Test data in Chapter 2

Title : The use technology of a “Special synthetic magnetic field”

About the voyage test by the diesel engine of ship with heavy oil “A”,

About the data of various voyage tests of the ship engine that were carried out by voyage tests as accurately as possible,

Section 1 : About specifications of the test ship,

Specifications of the main engine of “The third Sumiwaka-maru” (2,700HP)

Section 2 : About the installed state of ”Trans-master” device in the test ship

Section 3 : About data of the first voyage test

Section 4 : Explanation of data of the first voyage test

Section 5 : About the second and the third voyage test data

Section 6 : Explanation of the second and the third voyage test data

Section 7 : About the fluid speeds of heavy oil “A” passing through "Trans-master" device A and "Trans-master” device B

Section 8 : About the frequency of AC power supply used by "Trans-master" device

Section 9 : About nitrogen oxide (NOx) in exhaust gas caused by the drop of combustion temperature in diesel engine of the test ship

Section 10 : About the drops of vibration and a noise by the engine of the test ship

Section 11 : About the combustion test in the burner of the boiler

Section 12 : About the reduction of the fuel consumption and harmful exhaust gas of a boiler

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Section1 : About specifications of the test ship,

The following photograph is whole view of "The third Sumiwaka-maru" of the test ship.

Fig.1

A. About the specifications of the main engine of "The third Sumiwaka-maru" of the test ship (2,700HP),

(a) The test ship : "The third Sumiwaka-maru"

(b) The fuel consumption of the main engine of the test ship: 2, 00 liters/h,

(c) The capacity of the auxiliary fuel tank : 1,000 liters,

(d) Heavy oil “A”

(e) The use temperature of "Trans-master" device : 80 ℃ Max.,

(f) The available use pressure of "Trans-master" device: 4kg /㎠ Max.,

Section2 : About the installed state of ”Trans-master” device in the test ship,

(a) The following photograph is external forms of "Trans-master" device.

Fig. 2

(b) The following photograph is “Trans-master” device B that connected three pieces of “Trans-master” devices in series.

Fig 3

(c) The following photograph is “Trans-master” device A setting on the auxiliary fuel tank of the test ship (The third Sumiwaka-maru)

Two pieces of “Trans-mastr” devices are connected in series by fuel hose.

Fig4

Section3：About data of the first voyage test,

About voyage test data of the test ship by "Trans-master" device A,

第三住若丸 7th

自：横　　至：釜石　　(満船)/空船　　平均回転数 260 rpm

月日7	時刻	○活性化 ×通常	消費量 L	計測消費量 L/h	航走距離 浬	排気温度 #1	#2	#3	#4	#5	#6	ラック m/m	航位等	風 m/s	備考
11/5	20:00	×	606	202.0	33.2	320	325	320	330	325	320	30	14:00 活性化装置 OFF	0	
	23:00	×												0	
	23:00	×	595	198.3	35.6	320	325	320	330	325	320	30		0	23:00 North 5m
11/6	2:00	×											02:45 塩屋崎通過	0	
	2:00	×	605	201.7	33.6	320	325	320	330	325	320	30		0	02:00 North 4m
	5:00	×												0	
	5:00	×	600	200.0	34.8	315	320	315	325	315	315	30		0	05:00 North 5m
	8:00	×												0	
	8:00	×	600	200.0	36.5	310	315	310	320	310	310	30	10:00 金華山通過	0	
	11:00	×												0	
	11:00	×	590	196.7	33.2	310	315	310	320	310	310	30		0	11:00 NE 4m
	14:00	×												0	
	14:00	×	328	200.9	20.0	310	315	310	320	310	310	30		0	14:00 SE 4m
	15:38	×											15:38 釜石入港	0	
		合計/平均	3,924	199.9	226.9										

消費量/浬　17.29 L/浬

航走距離/L　107.09 m/L

平均速力　11.56 Kn

過給機圧力 0.6～0.62

5

No.2

第三 住若丸 8th　トランスマスター 計3ヶ(7thまでは2ヶ)
(H17/12/6 トランスマスター 1ヶ増設 修理)

自：東津　至：東広島　(満船)/空船　平均回転数 260 rpm

H.17	時刻	○活性化 ×通常	消費量 L	時間消費量 L/h	航走距離 浬	排気温度 #1	#2	#3	#4	#5	#6	ラック m/m	航位等	風 m/s	備考
12/28	17:00	○	362	191.0	25.7	300	300	295	305	300	300	29	16:00 鳴門海峡通過	0	鳴門海峡 12/28
	19:00	○				295	295	295	305	300	300	29	(減速)		最強 16:00 5.6Kn
	19:00	○	384	192.0	24.0									0	転流 18:19
	21:00	○				300	305	295	310	305	300	29			
	21:00	○	374	187.0	25.2								三原瀬戸	0	三原瀬戸
	23:00	○				300	305	295	310	305	305	29			最強 19:30 1.4Kn ENE
	23:00	○	190	190.0	12.5									0	転流 22:03
12/29	0:00	○				300	305	300	310	305	305	29		0	
														0	
														0	
														0	
														0	
														0	
														0	
		合計/平均	1,330	190.0	87.4										

