

Tender
Document Process No. CP-001-2017
Sale of Tanker Vessels

EP FLOPEC

TENDER DOCUMENTS CONTENT

This document establishes the rules, conditions and criteria applicable for the selling process N° CP-001-2017 **SALE OF TANKER VESSELS PROPERTY OF EP FLOPEC** that will launch the Empresa Pública Flota Petrolera Ecuatoriana (EP FLOPEC), through the brokers dully registered in the approved List of Brokers (LBA), in general terms, the Tender document involves:

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CHAPTER I PARTICIPANTS INSTRUCTIONS

1. OBJECT FOR SALE

The object of process CP-002-2017 is the **sale of two (2) Panamax tanker vessels** named: "COTOPAXI" and "CHIMBORAZO", through the application of Article 23 of the Regulation for Handling and Management of Public Goods, published on the Official Register Supplement N° 888 of November 23th 2016, taking into consideration that EP FLOPEC is a state owned company with legal identity, own heritage and autonomous management.

2. APPLICABLE REGULATION

The present sale will be regulated by the second article in the 23rd subparagraph of the codification of the regulation for handling and management of public goods, published on the Official Register Supplement number 8880 November 23, 2016.

3. SALE GENERAL CONDITIONS

3.1 Sale Method:

INTERNATIONAL BIDDING TENDER through the panel of brokers that have a vessel purchase-sell unity and are qualified in the Approved Brokers List (LBA).

3.2 Nature of the Sale:

Sale of Panamax tanker vessels named: "COTOPAXI" and "CHIMBORAZO". The goods included in the present sale are offered in the current condition, this means: "AS THEY ARE and WHERE THEY ARE".

3.3 Sale Mechanism: International Tender

The mechanism for the tanker vessels sale will be through an international Tender of bids that will have the following procedure:

A) A sale commission will be nominated for the vessels sale integrated by:

A CEO delegate - Commercial Manager
Financial Manager
Technical Manager
Administrative Services Manager
Legal Manager will act as commission secretary.

The sale commission will be responsible of carrying the sale procedure established in the Tender document until the final report is issued for the awarding that will be presented to the CEO of the company.

The sale commission according to the CEO guidelines will be responsible for the negotiation and terms of the bid: economic, and will present their final report for the CEO knowledge.

B) The schedule of the sale procedure for the vessels will be the following:

Tender Launch:	September 12, 2017
Vessel inspection:	until October 20, 2017
Questions to the Tender document:	October 17, 2017
Answers to the questions to the Tender document:	October 20, 2017
Reception and assessment of bids:	until October 30, 2017, 22:30 hours of Quito.
Preparation of the reception and assessment of bids Act:	October 31, 2017
Negotiation guidelines by CEO:	November 01 1017
Start of negotiation:	From 09:00 hrs of November 06, 2017
End of negotiation:	Until 15:00 hrs of November 08, 2017
Presentation of report to the commission:	November 10, 2017
Preparation of the awarding Act and signature of the MOA:	November 14, 2017
Signature of complementary documents to end the transaction:	November 20, 2017
Date of vessel delivery:	according to MOA

The schedule of the process could be modified by the commission, if that is the case.

On the day and hour determined in this Tender document the international Tender will be launched with the publication of the Tender rules along its annex, bid form, the MOA, the Q88, vessel inventory, CAP (Condition Assessment Program); and the inspection report, issued by the class society. The Tender will be carried by email and the qualified brokers in the LBA and the webpage www.flopec.com.ec.

3.4 CURRENCY OF PAYMENT:

Dollar of the United States of America.

4. DESCRIPTION OF THE SALE

This process consists on the sale of Panamax tanker vessels "as they are and where they are"; named: "COTOPAXI and "CHIMBORAZO", with the characteristics pointed in CHAPTER III, General Technical Specifications of the vessels.

5. CLARIFICATIONS TO THE CONTENT OF THE TENDER DOCUMENT

In case there are clarifications and/or questions to the present Tender document, the brokers may request them through the email address comisionventabuques@flopec.com.ec, according to the process schedule; in order for the Sale Commission to answer all the clarification questions according to the same schedule. Additionally, a copy of the questions and the answers will be sent, including an explanation to the questions without identifying the source, to all participant brokers in the international Tender for the vessels sale.

The clarification answers and/or questions will form part of the Tender Document and will have the same value.

Note: it will be taking into consideration only the email addresses supplied by the brokers, which domain belongs to the company of the participant broker.

People authorized to answer clarifications and/or questions:
Commercial Manager or his delegate (Member of the Commission)

6. MODIFICATIONS TO THE TENDER DOCUMENT

EP FLOPEC reserves the right to modify the content of the Tender document, at any time and until two (2) working days before the deadline for presenting the bids.

All brokers within the panel will be notified by written notification about any modification to the Tender document.

7. BIDDING LANGUAGE

The present Tender document, the bids and documents derived of the sale procedure must be presented in English.

8. VALIDITY PERIOD OF THE BIDS

The bids will have a validity of three (3) working days counted from the date of the offer submission,

9. PARTICULAR CONDITIONS

9.1. PAYMENT METHOD

The price of the Panamax tanker vessels objects of this sale will be paid in full by the bidder in Dollars of United States of America via T/T, as stated in the MOA document.

The period of time for the awarded bidder to pay the full price of the vessel or vessels (in case of an Ecuadorian bidder plus the tax of aggregate value (IVA)), will be according to the terms and conditions of the MOA.

The payment transfer from any international bank will be made to the following bank instructions from the seller, sending the transfer to the email address of the sale commission:

Intermediary Bank:

Name: Wells Fargo Bank N.A.
Address: 375 Park Avenue, NY 4080
New York, USA
Swift: PNBPU3NYYC
ABA: 026005092

Beneficiary Bank:

Name: BANISI S.A.
Address: Calle 58 con Calle 50, Obarrio, Bella Vista.
Panamá, Panamá
Account: 2000192008374

Swift: GUAYPAPA

Beneficiary:

Account number: 100-56-12792

Beneficiary name: EMPRESA PUBLICA FLOTA PETROLERA ECUATORIANA EP FLOPEC

The invoice corresponding to the sale of the vessels will be issued under the name of the awarded bidder or its consignee and will not be conditioned or linked to the delivery/reception of the vessels. If these payment conditions are not fulfilled, the awarding bidder will lose its right to the awarding and EP FLOPEC will apply the penalty established in the MOA, passing the awarding to the participant which bid is in second place, the same consideration will apply until the bidder in the third place.

The awarded bidder will provide in written to EP FLOPEC, at the moment of payment, the name of the person or people that under its responsibility and on its behalf and representation will be present to carry out the physical delivery of the vessels object of this sale process.

9.2. BIDS RECEPTION

On the date and hour established in the process schedule, the companies interested in purchasing the vessels must send their bids through the brokers registered that LBA, who will send them by email to comisionventabuques@flopec.com.ec

The bid, which must be duly subscribed by the legal representative or his delegate in PDF, must contain the information required in annex I and Form 1 of the Tender document, with a clear indication of the payment method, the validity of the bid, acceptance of the present Tender document and the MOA.

