	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25
65.	Trias Adi S	5	4	4	5	5	23	4	4	4	5	5	22	5	5	4	4	5	23
66.	Teguh Hadi P	4	3	4	5	5	21	5	5	3	4	3	20	5	5	4	5	4	23
67.	Siyam Rifaldi	5	5	5	5	5	25	5	5	5	5	5	25	5	5	5	5	5	25



**Lampiran IV REKAPITULASI SWOT**

NO	NAMA	S1	S2	S3	S4	S5	W1	W2	W3	W4	W5	O1	O2	O3	O4	O5	T1	T2	T3	T4	T5
1.	Prananda Eka N	4	3	3	3	4	3	4	3	3	3	4	4	3	3	4	4	3	3	3	3
2.	Agam Wijayanto	4	3	3	4	4	3	3	4	3	4	4	3	4	4	3	3	4	4	3	4
3.	Andang Prihandoko	4	3	4	3	4	4	3	3	4	4	3	4	3	3	3	4	3	3	4	3
4.	Anjata Besar	3	4	4	4	3	3	4	3	4	3	4	3	4	3	4	4	3	3	4	3
5.	Bekti Supriyanto	3	4	3	3	4	4	4	3	3	4	3	4	3	4	3	3	4	4	3	4
6.	Danang Dwi	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	3	3	3	3	4

	Setyo																				
7.	David Marsela K	4	3	4	3	4	3	4	4	3	3	4	4	4	3	3	3	3	3	4	4
8.	Dhavid A	4	3	4	4	4	3	3	3	3	4	4	4	3	4	3	3	4	3	3	4
9.	Edi Sugiarto	4	3	3	4	4	3	4	3	3	4	3	4	4	3	3	4	3	4	4	3
10.	Gabriel Damasus B	3	4	3	4	4	3	3	4	3	4	3	3	4	3	3	3	3	4	3	4
11.	Guruh Putra H	4	3	4	4	4	3	2	2	2	3	3	4	4	4	3	3	4	3	3	4
12.	Hanif Aulawi	4	4	3	4	4	3	4	3	4	4	3	3	4	4	4	3	4	4	4	3
13.	I Wayan Ari Aditya	4	4	3	3	4	3	3	4	4	3	3	4	3	3	3	3	4	4	4	3
14.	Ilham Mustofa	3	4	3	4	4	3	3	4	3	4	4	3	4	4	4	3	4	3	4	3
15.	Ilham Rahmadi	3	4	4	3	3	3	4	3	3	3	3	4	4	3	3	3	3	4	3	3
16.	Johan Prabowo S	4	4	3	4	4	4	4	3	4	3	4	3	3	4	3	4	4	3	3	4
17.	Kastriman	4	3	4	4	4	3	3	3	3	4	4	4	3	3	3	3	3	3	3	4
18.	Khafidh Nur H	3	3	3	3	4	3	3	4	4	3	3	3	4	3	3	3	3	4	3	3
19.	Muhammad Irfan T	3	4	4	3	4	4	4	3	4	3	4	3	3	4	3	3	3	4	4	3
20.	D E Bahari	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
21.	Anang Lutfi A	4	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
22.	Bima Pamula V	2	2	2	2	2	2	2	3	3	3	3	3	3	3	2	3	3	3	3	3

23.	Irwan	3	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	2	2	3	3
24.	Anwarul Masalik	4	3	3	3	3	3	4	4	3	4	3	3	4	4	3	4	4	4	4	4	4
25.	Fahmi Idris	3	4	4	3	4	3	4	4	4	3	4	3	4	3	4	4	3	4	4	3	3
26.	Ennovendra Akbar	2	4	3	3	4	3	3	3	3	2	2	2	3	3	2	3	2	4	3	4	4
27.	Satrio Bagus Dwi W	4	4	3	3	4	4	4	4	4	3	3	4	4	3	3	4	3	3	4	4	4
28.	Kurnia Sandy	3	3	3	3	4	4	3	3	4	3	3	3	3	3	3	3	3	4	3	3	3
29.	Andre Yusanto	3	3	3	3	3	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3
30.	Rizal Adi K	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
31.	Dimas Ricky S	3	3	3	3	3	2	3	2	3	2	2	2	2	3	2	3	3	3	3	3	3
32.	Abluri	3	4	4	3	3	3	3	4	3	3	3	3	4	4	3	3	3	3	3	3	3
33.	Andi Kristiawan	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3
34.	Andika Adi Nur K	3	4	4	3	4	4	3	4	3	4	3	4	3	3	3	4	4	3	3	3	3
35.	Achmad Sholihul F	3	4	4	3	3	3	3	4	3	3	3	3	4	3	3	3	3	3	3	3	3
36.	Achmad Sholikin	3	4	3	3	3	3	2	3	3	3	4	3	3	3	3	3	3	3	3	3	3
37.	Adhadi Pranoto	4	4	3	4	4	4	3	4	4	3	4	3	3	4	3	4	3	4	3	4	4
38.	Adi Surya Riono N	3	4	4	3	4	2	2	2	2	2	3	4	4	3	3	2	1	1	2	1	1
39.	Alexander Edison	3	3	3	3	3	2	2	3	2	3	3	3	4	4	3	3	2	2	2	2	2