消費量/浬　15.22 L/浬
航走距離/L　121.70 m/L
平均速力　12.49 Kn
過給機圧力　0.6

※補機 FO消費量
13 L/h メーター計測
10 L/h 勿分計測

No.3

第三 住若丸 8th

自：下松　至：坂出　(満船)/空船　平均回転数 260 rpm

H.17	時刻	○活性化 ×通常	消費量 L	時間消費量 L/h	航走距離 浬	排気温度 #1	#2	#3	#4	#5	#6	ラック m/m	航位等	風 m/s	備考
12/30	2:00	○	384	192.0	22.7	305	310	300	315	305	305	28	01:20 下松出航	0	
	4:00	○				305	310	300	315	305	305	28			
	4:00	○	374	187.0	24.8									0	
	6:00	○				305	310	295	315	305	305	28			
	6:00	○	378	189.0	26.5									0	
	8:00	○				305	310	300	315	305	305	28	07:35 来島海峡通過		来島海峡
	8:00	○	377	188.5	24.0								(減速)	0	最強 07:47 7.8Kn 南流
	10:00	○				305	310	300	315	305	305	28		0	転流 11:11
	10:00	○	188	188.0	12.0									0	
	11:00	○												0	
													11:30 坂出入港	0	
														0	
														0	
														0	
		合計/平均	1,701	189.0	110										

消費量/浬　15.46 L/浬
航走距離/L　119.76 m/L
平均速力　12.22 Kn
過給機圧力　0.6

Section4 : Explanation of data of the first voyage test

1. Test ship : “The third Sumiwaka-maru”

2. Purpose of the test

In the main engine of the test ship by "Trans-master " device A, a decrease effect of the fuel consumption and a drop effect in temperature of exhaust gas are gotten.

"Trans-master" device A is the activated device by connecting two "Trans-master" devices in series.

3. Conditions of the voyage test,

(a) The voyage test course of the test ship,
The specific voyage test course is not being set.

(b) The height of wave : 1 meter or less

4. Enforcement day of the voyage test

2005/11/05~06

5. Explanation of No. 1 table of "7th",

(5-1) When "Trans-master" device A is set by "OFF" the voyage test data is recorded in only one sheet No. 1 table of "7th".

(5-2) Temperature of the exhaust pipe of the main engine,
Particularly, the temperatures of the exhaust pipe in 1-6 spots of the main engine by a thermometer seven times every three hours are measured.

6. The result of the voyage test of sheet No. 1 of table of "7th",

(1) Average exhaust temperature : 317.9℃
(2) Average fuel consumption : 17.29 litters/a mile
(3) The average voyage distance : 107.09 Meters/litter
(4) Average speed : 11.56 knots
But, 19 hours 38 minutes of the consecutive voyage time,

7. Explanation of sheet No. 2 of table of "8 th"

(7-1) When "Trans-master " device A is set by "ON" the voyage test data is recorded in sheet No. 2 table of "8th" and is recorded in sheet No. 3 table of "9th",

(7-2) Particularly, the temperatures of the exhaust pipe in 1-6 spots of the main engine by a thermometer five times every two hours are measured.

8. The result of the voyage test

(8-1) The result of the voyage test of sheet No. 2 table of "8 th",

(1) Average exhaust temperature : 301.7 ℃
(2) Average fuel consumption : 15.22 litters/a mile
(3) The average voyage distance : 121.70 Meters/litter
(4) Average speed : 12.49 knots

But, consecutive voyage time is 7 hours 0 minutes

(8-2) The result of the voyage test of sheet No. 3 table of "9 th",

(1) Average exhaust temperature : 306.5 ℃
(2) Average fuel consumption : 15.46 litters/a mile
(3) The average voyage distance : 119.76 Meters/litter
(4) Average speed : 12.22 knots

But, consecutive voyage time is 9 hours 0 minutes

(8-3) About the average numerical value of sheet No.2 of table "8 th" and sheet No.3 table of "9 th",

(1) Average exhaust temperature : 304.1 ℃
(2) Average fuel consumption : 15.34 litters/a mile
(3) The average voyage distance : 120.73 Meters/litter
(4) Average speed : 12.36 knots

But, consecutive voyage time is 9 hours 0 minutes

9. Explanation of the effect by "Trans-master " device A,

(9-1) Therefore, the decrease rate of the fuel consumption of the test ship by the "Trans-master" device A is represented by the numerical value that the voyage test result in the "OFF" state is lower than the voyage test result in the "ON" state.