9.3. MECHANISM FOR RECEPTION AND OPENING OF BIDS

The sales commission, will gather officially the day and hour determined in the process schedule, will proceed to review the bids on the email address of the commission, same that should be followed by the enabling documents established in Annex I and Form 1 of this Tender document.

They will assess the bids that comply with the following criteria with a checklist system, which means "COMPLY or DON'T COMPLY":

- A) That has been presented within the period of time for bids reception.
- B) That has attached all documents established in Annex I and Form 1.

In any case, bids will not be admitted once the reception period has concluded.

10. BIDS ASSESSMENT CRITERIA

In the day in our pointed in the process schedule, the sale commission of the vessels, will rate the bids in order of reception according to the following criteria:

- A) The legality of the bids presented.- Understood as the way of presenting the bids with the required documents in Annex I and Form 1.
- B) Financial bid.- Containing the amount offered by the participant in numbers and letters;

C) Payment method.- Payment in full by T/T to the before mentioned seller's account.

After the assessment rating of the bids, the sale commission for the vessels will elaborate they "act of assessment and rating" for acknowledgment of the CEO who will issue the guidelines needed for starting the negotiation.

On the day and hour established in the schedule negotiation, it will be carried out with the bidding companies through the correspondent brokers, which bids have been accepted by the sale commission; the negotiation will be carried out by email within the time period established in the schedule, in case more time is needed for negotiation, this time period will be extended according to the guidelines issued by the CEO.

End of negotiation- Once negotiation is concluded or the time period established in the schedule has ended, the sale commission will send to the CEO a negotiation result report, presenting a list of the final bidders in order to approve the awarding to the best bidder, and to apply if needed what is stated in number 9.01 (third paragraph) and the following number 11.

For the not awarding participants, a communication will be sent thanking them for their bid.

The awarding resolution will content the name of the awarding company and the value for which the awarding is made. This resolution will be Private and Confidential.

11. AWARDING CRITERIA

The awarding will be granted to the bidders that qualify with the best bid negotiated considering the amount agreed.

If there are more than one qualified bidder, and the participant with the first option, once the process result has been notified, doesn't keep his offer, decline to sign the MOA, or have the awarding cancelled by reasons that will feature on the sale commission report; the bidders that have reached the second and third place in the offers assessment, will have the right to be granted the awarding.

EP FLOPEC could award totally (two vessels) or partially (one vessel) between various bids presented; all before mentioned considering the best bids received and the amount offered and negotiated.

12. CAUSES FOR DECLARING THE SALE PROCESS VOID

EP FLOPEC could declare the present process void when:

1. No bids have been presented.
2. All the bids are rejected or the bidders disqualified, for not complying with the established on the Tender document.
3. In the case none of the bidders keep their offer valid, declined to sign the MOA or the complementary documentation for enabling the process, or the awarding is nulled for providing fake information.
4. Exist circumstances in which, to the commission criteria, give chance to a significant modification of the offers.
5. It is suspected that between some bidders there are agreements or deals that may alter the transparency of the process.

13. BIDDER DISQUALIFICATION CRITERIA

All bidders found in any of the following assumptions will be disqualified:

1. That during the procedure they are under liquidation and/or dissolution.
2. That the broker hasn't been qualified by EP FLOPEC and is not on the LBA.
3. The present offers that include fake information or data.
4. That doesn't supply properly and in due course the information required on the Tender document, making it possible its assessment or appreciation.
5. That doesn't comply with any of the qualification criteria established in the Tender document.

14. CRITERIA FOR REJECTING BIDS

The bids that are found in the following assumptions will be rejected:

1. That have substantial omissions or deviations to the requirements demanded in the Tender document.
2. That are conditioned or alternatives.
3. That different offers for the same vessel come from the same bidder.
4. That the offers are presented by different brokers on behalf one same bidder.
5. That provides fake information.
6. That are not followed by the documentation requested in the Tender document.
7. That are not signed by the people representing legally to the bidding company.
8. That are presented in a different currency than the one mentioned in the Tender document.

15. NOTIFICATION OF THE AWARDING

The CEO of EP FLOPEC must award or declared void the procedure according to the process schedule

Through written communication addressed to the awarded bidder EP FLOPEC would inform the result of the process, requesting the awarded bidder to provide the following documentation duly apostilled and authenticated:

1. The address of the office legally registered, name of the contact person for celebrating and signing of all complementary and enabling documentation of the process.
2. Company Constitution and inscription certificate in its country of origin.
3. Valid appointment of the legal representative of the awarded bidder or its delegate.

Once the awarding notification is sent by EP FLOPEC, the awarded company will have a period of time no greater than ten (10) working days to present the before mentioned documents.

Moreover, the rest of the participants will be informed of not being awarded by written correspondence.

The awarded company or its consignee will be the only one responsible before EP FLOPEC of the execution of the object of the current sale process.

16. ASSIGNMENT OF RECEIVABLES

The awarded bidder, could not hand over or sale, neither total nor partially in favor of a third company the rights and obligations derivate of the current sale process.

17. OTHER CONSIDERATIONS

17.1. Inspection of goods

The interested bidders could inspect the Panamax vessels named: "COTOPAXI" and "CHIMBORAZO", in order to verify their physical condition, description, specifications, blueprints, documents and logs wherever the vessels are located, after obtaining access to the facilities.

For coordinating the inspection of the tanker vessels, the same must be requested but email to the following email address: comisionventabuques@flopec.com.ec, attaching copies of passport of the people that will go on board the vessel, the name of the vessel they will inspect and the date in which the inspection is scheduled to be carried out. Once the date and place of inspection are coordinated, the interested party and the Master of the vessel will be informed. The inspector will not interfere with the vessel's operation.

Date for the vessels inspection.-The Panamax vessels named: "COTOPAXI" and "CHIMBORAZO", could be inspected in the period of time established in the schedule process, the lack of inspection will not be considered as excuse for the bidder to stop the negotiation.

The interested in purchasing the before mentioned vessels will be the only one responsible for the damages or injuries that may suffer the people carrying out the inspection on their behalf during the visit to the vessel, they also undertake to respond before any lawsuit or claim derivate of before mentioned motives against EP FLOPEC, through written document (LOI).

The lack of physical inspection by the interested parties to verify the physical condition of the vessels including in this sale process, as well as the documentation, certificates, registration, logs and further information inherent to the vessels, is on the responsibility of the interested party, therefore claims derivate of the lack of inspection or revision will not be accepted.

Since these are goods, which physical characteristics don't allow to the interested party to fully verify the specifications pointed in Annex I, EP FLOPEC, is not responsible for the discrepancies that may exist upon delivery of the vessel or vessels.

The bidders will be responsible of all the costs associated with the preparation and delivery of their offers and the visit and inspection will be under their own risk, EP FLOPEC, in any case, will be responsible for the outlays of any nature in which the participants incur in this sale process, even if said process is cancelled or declare void.