	A																				
40.	Alif Akbar Lukman	3	3	3	4	4	2	2	3	2	2	3	3	4	3	3	2	2	2	2	2
41.	Andre Galih P H	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	4	3	3	3	4
42.	Andrianto	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	4	3	3	3	4
43.	Asnan Rois M	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	4	3	3	3	4
44.	Alvin Bagas P	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	3	3	3	4	3
45.	Dimas Yoga A P	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	4	3	3	3	4
46.	Firdaus Hakiki	3	4	3	3	3	3	3	3	4	3	3	3	4	3	3	4	3	3	3	4
47.	Firman Subiyanto	3	4	3	3	4	2	2	1	2	2	4	4	3	4	3	2	1	2	1	2
48.	Hendri Priyanto	4	3	3	3	3	3	3	3	3	3	4	4	3	4	3	3	3	3	3	3
49.	Iqna Al Musyaddad	4	3	4	4	3	3	3	4	3	3	3	4	3	4	3	4	4	3	3	3
50.	Miftahul Huda	4	3	4	4	4	3	3	3	4	3	4	3	4	4	4	4	3	3	4	3
51.	Nanda Tendi P	3	3	3	3	3	3	3	4	3	3	4	3	4	3	3	4	3	3	3	4
52.	Narenda A P	3	4	3	4	4	4	4	4	3	3	3	3	4	4	4	3	4	4	4	4
53.	Rabbani Aswan D	4	4	4	3	4	1	2	1	2	1	3	4	3	4	4	1	2	1	2	1
54.	Radifa Nuqi N	3	4	4	3	3	4	4	4	3	4	4	3	4	4	4	3	4	4	4	3
55.	Raka Chabib P	4	4	4	4	3	1	1	1	1	1	4	3	4	3	4	1	2	1	2	1
56.	Renaldo M	4	3	3	4	4	3	3	4	4	3	4	4	3	3	4	3	4	4	3	3

57.	Rendi Sukarno	3	4	3	3	3	3	4	4	3	4	3	4	3	4	4	3	4	4	3	3
58.	Satri R K	3	3	3	3	3	3	4	3	4	4	3	4	3	4	3	3	3	3	4	4
59.	Soni Hadi P	3	4	4	3	3	3	4	4	3	4	3	4	3	3	3	3	4	4	3	4
60.	Wahyu Febriyanto	3	4	3	3	3	3	3	4	4	3	3	3	4	3	3	3	3	3	4	3
61.	Wellin Sidarta M Z	4	4	3	3	3	2	2	2	2	2	3	3	3	3	3	2	2	2	2	2
62.	Zhahir Eka N	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
63.	Yoga Purwa M	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
64.	Widi N	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
65.	Trias Adi S	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
66.	Teguh Hadi P	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
67.	Siyam Rifaldi	3	4	3	3	3	3	3	4	3	4	3	3	3	4	3	4	4	3	4	4
<b>JUMLAH</b>		<b>222</b>	<b>242</b>	<b>222</b>	<b>218</b>	<b>230</b>	<b>202</b>	<b>208</b>	<b>218</b>	<b>215</b>	<b>212</b>	<b>221</b>	<b>222</b>	<b>233</b>	<b>228</b>	<b>212</b>	<b>218</b>	<b>214</b>	<b>209</b>	<b>217</b>	<b>220</b>
<b>RATA-RATA</b>		<b>3,31</b>	<b>3,61</b>	<b>3,31</b>	<b>3,25</b>	<b>3,43</b>	<b>3,01</b>	<b>3,1</b>	<b>3,25</b>	<b>3,21</b>	<b>3,16</b>	<b>3,3</b>	<b>3,31</b>	<b>3,48</b>	<b>3,4</b>	<b>3,16</b>	<b>3,25</b>	<b>3,19</b>	<b>3,12</b>	<b>3,24</b>	<b>3,28</b>