10. Effects by "Trans-master " device A,

(1) Average exhaust temperature : a drop of 13.8 ℃
(2) Average fuel consumption : The drop of 11.3%
(3) The improvement of the voyage distance : 13.64%
(4) The improvement of the test ship speed : 6.9%

11. About the evaluation of the voyage test,

As the effect on fuel consumption by ocean tide, waves and wind is particularly large, it is necessary to evaluate the fuel consumption most carefully as to the results of the voyage test of the test ship.

(11-1) The combustion temperature in a cylinder of the main engine was decreased by occurrence of a new unknown explosive vaporous expansion pressure by the magnetism without generating heat caused by the decrease of 13.9 ℃ with heavy oil “A” by “The use technology of special synthetic magnetic field" from the result of the voyage test mentioned above.

(11-2) Therefore, nitrogen oxide (NOx) and micro-particulate matter (PM) were decreased greatly at the same time, or might hardly occur.

(11-3) The average rate of decline of the fuel consumption became 11.3%.

Section5：About the second and the third voyage test data,

No. 4

第三住若丸 トランスマスター搭載テスト

平成23年 8月30日～8月31日

	日付	時間	主機流量計 メーター(Q)	回転数	デジタル回転数	ラック1	ラック2	速力	波高		測定ポイント	その他
1	8/30	16-00	4932650								戸畑港出航前	
2	8/30	19-00	4932785	265	271	27	27	10.4	0.5m		大連島沖 無二ブイ通過時	
3	8/30	22-00	4933735	265	271	27	27	10.4	0.5m		5時間後	
4	8/31	03-00	4934685	265	271	27	27	11.1	1.0m		10時間後	
5	8/31	08-00	4935620	265	271	27	27	11.4	1.0m		15時間後	
6	8/31	12-00	4936375	265	271	27	27	11.5	1.0m		鳥取港入港前	
7	8/31	12-50	4936495								鳥取港岸壁着	
8												