17.2. Delivery and clearance of the vessels

The delivery of the vessels will be effective once the payment of the agreed amount is made and the proper subscription of the enabling documents described in the MOA.

The act of vessel delivery will take place where they are and as they are, once the last voyage on owner's account is finished and according to the schedule used for completing the crew disembark, through a protocol of delivery and acceptance of the vessel made in the act.

For the delivery, EP FLOPEC will previously obtain the release of maritime liens, if any. On the other hand, the awarded company is forced to change the name of the vessel or the vessels, as well to paint her in such way that the name, brand and owner logo are hidden, avoiding any linked relation with EP FLOPEC once a delivery of the vessels is made. Any other tax, right or charge will be on the awarded company account.

In case that within the period of time comprehended between the act of awarding and the delivery of the vessel a damage or accident happened to the vessels, in which the insurance company of EP FLOPEC, declares as total loss, the sell and purchase operation will be cancelled, with no responsibility of any party, in these assumption, the values paid by the awarded company for any concept, will be reimbursed, without interest payment, within a period of time no greater than thirty (30) working days counted from the date of the insurance company statement.

Once the vessels are delivered to the awarded company, EP FLOPEC, will notify the Ecuadorian maritime authority and other relevant entities, about the sale of the before mentioned vessels.

The awarded company will be the only one responsible of carrying out the paperwork for obtaining the permits and make by their own means, her clearance; as well as to pay the rights of port, customs, steering, and other derivate it from the activity proper of the stay and departure that are caused, as well as the corresponding responsibilities. The awarded company will supply the vessel during this period, the proper crew determined by the port authority for her safety and protection. Within this period of time the awarded company under its own responsibility will carry out the paperwork for registration, flag state and obtain the permits for clearance.

All taxes, labor fees, rights and expenses related to the purchase, registration, flag state of the vessels and others raised within the clearance process will be on the awarded company account.

The components and equipment integrating the vessels are sold in the quantity and conditions in which they are "as they are and where they are", such as it is mentioned in Annex I, of the Tender document.

It is also established that the fuel and lubricants found on board of the vessels must be paid separately by the awarded company, at the regular price in the invoice for the last supply.

It is also established that the awarded company, its personnel or designated crew, will not be able to go on board the vessels to carry out minor repairing labors or engine revisions, until the act of delivery-reception of the vessels has been fully completed.

The awarded company will have to carry out the paperwork for certificates, permits and approvals that the maritime authorities request for their temporary or definitive mobilization. Furthermore, it is forced to observe and attend the accords, treats and national and international dispositions issued in matters of maritime safety, environment protection and sea life, as well as the treats, accords, protocols and to the International Maritime Organization (IMO) code for implementation of mandatory instruments, which on these matters are currently in force.

18. MAXIMUM PERIOD OF TIME IN WHICH THE MOA AND LEGAL ENABLING DOCUMENTS WILL BE SUBSCRIBED.

The MOA will be subscribed according to the process schedule.

If the bidder located in first option for awarding does not sign the MOA according to the process schedule, EP FLOPEC will pass the awarding to the bidder located in second option, applying the same consideration until the bidder located in the last option.

The complimentary and enabling documents contemplated on the MOA will be subscribed previous to the act of delivery-reception of the vessels.

19. CONFIDENTIALITY AGREEMENT

The participants must use all reasonable means to preserve the confidentiality of all the technical information, data and operational techniques, delivered today and directly or indirectly by EP FLOPEC.

None of the documents or information delivered in the sale process of the vessels contained in this tender, can be supplied to third parties or used by the participant without the previous written authorization of EP FLOPEC.

20. DEPOSIT

If the awarded company does not comply with the payment in time and form, according to the established in the MOA, EP FLOPEC will cancel the sell and purchase operation and will not be forced to refund the amount paid with the MOA subscription.

21. JURISDICTION.

For everything related to the interpretation and compliment of the present Tender document, the parties subject to the law and jurisdiction of the country in which the MOA is agreed.

Comentado [MACG1]: El texto sería en el siguiente sentido: El procedimiento de la contratación se lo realizará en base a la legislación ecuatoriana, y en todo lo relacionado a la suscripción del MOA se aplicará la legislación de Nueva York, previa autorización de la Procuraduría General del Estado.

**CHAPTER II
INSTRUCTIONS ANNEX FOR THE PARTICIPANTS**

ANNEX I

Documents for assessing the legality of the bid (copies):

OFFERING COMPANY'S ARTICLES OF INCORPORATION
APPOINTMENT OF THE LEGAL REPRESENTATIVE OF THE OFFERING COMPANY
AUTHORIZATION OR MANDATE ISSUED BY THE LEGAL REPRESENTATIVE OF THE OFFERING COMPANY TO THE BROKER

In case the bidder is awarded will have to provide original documentation duly apostilled and authenticated by the Ecuadorian Embassy or Consulate.

**FORM 1
SALE OF TANKER VESSELS COTOPAXI () · CHIMBORAZO ()***

EXPRESSION OF WILL TO PARTICIPATE

I, _____

With ID or passport N.º _____, as _____ of the company _____, express my will to participate in the sale process Nro. CP-001-2017 which object is the Sale of the Panamax Tanker Vessels named "COTOPAXI" y "CHIMBORAZO"

I accept the technical, operative conditions, the physical condition of the vessels COTOPAXI () and/or CHIMBORAZO (), without having anything to claim in the present or future about the condition of the mentioned vessels.

Furthermore, I declare under oath, the truthfulness and legality of all the information provided in the consigned documents. Moreover, I authorize EP FLOPEC to carry out audit practices to prove the content of any information at any time during the stages of the sale process.

For effects of any process related notification, the address of my represented is: _____, Fax No. _____, Email Address: _____.

VESSEL (S) TO BID	CHIMBORAZO	COTOPAXI	CHIMBORAZO AND COTOPAXI	YES / NO **
FINANCIAL OFFER (NUMBERS AND LETTERS)				
VALIDITY TIME OF THE FINANCIAL OFFER				
PAYMENT IN FULL				
ACCEPTANCE OF TERMS AND CONDITIONS ESTABLISHED ON THE TENDER DOCUMENT				

* Place an X on the vessel of interest

** If you select YES, there won't be any further comments to be considered and we will understand that you accept all other terms and conditions of this Tender document.