FAKTOR INTERNAL				
No	Indikator Kekuatan	Hasil Rekap		
		Score	Rating	Score x Rating
1	S1	3,3	1,5	4,8
2	S2	3,6	3	6,6
3	S3	3,3	4	13,2
4	S4	3,3	1	3,3
5	S5	3,4	0,5	1,7
	<b>Sub Total</b>	<b>16,9</b>	<b>10</b>	<b>29,6</b>

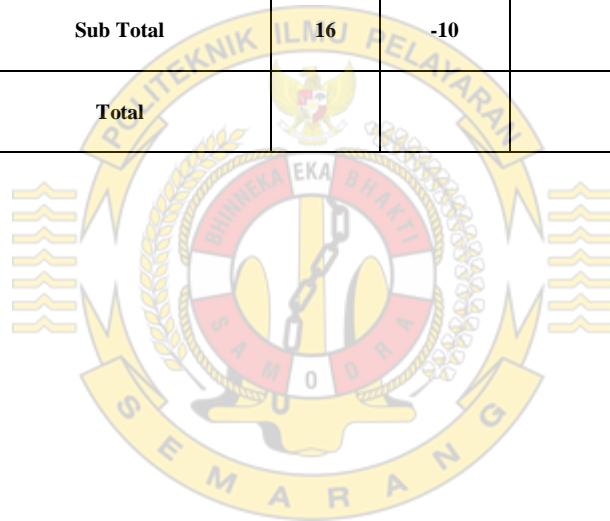
No	Indikator Kelemahan	Hasil Rekap		
		Score	Rating	Score x Rating
1	W1	3	-2,25	-6,75
2	W2	3,1	-4	-12,4
3	W3	3,3	-1,75	-5,775
4	W4	3,2	-1,5	-4,8
5	W5	3,2	-0,5	-1,6
	<b>Sub Total</b>	<b>15,8</b>	<b>-10</b>	<b>-31,325</b>
	<b>Total</b>			<b>-1,725</b>

FAKTOR EKSTERNAL				
No	Indikator Peluang	Hasil Rekap		
		Score	Rating	Score x Rating
1	O1	3,3	4	13,2

2	O2	3,3	1	3,3
3	O3	3,5	3	10,5
4	O4	3,4	1,5	5,1
5	O5	3,2	0,5	1,6
	<b>Sub Total</b>	<b>13,5</b>	<b>10</b>	<b>32,1</b>

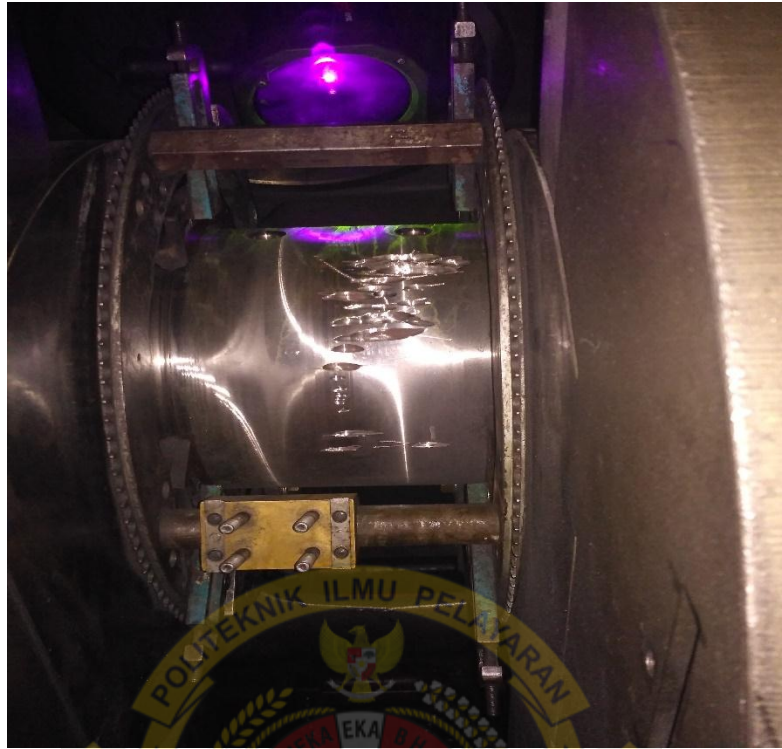


No	Indikator Ancaman	Hasil Rekap		
		Score	Rating	Score x Rating
1	T1	3,2	-4	-12,8
2	T2	3,2	-2,25	-7,2
3	T3	3,1	-1,5	-4,65
4	T4	3,2	-1,25	-4
5	T5	3,3	-1	-3,3
	<b>Sub Total</b>	<b>16</b>	<b>-10</b>	<b>-31,95</b>
	<b>Total</b>			<b>0,15</b>