航路 戸畑から鳥取　　トランスマスター OFF

(船) 空船

No.5

2012年 4月14日 13時39分 NO.1

H24

第3仕若丸 トランスマスター燃費テスト

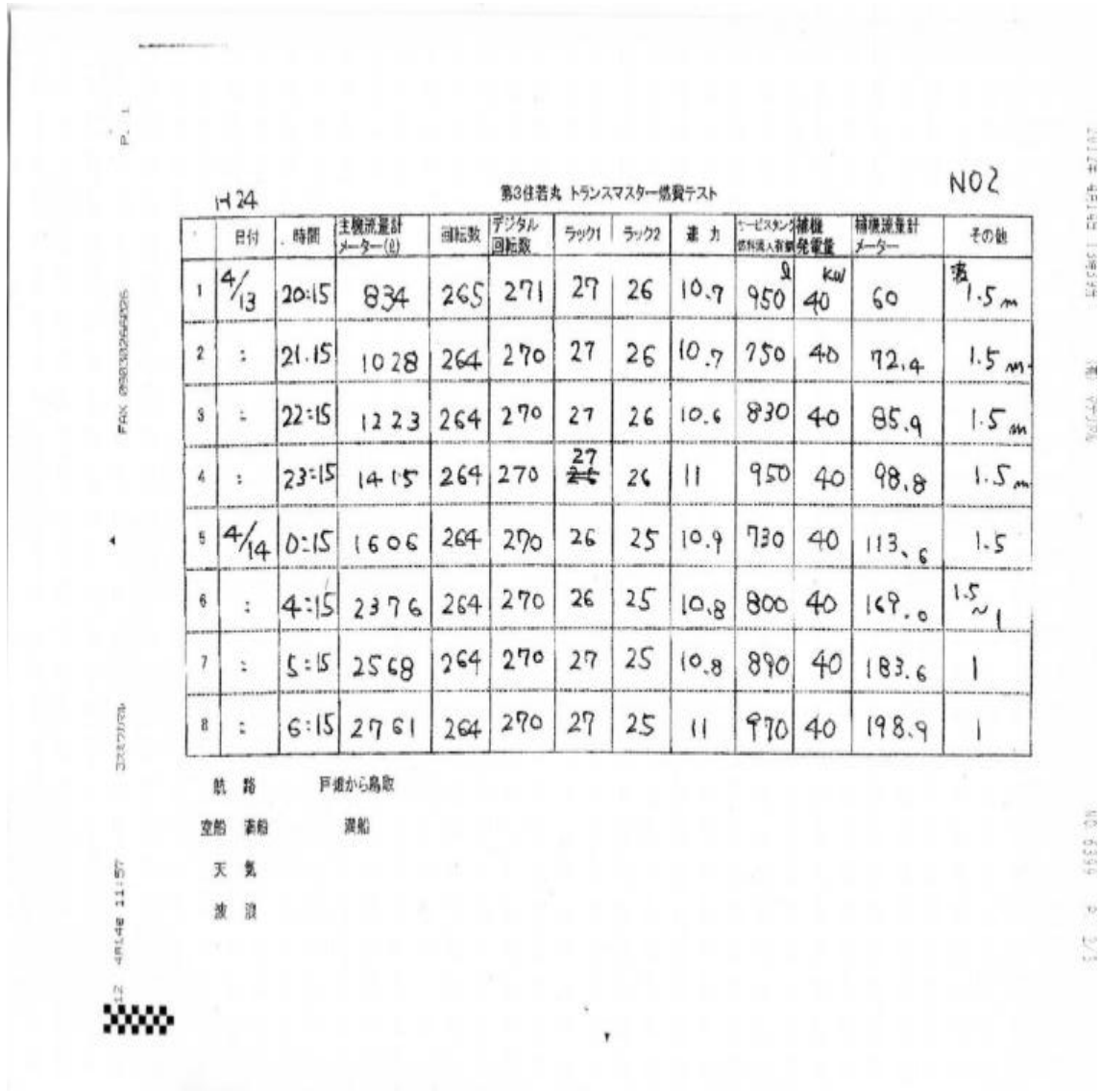
	日付	時間	主機流量計メーター(2)	回転数	デジタル回転数	ラック1	ラック2	速力	サービスタンク補機燃料投入有無	補機発電量	補機流量計メーター	その他
1	4/13	8:10										トランスマスター ON
2		15:25										主機ON アイドリング
3		15:45	0								0	出港
4		16:00	20	265	271	28	25	11.4	900ℓ	40kW	4.2	湾外へ 回転UP
5		16:15	68	265	271	26	25	11.1	850ℓ		8.3	六連NO2ブイ ～NO1ブイ通過
6		17:15	259	265	271	26	25	11.4	1000	40	21.5	波0.5m
7		18:15	448	264	271	26	25	12	800	40	35.9	0.5～1m
8		19:15	640	264	271	26	25	11.4	890	40	47.6	1m

航路　戸畑から鳥取

空船 (積船) 満船

天気 くもり・雨

波浪



H24　　第3住若丸 トランスマスター燃費テスト　　NO2

	日付	時間	主機流量計メーター(ℓ)	回転数	デジタル回転数	ラック1	ラック2	速力	ヒーピスタンス燃料流入有無 (ℓ)	補機発電量 (kw)	積算流量計メーター	その他
1	4/13	20:15	834	265	271	27	26	10.7	950	40	60	流 1.5m
2	〃	21.15	1028	264	270	27	26	10.7	750	40	72.4	1.5m
3	〃	22:15	1223	264	270	27	26	10.6	830	40	85.9	1.5m
4	〃	23:15	1415	264	270	27 ~~26~~	26	11	950	40	98.8	1.5m
5	4/14	0:15	1606	264	270	26	25	10.9	730	40	113.6	1.5
6	〃	4:15	2376	264	270	26	25	10.8	800	40	169.0	1.5~1
7	〃	5:15	2568	264	270	27	25	10.8	890	40	183.6	1
8	〃	6:15	2761	264	270	27	25	11	970	40	198.9	1

航路　戸倉から鳥取

空船　満船

天気

波浪

No.7

H 24 第3住若丸 トランスマスター燃費テスト NO.3

	日付	時間	主機流量計 メーター(ℓ)	回転数	デジタル 回転数	ラック1	ラック2	速力	サービスタンク 燃料流入有無	補機 発電量	補機流量計 メーター	その他
1	4/14	7:15	2953	264	271	26	25	10.8	780ℓ	40 kW	211.3ℓ	浪 1m.
2		8:15	3144	264	271	26	25	10.5	840ℓ	40	223.8	1m.
3		9:15	3336	264	270	27	25	10.5	950ℓ	40	236.8	[illegible]
4		10:15	3524	264	270	26	25	10.6	760ℓ	40	249.9	1m.
5		11:15	3715	264	270	26	25	10.7	830	40	262.8	1m
6												
7												
8												

航路 戸畑から鳥取

空船 満船 満船

天気

波浪

Section6： Explanation of the second and the third voyage test data,

B. The second voyage test："Trans-master" device B is set in a state of "OFF".

1. A test ship： “The third Sumiwaka-maru”

2. Purpose of the voyage test
The reduction rate of the fuel consumption and the voyage time of the test ship are measured with "Trans-master" device B.