Name of Legal Representative
Signature

CHAPTER III

GENERAL TECHNICAL SPECIFICATIONS OF MT

CHIMBORAZO


M/T CHIMBORAZO

- * IMO 9174591, ABS CLASS +A1, Oil Carrier, +AMS, +ACC, VEC, SH
- * L.O.A. 228.11 m
- * L.B.P. 219 m
- * BREADTH M.D.
32.20 m
- * DEPTH M.D.
17.85 m
- * DRAUGHT M.D. (DESIGN)
12.20 m
- * DRAUGHT M.D. (SCANTLING) 12.95 m
- * GROSS TON
35.770 (ITC)
- * DEAD WEIGHT
66.138
- * EQUIPMENT FOR OPERATION IN ECA ZONE, ABS APPROVAL.
- * CERTIFICATED CONDITION ASSESMENT PROGRAM (CAP) - GRADE 1- ISSUED BY ABS CONSULTING



MACHINERY PARTICULARS

SER NO.	NAME OF EQUIPMENT	MODEL & TYPE	PARTICULARS	MAKER
1	MAIN ENGINE S/N.: AA1058	HYUNDAI - B&W 5S60MC (MK-VI)	* NO. OF CYLINDER: FIVE (5)	HYUNDAI HEAVY IND. CO., LTD.
			*CYL. BORE X STROKE (mm): 600 X 2.292	
			*M.C.R.	
			** OUTPUT (BHP): 12.220x ** REVOLUTION (RPM): 93	
			** MEAN EFF. PRESS. (KG/CM2): 17.9	
	TWO (2) STROKE, SINGLE ACTING, CROSSHEAD DIRECT REVERSIBLE TYPE MARINE DIESEL		** MEAN PISTON SPEED (M/SEC): 7.1	
	* N.C.R.			
	** OUTPUT (BHP): 11.000 ** REVOLUTION (RPM): 89.8			
	** MEAN EFF. PRESS. (KG/CM2): 16.7			
	* ROTATION: CLOCKWISE VIEWED FROM FLYWHEEL SIDE			
	* STARTING METHOD: COMPRESSED AIR (30KG/CM2)			

	INTERMEDIATE SHAFT		* Q`TY: ONE (1) STEEL (T.S 60 KG/N * MATERIAL: FORGED * DIMENSION (DIA X LENGTH): 420 X 8.300			
	STEERING GEAR S/N.: 6573 - YEAR 1999	RV13503	* ROTARY VANE TYPE 65 KW X 2 SETS ELECTRIC MOTORS * MAX. WORKING TORQUE AT 35 DEG.: 136 TON-M	ULSTEIN FRYDENBO AS		
	HYD. NUT	HYDRAULIC	OUT DIA. X LENGTH; 720 X 240	HHI - EMD		
3	AUXILIARY ENGINE A/E 1: BA0677-1 A/E 2: BA0677-2 A/E 3: BA0677-3	HHI - B&W 5L 23/30 FOUR STROKE, TRUNK PISTON, IN - LINE WITH EXH. GAS TURBO - CHARGER	* NO. OF CYLINDER: FIVE (5) * CYL BORE X STROKE (MM): 225 X 300 * OUTPUT (PS): 880 * REVOLUTION (RPM): 720 * ROTATION: CLOCKWISE VIEWED FROM GENERATOR SIDE * F.O. BURNING SYS.: * F.O. CONSUMPTION (Gr/PS. H): 145.2 + 3% * L.O. CONSUMPTION (Gr/ PS.H): ABT. * STARTING METHOD: 30 KG/ CM2 COMPRESSED AIR * DIMENSION (L X W X H): 3.509 X 1.596 X 2.318 (MM)/ 4.700 X 1.500 2.500	HYUNDAI HEAVY IND. CO., LTD		
						
	AC GENERATOR AC 1: 98EWDH425 AC 2: 98EWDH426 AC 3: 98EWDH427		HFC6- 506- 14K		* OUTPUT (KW): 600 * VOLTAGE (V): AC 450 * AMPERE 750(KVA) * PHASE: 3 * REVOLUTION: 720 (RPM) * ENCLOSED: 1P23 * INSULATIONS CLASS: F * POWER FACTOR. 0.8 (LAGGING) * NO. OF POLE. 10 * EXCITING: SELF EXCITING BRUSHLESS	HYUNDAI HEAVY IND. CO., LTD
	AUXILIARY BOILER TYPE CPH-20 BURNER KBSA 1550		AUTOMATIC FORCED DRAFT, H.F.O. BURNING,		* EVAPORATION (TON/H): 20 * DESIGN PRESS (KG/CM2); 18 * WORKING PRESS (KG/CM2) ** AT UNLOADING: 16 KG/CM2	AALBORG SUNROD

	PROJECT No. AI 34261	MARINE BOILER	** AT NORMAL SEA GOING: 6 KG/CM2	
			* FEED WATER TEMPERATURE: 60 C	
			* FUEL OIL: H.F.O UP TO 700 CST AT 50 C	
	BURNER No. 1 : 12411		*MAKER/MODEL OF BURNER: AALBORG - SUNROD	
			*TYPE OF SOOT BLOWER:	
	BURNER No. 2 : 12412		*WATER VOLUME (M3): 10 (AVER. WATER LEVEL)	
			* DIMENSION (H X W X H)	
5	EXH. GAS ECONOMIZ ER TYPE: EM510M200 2 S/N: EH 7809	FORCED CIRCULATI NG, SURFACE EXTENDED WATER TUBE TYPE	* M/E EXH. GAS CONDITION: 73.500 KG/H X 221 C (AT M/E NCR UNDER ISO)	KANG RIM INDUSTRIE S CO.
			* EVAPORATION (KG/H): ABT. 1.000 KG/H	
			* FEED WAER TEM. @: ABT. 60C	
			*DRAFT LOSS (mmAq): 89 mmAq	
			* DESIGN PRESS. (KG/CM2): 22	
			* WORKING PRESS (KG/CM2): 6	
			* DIMENSION (L X W X H): 3.062 X 1.641 X 2.210	
6	MAIN AIR COMPRESSO R No. 1 S/N.: 48628-C1	RECIPROC AT'G F.W. AIR COOLED (V 250)	* CAPACITY (M3/H, FAD): 165	HAMWOR THY MARINE
			* DISCH. PRESS (KG/CM2): 30	
			* MOTOR (KW X RPM): 36 X 1200	
	MAIN AIR COMPRESSO R No. 2 S/N.: HG1713672	RECIPROC AT'G F.W. AIR COOLED (V 250)	* CAPACITY (M3/H, FAD): 171	HATAPLA MARINE EQUIPME NT
			* DISCH. PRESS (KG/CM2): 30	
			* MOTOR (KW X RPM): 33 X 1200	
7	MAIN AIR RESERVOIR No.1: AR7HD069-1 No.2: AR7HD069-2	CYLINDRIC AL	* VOLUME (M3): 4.5	KANG RIM INDUSTRIE S CO.
			* PRESS (KG/CM2): 30	
8	CONTROL AIR DRYER S/N.: 99-09 03	REFRIGIFIL TER KAD- 101	* CAPACITY (M3/H, FREE AIR): 100	KYUNG NAM IND. CO.
9	OILY BILGE SEPARATOR S/N.: 12050058	GRAVITY & FILTERING TYPE HYN05001	* CAPACITY (M3/H) : 5	HAN YOUNG ENGINEERI NG CO. LTD.
10	F.W. GENERATOR TYPE KE15 No. 1 S/N: 114-2317A No. 2 S/N: 114-2317B	M/E JACKET WATER HEATING SHELL & TUBE TYPE KE15	* CAPACITY (TON/DAY): 15	SASAKURA ENG. CO.
			* MAX. SALINITY (PPM):10	
			* COOLING S.W. (Q'TY/SET: 33 M3/H X 32 C	
			* M/E JACKET COOLING WATER: 82 M3/H X 78 C	
			* EJECTOR PUMP	
			** Q'TY/SET: ONE (1) CAPACITY (M3/H X MTH): 33 X 48	
		** MOTOR (KW X RPM) 15 X 1.755		
		** MAKER: SHIN SHIN MACHINERY CO. LTD		