LAMPIRAN 5. GAMBAR





## Lampiran VII

### SHIP'S PARTICULARS

Name of Vessel	: Mv. Armada Serasi
Call Sign	: POEY
IMO No.	: 9000675
Flag	: Indonesia
Port of Registry	: Surabaya
Vessel Type	: Container Ship
Builder	: Singapore Ship Building & Engineering Pte Ltd
Date Keel Laid	: 30 July 1990
Date of Delivery	: 31 October 1991
Classification	: B.K.I.
Name of Owner	: PT. SPIL
Name of Operator	: PT. SPIL
Type & Make of Main Engine	: WARTSILA VASA 12V32D S. NO:5357
Main Engine Power	: 4400 KW
Engine Maker	: OY WARTSILA DIESEL, VASA FINLAND
Auxiliary Engine	: 3 nos YANMAR M200A1-UN, 480 KW 1 no. Shaft Generator, Taiyo Type FE41-A6, 600
KVA	
Designed Speed	: 12 knot @ 4400 KW on 90% MCR
Propeller	: CPP Left Hand Controllable Pitch
Propeller	
Bow Thruster	: 375 KW
No Of Crane & Capacity	: 2 x SWL 40 MT on Port Side
Length Over All ( LOA) (m)	: 120,6
Length between perpeniculars (m)	: 112,6
Beam (m)	: 18,4
Debth Molded (m)	: 9.0
Max Height from Keel (m)	: 33,04
Summer Draft (m)	: 6,5025
Tropical Draft (m)	: 6,6300
Free Board (m)	: 2,530
Displacement (t)	: 10.491.9
Dead Weight (t)	: 7.856
GRT (t)	: 5.320
NRT (t)	: 2.892
Fresh Water Allowance (mm)	: 139
Sea Speed (knots)	: 13,5
RPM	: 100
Container Capacity	: 453
20' On Deck	: 277 Teus
20' In Hold	: 176 Teus

Lampiran 8 kuesioner SPSS

- I. Identitas responden :.....  
 Nama :.....  
 Umur :.....  
 Instansi :.....  
 Tahun masuk instansi :.....  
 Berapa kali UKP prola :.....

- II. Tanggapan responden  
 Beri tanggapan menurut taruna taruni dengan memberikan tanda silang (x)pada pilihan tanggapan yang di sediakan yaitu:  
 SS :Sangat setuju  
 S :Setuju  
 RR :Ragu-Ragu  
 TS :Tidak setuju  
 STS :Sangat Tidak Setuju  
 Atas pertanyaan-pernyataan di bawah ini.

- III. Petunjuk
1. Bacalah terlebih dahulu pertanyaan-pertanyaan di bawah ini dengan cermat sebelum saudara menjawabnya.
  2. Pilihlah salah satu jawaban yang menurut saudara benar sesuai dengan keadaan saudara , dengan cara memberi

- I. Kualitas minyak lumas  
 Pertanyaan 1 - 5 berikut ini mengetahui apakah ada pengaruh kualitas minyak lumas terhadap kinerja *crankshaft* mesin induk.

No	Pertanyaan	STS	TS	RR	S	SS
1.	Perawatan filter minyak yang di lakukan berkala.					
2.	Pemilihan minyak lumas yang sesuai standart.					
3.	Pergantian minyak lumas secara berkala.					
4.	Pemisahan minyak lumas dari kotoran dan air dengan <i>LO purifier</i> .					
5.	Pemeriksaan suhu, kekentalan minyak lumas dan sesuai spesifikasinya.					

Berikan alasan saudara tentang kualitas minyak lumas

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2. Indikator perawatan bearing

Pertanyaan 1 - 5 berikut ini mengetahui apakah ada pengaruh perawatan *bearing* terhadap kinerja *crankshaft* mesin induk.