"Trans-master" device B is constituted of the three pieces of "Trans-master" devices connecting in series.

3. Conditions of the voyage test

(a) The voyage tests in a state of "ON" and in a state of "OFF" of "Trans-master" device B must be carried out with same states of the marine tide and a wave and a wind.

4. The voyage test course

(a) The marine tide is most stabilized and the voyage test course to "Tottori port" from "Tobata port" in the Sea of Japan that the marine condition is easy to be maintained constant, was decided to the voyage test.

(b) The test ship is always loaded in a state full of slag at the steelworks station and runs the voyage test.

The test ship is always state of full load with slag of ironworks.

(c) In other words, the situation of the load and the course of the voyage test are always equal completely because the test ship always transports the solid waste of the iron manufacture company from "Tobata port" to "Tottori port".

(d) In addition, the fuel consumption and the voyage time can be measured with the most accuracy by choosing the season that the marine tide and a wave and a wind become most stable in the voyage test course of the Sea of Japan.

5. The height of a wave,
0.5~1.0 meter

6. Enforcement day of the voyage test
From 30 to 31 on August in 2011

7. Explanation of the voyage test
(a) The voyage test data in a state of "OFF" by "Trans-master " device B were recorded to table No. 4.

8. The result of the voyage test

(a) The voyage test data from "Tobata port" to "Tottori port " were recorded to table No.4.

(a-1) The fuel consumption of the main engine : 3,845 liters

(a-2) The time required : 50 minutes and 20 hours,

C. The third voyage test : "Trans-master" device B is set in a state of "ON".

1. The test ship: "The third Sumiwaka-maru"

2. Purpose of the voyage test

(a) The purpose mentioned above is the same purpose with "B. the third voyage test".

3. Conditions of the voyage test

(a) The conditions mentioned above are the same conditions with "B. the third voyage test".

4. The voyage test course

(a) Test course is the same test course with "B. the third voyage test"

5. The height of a wave
0.5~1.5 meter

6. Enforcement day of the voyage test
From 13 to 14 on April in 2012

7. Explanation of the voyage test
(a) The voyage test data in a state of "OFF" by "Trans-master" device B were recorded in table No. 5 and table No.6 and table No.7.

8. The result of the voyage test
(a) The voyage test data from "Tobata port" to "Tottori port " were recorded to table No. 5 and table No.6 and table No.7.

(a-1) The fuel consumption of the main engine : 3,715 liters

(a-2) The time required : 30 minutes and 19 hours,

9. The effect of "Trans-master" device B

(a) When the results of "B. the second voyage test" and the results of "C. the third voyage test" are compared,
(a-1) About the time that was required of the test ship,

The time required in case of "B. the second voyage test", : 50 minutes and 20 hours

The time required in case of "C. the third voyage test", : 30 minutes and 19 hours

(a-2) About the fuel consumption of the main engine,

The fuel consumption of the main engine in the case of "B. the second voyage test" : 3,715 Liters

The fuel consumption of the main engine in the case of "C. the third voyage test" : 3,845 Liters

(a-3) As is mentioned above, the time to arrive at "Tottori Port" was shortened for 20 minutes and one hour in a state of "ON" by "Trans-master" device B in the voyage test.

(a-4) The voyage test mentioned above were carried out each in August, 2011 and April, 2012 in the good conditions of the test course.

(a-4-1) Because the enforcement day was changed, the voyage test that was carried out in August, 2011 did not be influenced by typhoons particularly and, it is considered that the time required was shortened greatly.

(a-5) The fuel consumption that was used till arrived at "Tottori Port" in the voyage test by "Trans-master" device B in a state of "ON", 130 liters was decreased.

Therefore, the rate of decline became 3.5%.

(b) About the test data of the “Rack” of the test ship,

(b-1) The rotating numerical values of the main engine is 265rpm, and the rotating numerical values that was set in the main engine recorded in No.4 table and No. 5 table and No.6 table is always unchangeable.

(b-2) The numerical value of "Rack" expressed as the concentration of heavy fuel "A" used in the main engine decreased from 29-31 to 28, but the voyage speed by "Trans-master" device A did not change.

(b-3) The “Rack” is a device for adjusting the density of heavy oil “A” before heavy oil “A” is jetted into a cylinder of the main engine in the test ship.

(c) About "Trans-master" device A and "Trans-master" device B

(c-1) According to the voyage test of the test ship, the rate of decrease in the fuel consumption by "Trans-master" device A was 11.3% and the rate of reduction in the fuel consumption by "Trans-master" device B is It was 3.5%.