			* DISTILLATE PUMP	
			** Q.TY/SET: ONE (1) * CAPACITY (M3/H X MTH): 1.2 X 30	
			** MOTOR (KW X RPM): 0.75 X 3600	
			** MAKER: SASAKURA	
			* DIMENSION (L X W X H)	
			* CAP. X TOTAL HEAD (M3/H X MTH): 520/900 X 20/9	
11	MAIN/ C.O.P.T. CONDENSER COOL'G S.W. PUMP	M.D.V.C (DV300V1 D1)	* BORE (SUC. X DISH.): 300 X 300 * MOTOR (KW X RPM): 26 X 1.765	
	PORT USE COOL'G S.W. PUMP	M.D.V.C. (B20V1D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 250 X 20 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 26 X 1.765	
	F.W. GEN. EJECT. PUMP	M.D.V.C. (C80V1D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 33 X 48 * BORE (SUC. X DISH.): 80 X 80 * MOTOR (KW X RPM): 15 X 1.755	
	M/E JACKET COOL. F.W. PUMP	M.D.H.C. (B125V1D 1)	* CAP. X TOTAL HEAD (M3/H X MTH) : 82 X 30 * BORE (SUC. X DISH.): 125 X 125 * MOTOR (KW X RPM): 15 X 1.755	
	CENTRAL COOL'G F.W. PUMP	M.D.V.C. (B200V1D 1)	* CAP. X TOTAL HEAD (M3/H X MTH): 460 X 25 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 55 X 1.765	
	PORT USE COOL. F.W. PUMP	M.D.V.C. (B200V1D 1)	*CAP. X TOTAL HEAD (M3/H X MTH): 220 X 25 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 26 X 1.765	
	HOT WATER CIRC. PUMP	M.D.H.C. (EHC40A)	* CAP. X TOTAL HEAD (M3/H X MTH): 2 X 5 * BORE (SUC. X DISH.): 40 X 32 * MOTOR (KW X RPM): 0.4 X 1.700	
	BOILED FEED W. PUMP	M.D.H.C. (MB65/5S)	* CAP. X TOTAL HEAD (M3/H X MTH): 50 X 220 * BORE (SUC. X DISH.): 80 X 65 * MOTOR (KW X RPM): 55 X 3.570	
	M/E AIR COOLER CHEM. CLEAN'G PUMOP	M.D.H.C. (EHC40A)	* CAP. X TOTAL HEAD (M3/H MTH): 1 X 30 * BORE (SUC. X DISH.): 40 X 32 * MOTOR (KW X RPM): 1.5 X 3.350	
	ECONOMIZE R FEED WATER PUMP	M.D.V.C. (MB32-4S)	* CAP. X TOTAL HEAD (M3/H X MTH): 2.5 X 100 * BORE (SUC. X DISH.): 50 X 32 * MOTOR (KW X RPM): 5.5 X 3.480	
	BOILER WATER CIRC. PUMP	M.D.H.C. (BCP50AX)	* CAP. X TOTAL HEAD (M3/H X MTH): 8 X 40 * BORE (SUC. X DISH.): 50 X 40 * MOTOR (KW X RPM): 5.5 X 3.480	
	BILGE, FIRE &G/S PUMP	M.D.V.C. (2C150V1B 2)	* CAP. X TOTAL HEAD (M3/H X MTH): 160/130 X 30/90 * BORE (SUC. X DISH.): 150 X 150 * MOTOR (KW X RPM): 70 X 1.780	
	SCRUBBER COOL. S.W. PUMP	M.D.V.C. (D125V1D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 140 X 50 * BORE (SUC. X DISH.): 125 X 125 * MOTOR (KW X RPM): 37 X 1.775	
				* CAP. X TOTAL HEAD (M3/H X MTH): 4 X 35

SHIN SHIN
MCH CO.
LTD.

	I.G. DECK SEAL WS. W. PUMP	M.D.H.C. (EHC40A)	* BORE (SUC. X DISH.): 40 X 32 RPM): 2.2 X 3.420	* MOTOR (KW X	
	C.O.P.T. CONENSATE PUMP	M.D.V.C. (NVC100)	* CAP. X TOTAL HEAD (M3/H X MTH): 40 X 25 * BORE (SUC. X DISH.): 200 X 100 RPM): 7.5 x 1.755	* MOTOR (KW X	
	MAIN L.O. PUMP	M.D.C. DEEP WELL (SDF-2V200)	* CAP. X TOTAL HEAD (M3/H X MTH): 220 X 4 * BORE (SUC. X DISH.): - X 200 RPM): 7.5 X 1.780	* MOTOR (KW X	
12	M/E CAMSHAFT L.O. BOOSTER PUMP	M.D.H.R (NLG6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 6.5 X 3 * BORE (SUC. X DISH.): 40 X 40 RPM): 1.5 X 1.120	* MOTOR (KW X	SHIN SHIN MCH CO. LTD.
	STERN TUBE L.O. PUMP	M.D.H.R. (NHG - 0.5)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 0.5 X 3 * BORE (SUC. X DISH.): 32 X 35 RPM): 0.4 X 1.120	* MOTOR (KW X	
	L.O. TRANSFER PUMP	M.D.H.R (NHG -5)	* CAP. X DISH. PRESS. (M3/H3 X KG/CM2): 5 X 3 * BORE (SUC. X DISH.): 40 X 40 RPM): 2.2 X 1.140	* MOTOR (KW X	
	M/E F.O. CIRC. PUMP	M.D.H.R (NHGH 6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5.3 X 6 * BORE (SUC. X DISH.): 50 X 40 RPM): 3.7 X 1.165	* MOTOR (KW X	
	M/E F.O. SUPPLY PUMP	M.D.H.R (NLG 3)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 2.5 X 4 * BORE (SUC. X DISH.): 32 X 32 RPM): 1.5 X 1.120	* MOTOR (KW X	
	H.F.O. PURI, SUPPLY PUMP	M.D.H.R. (NLG2)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 2.1 X 3 * BORE (SUC. X DISH.): 25 X 25 RPM): 1.5 X 1.120	* MOTOR (KW X	
	MAIN L.O. PURI. SUPPLY PUMP	M.D.H.R. (NLG 1.5)	* CAP X DISH. PRESS. (M3/H X KG/CM2): 1.4 X 3 * BORE (SUC. X DISH.): 40 X 40 RPM): 1.4 X 3	* MOTOR (KW X	
	CYL. OIL SHIFTING PUMP	M.D.H.R (NHG -0.5)	* CAP. X DISH PRESS. (3M/H X KG/CM2): 0.3 X 2 * BORE (SUC. X DISH.): 32 X 25 RPM): 0.4 X 1.120	* MOTOR (KW X	
	H.F.O. TRANSFER PUMP	M.D.R.H. (NLG20)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 20 X 3 * BORE (SUC. X DISH.): 80 X 80 RPM): 7.5 X 1.170	* MOTOR (KW X	
	M. D. O. TRANSFER PUMP	M.D.H.R (NLG6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3 * BORE (SUC. X DISH.): 40 X 40 RPM): 2.2 X 1.140	* MOTOR (KW X	
	G/E F.O. BOOSTER PUMP	M.D.H.R. (NLG2)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 1.5 X 4 * BORE (SUC. X DISH) 25 X 25 RPM): 1.5 X 1.120	* MOTOR (KW X	