No	Pertanyaan	STS	TS	RR	S	SS
1.	Pengecekan gesekan antar bearing dan poros engkol.					
2.	Pengecekan main bearing secara berkala					
3.	Pemilihan bahan bantalan sesuai spesifikasi					
4.	Pemeriksaan permukaan bantalan terhadap kerusakan.					
5.	Pemeriksaan sambungan antara rumah bantalan dan blok mesin					

Berikan alasan saudara tentang perawatan bearing

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3. *Crankshaft*

Pertanyaan 1 - 5

No	Pertanyaan	STS	TS	RR	S	SS
1.	Perawatan <i>crankshaft</i> yang sesuai procedure					
2.	Pemeriksaan clearance pada <i>crankshaft</i> secara berkala					
3.	Pemeriksaan tekanan LO pada					



	main LO pump					
4.	Penggantian <i>crankshaft</i> sesuai jam kerja					
5.	Ketersedian suku cadang <i>crankshaft</i> di kapal.					

Berikan alasan saudara tentang kinerja crankshaft

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## LAMPIRAN 9 KUISIONER ANALISIS SWOT

### “ANALISA PENGARUH KUALITAS MINYAK LUMAS DAN PERAWATAN *BEARING* TERHADAP KINERJA *CRANKSHAFT* (DENGAN METODE SPSS) DAN STRATEGI OPTIMALISASI KINERJA *CRANKSHAFT* MESIN INDUK DI MV. ARMADA SERASI” (DENGAN METODE SWOT)

- I. Identitas responden : .....
- Nama : .....
- Bagian/Unit : .....

- II. Tanggapan responden
- Acuan pengisian kuisisioner ini adalah sebagai berikut :
- Penilaian urgensi penanganan :
- Angka 1 = tidak baik
- Angka 2 = kurang baik
- Angka 3 = baik
- Angka 4 = sangat baik
- Beri tanggapan menurut pendapat Anda dengan memberikan tanda silang (X) pada pilihan tanggapan yang telah disediakan atas pertanyaan di bawah ini :

No.	Indikator KEKUATAN	Urgensi Penanganan			
		1	2	3	4
		TB	KB	B	SB
1.	Kerjasama yang baik antar kru kapal dalam pengecekan kinerja <i>crankshaft</i> .				
2.	Pemeriksaan yang teratur terhadap kekencangan baut antar dudukan				

	buntalan dan <i>connecting rod</i> .				
3.	Penjagaan yang baik terhadap suhu dan kekuatan minyak lumas.				
4.	Penggantian komponen <i>crankshaft</i> yang teratur.				
5.	Pengalam masinis kapal dalam penanganan <i>crankshaft</i>				

No.	Indikator KELEMAHAN	Urgensi Penanganan			
		1	2	3	4
		TB	KB	B	SB
1.	Kualitas minyak lumas yang tidak sesuai dengan spesifikasinya.				
2.	Timbulnya getaran yang tinggi saat putaran penuh.				
3.	Kualitas dari bahan <i>crankshaft</i> yang tidak sesuai.				
4.	Kelalaian kru kapal dalam pemeriksaan kerusakan <i>crankshaft</i> .				
5.	Terbatasnya perawatan <i>crankshaft</i> karena pelayaran yang lama.				

No.	Indikator PELUANG	Urgensi Penanganan			
		1	2	3	4
		TB	KB	B	SB
1.	Tersedianya operator khusus untuk penanganan <i>crankshaft</i> .				

2.	Terdapatnya kerjasama antar perusahaan dengan maker.				
3.	Tersedianya buku petunjuk dalam perawatan rutin terhadap <i>crankshaft</i> .				
4.	Perusahaan yang mengizinkan melakukan perbaikan dalam jangka waktu tertentu.				
5.	Layanan pihak perusahaan untuk konsultasi jika terapi permasalahan pada permesinan.				

No.	Indikator ANCAMAN	Urgensi Penanganan			
		1	2	3	4
		TB	KB	B	SB
1.	Kualitas <i>crankshaft</i> yang tidak sesuai spesifikasi.				
2.	Keterbatasan pengiriman <i>crankshaft</i> yang berakibat terganggunya operasi kapal.				
3.	Kurang tanggapnya perusahaan dalam permintaan <i>crankshaft</i> .				
4.	Akses pelabuhan yang jauh menghambat proses pengiriman <i>crankshaft</i> .				
5.	Faktor cuaca yang buruk mengakibatkan pengiriman terhambat.				