(c-2) It is impossible at all that numerical value of the rate of decline of the fuel consumption mentioned above is accomplished by a technology and the science about the conventional ship.

(c-3) Therefore, in the molecules of the heavy oil "A" in the cylinder of the test ship, the new and unknown explosive vaporous expansion pressure without generating heat corresponding to 11.3% and 3.5% each of the explosive thermal expansion pressure by conventional combustion, occur.

(c-4) The reduction rate of fuel consumption of 11.3% of "Trans-master" device A, in which two "Trans-master" devices were connected in series, is a much larger numerical value than 3.5% of the reduction rate of fuel consumption by "Trans-master" device B, in which three "Trans-master" devices were connected in series.

Section 7: About the fluid speeds of heavy oil “A” passing through "Trans-master A" device and "Trans-master B" device,

A. Explanation of the flow speed of heavy oil "A" which affects the rate of decrease of the fuel consumption in particular.

(a) In the case of "Trans-master" device B consisting of three "Trans-master" devices connected in series, it is possible to surely induce of big electron energy by the magnetism to atoms of heavy oil "A".

(b) However, according to the voyage test results, 3.5% of the numerical value of the reduction rate of the fuel consumption by "Trans-master" device B is too low when compared with the numerical value of 11.3% by "Trans-master" device A .

A-1. In particular, the reason why the reduction rate of the low fuel consumption by "Trans-master" device B occurred,

(a) Because the same gear pump was used, the passage resistance of heavy oil "A" by "Trans-master" device A is far smaller than the passage resistance by "Trans-master" device B.

(b) Therefore, the flow velocity of heavy oil "A" flowing in the fuel hose of "Trans-master" device A is bigger in speed than the flow velocity flowing in the fuel hose of "Trans-master" device B, and it is a flow velocity close to "The most suitable speed for reduction of the fuel consumption".

(c) In other words, the flow velocity of the heavy oil "A" flowing in the fuel hose of "Trans - master" device B is considered to be far from "The most suitable speed for reduction of the fuel consumption".

(d) Accordingly, the decrease rate of the fuel consumption of "Trans-master" device A composed of two "Trans-master" devices is far higher than the decrease rate of the fuel consumption of "Trans-master" device B being composed of three "Trans-master" devices.

(e) From the above, when the cutting the special synthetic magnetic field at "The most suitable speed for reduction of the fuel consumption" based on "The use technology of a special synthetic magnetic field", the results in an overwhelmingly large reduction effect was generated.

(f) Therefore, when "Trans-master" device B is used particularly, it is necessary to increase the output of the pump of the test ship mentioned above so that speed of the heavy oil "A" can become "The most suitable speed for the decrease of the fuel consumption".

(g) In any case it is thought that the decline rate of the fuel consumption of 11.3% by "Trans-master" device A was gained.

Section 8: About the frequency of AC power supply used by "Trans-master" device,

(a) The changeable breadth of the frequency of the commercial AC power supply is generally 0-15%.

(b) When the load of the gear pump is overloaded, because the voltage drop and the frequency of the AC power supply decrease, the rotation speed of the gear pump lowers.

(c) As a result, since the speed of the heavy oil "A" in the Trans-master "device will drop and inevitably will be a speed away from" The most suitable speed for reduction of the fuel consumption", the ability of "Trans-master "device will be greatly decreased.

(d) Therefore, the AC power supply voltage and frequency drop caused by the overload must be prevented by the automatic voltage regulator.

Section 9: About nitrogen oxide (NOx) in the exhaust gas by the drop of combustion temperature in diesel engine of the test ship,

A. About temperature of exhaust gas,

(a) According to the voyage test data of "7 th" of No.1 table and of "8 th" of No. 2 table and of "9 th" of No. 3 table, the average temperature of exhaust gas of the ship engine by fuel oil "A" declined from 318 ℃ to 304℃.

(b) As a result, in the combustion temperature in the inside of a cylinder in the main engine, numerical value of 14℃ decreased in the voyage test of "The third Sumiwaka-maru" by "Trans- master" device A.

(c) It was proved virtually that nitrogen oxides (NOx) in exhaust gas from the ship diesel engine decreased by confirming the decrease in temperature of 14℃ of exhaust gas of the ship engine mentioned above.

(d) As is mentioned above, it can be thought that the new unknown explosive vaporous expansion pressure by the magnetism without generating heat occurred in combustion of the inside of a cylinder of the main diesel engine in "The third Sumiwaka-maru" of the test ship and as a result combustion temperature decreased.