	G/E F.O. SUPPLY PUMP	M.D.H.R. (NLG1)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 0.6 X 4 * BORE (SUC. X DISH) 20 X 20 * MOTOR (KW X RPM): 0.75 X 1.110	
	OILY BILGE PUMP	M.D.H. MONO	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3.5 * BORE (SUC X DISH.) 50 X 50 * MOTOR	
	SLUDGE PUMP	M.D.H. MONO (P131S5)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3.5 * BORE (SUC. X DISH.) 50 X 50 * MOTOR (KW X RPM): 2.2 X 1.140	
13	H.F.O. PURIFIER No. 1 S/N: A1004056 No. 2 S/N: A1004991	MITSUBISHI SELFJECTOR GENIUS SERIES - SJ 30G	* CAPACITY (L/H): 3.200 L/H * OIL VISCOSITY: 380 CST AT 50 DEG. C * BOWL REVOLUTION (RPM): 10.000 * MOTOR (KW X RPM): 5.5 X 1755 ** OUTPUT (KW): 5.5 ** SPEED (RPM): 1755 * AUTO.CONTROL DEVICE: MULTIMONITOR MM1	MITSUBISHI KAKOKI KANSAI, A,
	MAIN LUBE OIL PURIFIER S/N: A3000226		* CAPACITY (L/H): 1.300 L/H * OIL VISCOSITY: DETERGENT OIL OF SAE # 30 AT 40 DEG.C * BOWL REVOLUTION (RPM): 10.000 * MOTOR (KW X RPM): 5.5 X 1755 ** OUTPUT (KW): 5.5 ** SPEED (RPM): 1755 * AUTO.CONTROL DEVICE: MULTIMONITOR MM1	
	G/E LUB. OIL PURIFIER S/N: A3000225			
14	CENTRAL F.W. COOLER No. 1 S/N: 33465/1 No. 2 S/N: 33465/2	MODEL: GX-100P TITANIUM PLATE	* CAPACITY ** (F.W.) FLOW (M3/H): 235 IN/OUTLET TEMP. @: 49.5 / 36 ** (S.W.) FLOW (M3/H): 260 IN/OUTLET TEMP. @: 32 /44.4 * HEAT DISSIPATION (KCAL/H): ABT 3.174.600 (50% OF TOTAL HEAT) * SURFACE AREA (M2): 110.09	SWEP
	MAIN L.O. COOLER	MODEL: GX-100P	* CAPACITY ** (L.O.) FLOW (M3/H): 220	



15	S/N: 33465/3	STAINLESS STEEL PLATE	IN/OUTLET TEMP. (C): 52.2 / 45	DONGHW A
			** (F.W.) FLOW (M3/H): 110	
			IN/OUTLET TEMP. (C): 36 /41.8	
			* HEAT DISSIPATION (KCAL/H): ABT 636.400	
			* SURFACE AREA (M2): 203.01	
	S/T L.O. COOLER S/N: 33465/4	MODEL: GX-12P STAINLESS STEEL PLATE	* CAPACITY	
			** (L.O.) FLOW (M3/H): 0.5	
			IN/OUTLET TEMP. (C): 52.4 / 45	
			** (F.W.) FLOW (M3/H): 3	
			IN/OUTLET TEMP. (C): 36 / 36.5	
		* HEAT DISSIPATION (KCAL/H): ABT 1.500		
		* SURFACE AREA (M2): 0.60		
	C.O.P.T. CONDENSER S/N: 715- 970A	SHELL&TU BE	* CAPACITY: COVERING FULL STEAM EXHAUST FROM C.O.P.T. / W.B.P.T.	DONGHW A
			** (STEAM) FLOW (KG/H): 23.326 / 3.168	
			IN/OUTLET TEMP. (C): /65	
			* (S.W.) FLOW (M3/H): ABT. 814	
			IN/OUTLET TEMP. (C): 27 / 44.48	
			* HEAT DISSIPATION (KCAL/H): ABT. 13.706.034	
			* SURFACE AAREA (M2):	
	AIR EJECTOR CONDENSER S/N: 715- 970B	SHELL&TU BE	* CAPACITY	
			* (STEAM) FLOW (M3/H): 536 - 605	
			* (S.W.) FLOW (KG/H): 40	
			* HEAT DISSIPATION (KCAL/KG):	
			* SURFACE AREA (M2): 17	
	ATMOSPHER E CONDENSER S/N: 715- 920B	SHELL&TU BE	*CAPACITY: COVERING FULL EXHAUST STEAM FROM C.O. STRIPPING PUMP	HI-PRES
			** (STEAM) FLOW (KG/H) 650/330/2.580	
			INLET ENTHALPHYB (KCAL/H): 166/166/645	
			** (S.W.) FLOW (M3/H): 190	
			IN/OUTLET TEMP (C): 36.5 / 45.2	
			* HEAT DISSIPATION (KCAL/H): 1.600.000	
			* SURFACE AREA (M2): 34	
	E/R VENT FAN	AXIAL FLOW REVERSIBL E (AQ- 1250/578)	*CAPACITY (M3/MIN X mmAq): 1.150 X 38	
			* MOTOR: 18.5 KW X 1.160 RPM	
		AXIAL FLOW NON REVERSIBL E (AQ- 1120/578)	*CAPACITY (M3/MIN X mmAq): 1.150 X 38	
			* MOTOR: 18.5 KW X 1.160 RPM	
	PURIFIER ROOM EXH. FAN	AXIAL FLOW (AQ- 560/280)	*CAPACITY (M3/MIN X mmAq): 150 X 30	
			* MOTOR: 1.5 KW X 1.710 RPM	
17			* CAPACITY (KCAL/H): ABOUT 300.000	