B. About a peculiar problem of the main diesel engine of the test ship,

(a) The rate of the fuel combustion of 3.5% with heavy oil "A" of the main diesel engine of the test ship is the vary small numerical value in comparison with the decrease rate of the fuel consumption of large vehicle of 10% such as a truck and the bus.

(b) A main cause is that the speed of heavy oil " A" that cuts "special synthetic magnetic field" is far away from the "Most suitable speed for the decrease of the fuel consumption" .

(c) Particularly in marine engines, since the distance from the auxiliary fuel tank to the main engine is long and heavy oil "A" is delivered by the iron pipe, the new unknown special kinetic energy by the magnetism that have been already accumulated in advance to heavy oil "A" in the auxiliary fuel tank may be greatly attenuated.

Section 10：About the drops of vibration and a noise by the engine test,

A. Vibration and the noise in the voyage test of the ship engine,

(a) The combustion temperature in the inside of a cylinder of the ship engine greatly decreased.

(b) Therefore, since the combustion temperature is decreasing, it is considered that the amount of nitrogen oxide (NOx) generated by combustion has decreased considerably.

(c) By the way, the rotation speed of the main engine of the conventional ship is automatically controlled by the fuel oil supply system which can constantly maintain a constant rotation speed.

(d) However, since the new unknown explosive vaporous expansion pressure by the magnetism which does not generate heat added to the explosive thermal expansion pressure by conventional combustion, the rotation speed of the main engine increases.

(e) However, since the rotation speed of the main engine is automatically controlled to be constant, the conventional fuel supply amount is automatically reduced.

(f) That is, the new unknown explosive vaporous expansion pressure by the magnetism without generating heat by combustion of the heavy oil "A" occurs, immediately afterwards the conventional explosive thermal expansion pressure by the combustion of decreased heavy oil "A" occurs in parallel.

(g) Therefore, because the above two kinds of explosive pressures are added to the piston of the main engine, the impact value to the piston is averaged and drastically lowered.

(h) Therefore, in a conventional marine ship, because the analog indicator of a main engine generally vibrates within the scale of the smallest unit due to vibration of the main engine, it was completely impossible to accurately read the instructed numerical value of the pointer.

(i) However, since the vibration and noise of the main engine of the ship has been greatly reduced by using the heavy oil "A" managed by "The use technology of a special synthetic magnetic field",
it was able to read1/10 in the minimum unit indicated by the pointer of the pointing device accurately.

(j) Furthermore, since the impact strength in the piston of the main engine was greatly reduced, the deterioration and contamination of the engine oil was reduced, and as a result, the life of the engine oil dramatically prolonged.

Section 11 : About the combustion test in the burner of the boiler,

A. The test of a decrease rate of the fuel consumption by "E-oiler" device in the burner of the boiler.

(a) The purpose of test

When "E- oiler" device is used as fuel oil of the boiler for a dryer of laver, the rate of decline of the fuel consumption is calculated.

(b) The boiler that is used for test

The boiler for the laver dryer which "Akashi-city, Hayashisaki, a fishermen's cooperative association" own

(c) The fuel oil to use : heavy oil "A"

(d) The method of test

The number of the mean volume of shipment of sheets of laver of 2006 by "E-oiler" device is compared with the number of the past mean volume of shipment of sheets of laver without "E-oiler" device.

A-1. The test result

(1) The test result after attaching "E-oiler" device in 2,006.

(a)Total number of the mean volume of shipment of sheets of laver : 6,562,200

(b) Total quantity of heavy oil “A” that was used : 43,178 liters

(c) The total number of the mean volume of shipment of sheets of laver per 1 liter : 152.4 pieces

(2) The result of measurement in 2,002

(a) The total number of the mean volume of shipment of sheets of laver per 1 liter in 2,002 : 143.9 pieces

(b) Because winter was mild particularly the fuel consumption was decreased.

(3) The result of measurement in 2,005

(a) The total number of the mean volume of shipment of sheets of laver per 1 liter in 2,005 : 130.9 pieces

(b) Because winter was severe particularly the fuel consumption was increased.

A-2. The conclusion of the reduction test of the fuel consumption

(a) When "E-oiler" device was not attached, namely the average shipment number of sheets of laver per 1 liter in 2002 and in 2005 is used as the past average shipment number of sheets of laver per 1 liter.

(b) That is, when "E-oiler" device was not attached, the average shipment number of sheets of laver per 1 liter, (143.9 sheets +130.9 sheets)/ 2 =137.4 sheets

(c) A increase rate of the shipment number of sheets of laver per 1 litter by "E-oiler" device,

152.4 sheets / 137.4 sheets = 1.109

(d) That is, the decrease rate of the fuel consumption by "E-oiler" device is 10.9 %.