		K8E7NB-KB50)		
	G/E F.O. DISCH. FILTER	AUTO - BACK FLUSHING (200-K8E7NB-KB50)	* CAPACITY (M3/H): 200	
			* MESH SIZE (MICRON): 50	
21	M/E F.O. VISCOSIMETER CONTROL UNIT (WITHOUT VISCOSITY RECORDER)	PNEUMATIC CONTROL	* FLOW RATE (L/H): 32	DAE HO FLOW INSTRUMENT CO.
	M/E F.O. VISCOSIMETER CONTROL UNIT (WITHOUT VISCOSITY RECORDER)		* FLOW RATE (L/H): 1.5	
22	G/E F.O. FLOWMETER	POSITIVE DISPLACEMENT	* FLOW RATE (L/H):	DAE HO FLOW INSTRUMENT CO.
			** MAX.: 2.500 ** NOR.: 1.670 ** MIN.: 60	
			* KINEMATIC VISCOSITY: 700 CST AT 50°C	
	G/E H.F.O. FLOWMETER		* FLOW RATE (L/H):	
			** MAX.: 600 ** NOR.: 282 ** MIN.: 35	
			* KINEMATIC VISCOSITY: 700 CST AT 50°C	
23	STERILIZER	ULTRAVIOLET RAY (JS - 1000)	* CAPACITY (L/H): 1000	SU HYANG
			* DIMENSION (L X W X H): 500X 330 X 650 mm	
24	CALORIFIER	STEAM HEATED/ W ELEC. HEATING	* FLOW (L/H): 2.000 * TEMP. (C) : 10-70	KANG RIM INDUSTRIES CO.
			* TANK CAP. (L): 300 * ELEC. HEATER (KW): 15 X 1	
25	MINERALIZER	DOLOMITE SWM 1.0	* FLOW (L/H): 1.100	SE WON
			* TANK CAP. (L) : 140	
26	F.W. HYDROPHORE UNIT	UHU 40A-1.0-2R	* CAPACITY	SHIN SHIN MCH CO. LTD.
			** TANK: 1000 L/H X 1 SET	
			** PUMP: 5 M3/H X 45MTH X TWO (2)	
27	UNIT COOLER	MARINE PACKAGED (MP-G5 HSS2)	* CAPACITY (KCAL/H): 15.000 FOR COOLING 15.000 FOR HEATING	KYUNG WON
28	LATHE NAMSUN	NSL 480 X 1000G	* DISTANCE OF CENTER (mm): 1000	NAMSUN PRECISION
			* SWING OVERBED (mm): 480 * MOTOR (KW): 5.5	
	DRILLING MACHINE	YKD-25	* DRILLING MACHINE: MAX. 32 mmDIA	YOUNGKWANG
			* MOTOR (KW): 0.75	
GRINDER	YKGV - 255	* WHEEL SIZE: 255 mm STONE DIA		
			* MOTOR (KW): 0.75	
			* OXIGEN BOTTLE: THREE (3)	UNITOR

	GAS WELDER	GAS CENTRAL FOR 5 CYL: 2AC + 3OX	* ACETYLENE BOTTLE: TWO (2)	
	HACK SAW MACHINE	HYDRAULIC TYPE SM-250	* CAPACITY: MAX. 250 mm DIA	DONG JIN
29	E/R CRANE	MOTOR DRIVEN	* CAPACITY (S. W. L.): 3.2 TON * SPAN LENGTH (MM): 6.900	DONG NAM
30	M.G.P.S.	IONIZING ELECTRODES TYPE	* SPAN LENGTH: 6.900 (mm) * CAPACITY (M3): 700	CATHELCO
31	SEWAGE TREATMENT PLANT	BIOLOGICAL TYPE (AEROB-18)	* CAPACITY: 36 PERSONS * DESIGNED HYDRAULIC LOADING M3/d 3.15 * DESIGNED ORGANIC LOADING Kg/d 1.34	JONG HAP MACHINERY CO., LTD. YONG SAN

GENERAL TECHNICAL SPECIFICATIONS OF MT

COTOPAXI


M/T COTOPAXI


- * IMO 9174579, ABS CLASS +A1, Oil Carrier, +AMS, +ACC, VEC, SH
- * L.O.A. 228.11 m
- * L.B.P. 219 m
- * BREADTH M.D. 32.20 m
- * DEPTH M.D. 17.85 m
- * DRAUGHT M.D. (DESIGN) 12.20 m
- * DRAUGHT M.D. (SCANTLING) 12.95 m
- * GROSS TON 35770 (ITC)
- * DEAD WEIGHT 66.160
- * EQUIPMENT FOR OPERATION IN ECA ZONE, ABS APPROVAL.
- * CERTIFICATED CONDITION ASSESMENT PROGRAM (CAP) - GRADE 1- ISSUED BY ABS CONSULTING



MACHINERY PARTICULARS

SER NO.	NAME OF EQUIPMENT	MODEL & TYPE	PARTICULARS	MAKER
1	MAIN ENGINE S/N.: AA1057	HYUNDAI - B&W	* NO. OF CYLINDER: FIVE (5)	HYUNDAI HEAVY

		5S60MC (MK-VI)	<p>*CYL. BORE X STROKE (mm): 600 X 2.292</p> <p>*M.C.R.</p> <p>** OUTPUT (BHP): 12.220x ** REVOLUTION (RPM): 93</p> <p>** MEAN EFF. PRESS. (KG/CM2): 17.9</p> <p>** MEAN PISTON SPEED (M/SEC): 7.1</p> <p>* N.C.R.</p> <p>** OUTPUT (BHP): 11.000 ** REVOLUTION (RPM): 89.8</p> <p>** MEAN EFF. PRESS. (KG/CM2): 16.7</p> <p>* ROTATION: CLOCKWISE VIEWED FROM FLYWHEEL SIDE</p> <p>* STARTING METHOD: COMPRESSED AIR (30KG/CM2)</p> <p>* EXH. GAS Q'TY X TEMP.: 73.500 KG/H X 221 C (AT 100% LOAD UNDER ISO)</p> <p>* COOLING METHOD</p> <p>** FRESH WATER: CYL. JACKET</p> <p>** SEA WATER: AIR COOLER</p> <p>** LUB. OIL: PISTON</p> <p>** TURBO- CHARGER: VTR 564D X 1 SET</p> <p>* F.O. CONSUMPTION (Gr/ BHP . H): 124.8 + 3% USING MDO. OF 10.200 KCAL/KG IN L.C.V.</p> <p>*L.O. CONSUMPTION (Gr/ BHP . H):</p> <p>** SYS. OIL: ABT. 7 Kg/CYL.24H</p> <p>** CYL. OIL: 0.8 -1.2 Gr/BHP.H</p> <p>** DIMENSION (L X W X H) ; 7.655 X 3.478 X 10.500</p>	IND. CO., LTD.
	TWO (2) STROKE, SINGLE ACTING, CROSSHEAD DIRECT REVERSIBLE TYPE MARINE DIESEL ENGINE EQUIPPED WITH EXH. GAS TURBO - CHARGER)			
2	PROPELLER	TYPE KEYLESS BORE - AEROFOIL SECTION (NACA)	<p>* NO. OF BLADE: 4</p> <p>* DIAMETER: 7.000 MM</p> <p>* MATERIAL: N1-AL-BR (MEAN): 5197.4 MM</p> <p>* PITCH</p> <p>* EXPANDED AREA RATIO: 0.4821</p>	HHI - EMD
	STERN TUBE SEAL	SIMPLEX COMPACT	<p>* MODEL SIZE</p> <p>** AFT: 560</p> <p>** FWD: 560</p>	