A-3. Furthermore, the vibration and noise when heavy oil A was injected from the burner decreased dramatically due to the decrease in jetting resistance due to the drastic decrease in viscosity of heavy oil “A”.

A-4. Consideration of burning test by heavy oil "A" managed by "The use technology of a special synthetic magnetic field",

(a) By the way, today, there is almost no possibility for improving the decrease of the fuel consumption with combustion technology by heavy oil "A" in every boiler.

(b) However, since it was a continuous reduction test of fuel consumption by "E-oiler" devices for a long period of one year in 2006, 10.9% of the reduction rate of the test result is considered to be a reasonable reduction value .

(c) Therefore, because the numerical values of 10. 9% by heavy oil "A", as a decrease rate of the fuel consumption by "E-oiler" devices are too big, it can't be explained at all reasonably with the conventional combustion technology and science about the burner of the boiler .

(d) That is, the above data is proving that a new unknown thermal energy by the magnetism was generated in combustion of the burner of the boiler.

B. Combustion test of the light oil by the alcohol lamp

B-1. Regarding the test method

(a) Because in the state of almost complete combustion with light oil, the color and state of the flame by normal combustion of light oil and burning with light oil managed by "The use technology of a special synthetic magnetic field" are exactly the same, the differences in the state of the flame can not be judged at all.

(b) However, the differences in flame color and flame state clearly appear by setting the burning temperature of light oil as low as possible by incompletely burning light oil with an alcohol lamp.

(c) In the above case, caution is required since smoke is generated especially due to incomplete combustion.

(d) Therefore, the conditions of the flame by combustion by the alcohol lamp with ordinary light oil and the light oil managed by "The use technology of a special synthetic magnetic field" are compared by visually inspection.

(e) Particular, the color and length of the flame due to the combustion of light oil managed by "The use technology of a special synthetic magnetic field" are compared with the flame of normal light oil.

(f) Regarding the change in the state of the flame, as for the flame of the light oil managed by "The use technology of a special synthetic magnetic field", since the jet pressure due to the vaporous expansion pressure from the alcohol lamp becomes stronger, the height of the flame necessarily heightens and the color becomes orange in higher temperature.

(g) On the other hand, the height of the flame in the conventional light oil is low because the vaporous expansion pressure of conventional light oil is small and the injection pressure is low, and the color of the flame becomes a red flame with a lower temperature.

B-2. Conclusion of the test

(a) It can not but be thought that due to the above phenomenon, the electron energy caused by magnetism induced to the atom of light oil managed by "The use technology of a special synthetic magnetic field" is released in combustion of light oil and becomes thermal energy and has been added to thermal energy of combustion of conventional light oil.

(b) In other words, the data mentioned above is proving that a new unknown thermal energy by the magnetism that was accumulated to light oil in the combustion of conventional burner was generated.

B-3. In the combustion test of light oil with the above alcohol lamp, black smoke was generated due to incomplete combustion.

Section 12: About the reduction of the fuel consumption and harmful exhaust gas of a boiler

(a) Today, as for the combustion technology by fuel oil in normal boiler with heavy oil “A”, the possibility of improvement of the fuel consumption does not exist almost.

(b) Therefore, because the numerical values of 10.9% by heavy oil "A", as a decrease rate of the fuel consumption by "E-oiler" device are too big, it can’t be explained at all reasonably by conventional combustion technology and science on the boiler.

(c) That is, the above data is proving that a new unknown thermal energy by the magnetism was generated in combustion of the burner of the boiler.

(d) Besides, in combustion of the light oil mentioned above, a noise and the vibration to be generated in the inside of a cylinder of a heat engine decrease dramatically. Similarly, in combustion of heavy oil "A" mentioned above , a noise and the vibration to be generated in the burner of the boiler decrease dramatically too.

(e) Combustion test with the light oil used for the boiler

(e-1) The test method burns with light oil managed in the alcohol lamps in normal light oil and "The use technology of a special synthetic magnetic field" and investigates flame.

(e-2) The colour and the length of flames of light oil managed by "The use technology of a special synthetic magnetic field" are compared with normal light oil in the alcohol lamps.

(e-3) As for the change of the flame, everyone can distinguish easily the color of the orange from a red color , and because the force is added to the flame the height of the flame gets longer inevitably.

(f) In other words, it is thought that electronic energy by the magnetism induced to an atom of the light oil managed by “The use technology of a special synthetic magnetic field" was released by combustion of the light oil and became thermal energy and was added to combustion of the conventional light oil.

(g) In other words, data mentioned above is proving that a new unknown special thermal energy by the magnetism that was accumulated to light oil and heavy oil A in the combustion of conventional burner was generated.

End

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