		TYPE CX-560 S/N: X-31356	* MATERIAL ** RING; VITON (AFT), VITON (FWD) ** LINER: *AFT: CHROME STEEL * FWD: CHROME STEEL	KOBELCO MARINE ENG.
	STERN TUBE BUSH	OIL COLLAR TYPE	* DIMENSION (DIA X LENGTH) ** AFT: 510.9 X 644X 1000 * FWD: 512.9 X 644X350 * MATERIAL: CAST IRON, WJ-2	KOBELCO MARINE ENG.
	INTERMEDIATE SHAFT BEARING	TYPE KMS430 S/N: S0218	* MODEL SIZE: 430 * Q'TY: ONE (1) * DIMENSION 1.D. X LENGTH): 425 X 507 (MM)	KOBELCO MARINE ENG.
	PROPELLER SHAFT	HD NUT TYPE	* MATERIAL: FORGED STEEL (T.S 60KG/MM2) * DIMENSION (DIA X LENGTH): 510 X 7.586 * Q'TY: ONE (1) * MATERIAL: FORGED STEEL (T.S 60 KG/N) * DIMENSION (DIA X LENGTH): 420 X 8.300	HHI - EMD
	INTERMEDIATE SHAFT			
	STEERING GEAR S/N: 6513 - YEAR: 1998	RV1350	* ROTARY VANE TYPE 65 KW X 2 SETS ELECTRIC MOTORS * MAX. WORKING TORQUE AT 35 DEG.: 136 TON-M	ULSTEIN FRYDENBORG AS
	HYD. NUT	HYDRAULIC	OUT DIA. X LENGTH; 720 X 240	HHI - EMD
3	AUXILIARY ENGINE A/E 1: BA0676-1 A/E 2: BA0676-2 A/E 3: BA0676-3	HHI - B&W 5L 23/30 FOUR STROKE, TRUNK PISTON, IN - LINE WITH EXH. GAS TURBO - CHARGER	* NO. OF CYLINDER: FIVE (5) * CYL BORE X STROKE (MM): 225 X 300 * OUTPUT (PS): 880 * REVOLUTION (RPM): 720 * ROTATION: CLOCKWISE VIEWED FROM GENERATOR SIDE * F.O. BURNING SYS.: * F.O. CONSUMPTION (Gr/PS. H): 145.2 + 3% * L.O. CONSUMPTION (Gr/ PS.H): ABT. * STARTING METHOD: 30 KG/ CM2 COMPRESSED AIR * DIMENSION (L X W X H): 3.509 X 1.596 X 2.318 (MM)/ 4.700 X 1.500 2.500 	HYUNDAI HEAVY IND. CO., LTD
	AC GENERATOR AC 1: 98EWDH242	HFC6-506-14K	* OUTPUT (KW): 600 * VOLTAGE (V): AC 450 * AMPERE 750(KVA) * PHASE: 3	HYUNDAI HEAVY IND. CO., LTD


	AC 2: 98EWDH243		* REVOLUTION: 720 (RPM) * ENCLOSED: 1P23	
	AC 3: 98EWDH244		* INSULATIONS CLASS: F	
			* POWER FACTOR. 0.8 (LAGGING) * NO. OF POLE. 10	
			* EXCITING: SELF EXCITING BRUSHLESS	
4	AUXILIARY BOILER TYPE CPH-20 BURNER KBSA 1550 PROJECT No. AS 34260 BURNER No. 1 : 12409 BURNER No. 2 : 12410	AUTOMAT IC FORCED DRAFT, H.F.O. BURNING, MARINE BOILER	* EVAPORATION (TON/H): 20 * DESIGN PRESS (KG/CM2); 18 * WORKING PRESS (KG/CM2) ** AT UNLOADING: 16 KG/CM2 ** AT NORMAL SEA GOING: 6 KG/CM2 * FEED WATER TEMPERATURE: 60 C * FUEL OIL: H.F.O UP TO 700 CST AT 50 C * MAKER/MODEL OF BURNER: AALBORG - SUNROD * TYPE OF SOOT BLOWER: * WATER VOLUME (M3): 10 (AVER. WATER LEVEL) * DIMENSION (H X W X H)	AALBORG SUNROD
5	EXH. GAS ECONOMIZER ABS 98BK43671 S/N: EM7HD075	FORCED CIRCULAT ING, SURFACE EXTENDE D WATER TUBE TYPE	* M/E EXH. GAS CONDITION: 73.500 KG/H X 221 C (AT M/E NCR UNDER ISO) * EVAPORATION (KG/H): ABT. 1.000 KG/H * FEED WAER TEM. @: ABT. 60C * DRAFT LOSS (mmAq): 89 mmAq * DESIGN PRESS. (KG/CM2): 22 * WORKING PRESS (KG/CM2): 6 * DIMENSION (L X W X H): 3.062 X 1.641 X 2.210	KANG RIM INDUSTRI ES CO.
6	MAIN AIR COMPRESSOR No. 1 S/N.: 10.5483- 0 No. 2 S/N.: 14.5137- 02	RECIPROC AT'G F.W. OR AIR COOLED (V 250)	* CAPACITY (M3/H, FAD): 171 * DISCH. PRESS (KG/CM2): 30 * MOTOR (KW X RPM): 33 X 1200	HATAPLA MARINE EQUIPME NT
7	MAIN AIR RESERVOIR No.1: AR7HD068-1 No.2: AR7HD068-2	CYLINDRI CAL	* VOLUME (M3): 4.5 * PRESS (KG/CM2): 30	KANG RIM INDUSTRI ES CO.
8	CONTROL AIR DRYER S/N.: AD-016-11	REFRIGIFI LTER	* CAPACITY (M3/H, FREE AIR): 100	KYUNG NAM IND. CO.
9	OILY BILGE SEPARATOR S/N.: HYN 050-1070	TYPE HYN 05001 GRAVITY & FILTERING	* CAPACITY (M3/H) : 5	HAN YOUNG ENGINEER ING CO. LTD.
10	F.W. GENERATOR TYPE KE15 No. 1 S/N: 014-8331A No. 2 S/N: 014- 8331B	M/E JACKET WATER HEATING SHELL & TUBWE TYPE	* CAPACITY (TON/DAY): 15 * MAX. SALINITY (PPM):10 * COOLING S.W. (Q'TY/SET): 33 M3/H X 32 C * M/E JACKET COOLING WATER: 82 M3/H X 78 C * EJECTOR PUMP ** Q'TY/SET: ONE (1) CAPACITY (M3/H X MTH): 33 X 48 ** MOTOR (KW X RPM) 15 X 1.755	SASAKUR A ENG. CO.

		** MAKER: SHIN SHIN MACHINERY CO. LTD	
		* DISTILLATE PUMP	
		** Q'TY/SET: ONE (1) * CAPACITY (M3/H X MTH): 1.2 X 30	
		** MOTOR (KW X RPM): 0.75 X 3600	
		** MAKER: SASAKURA	
		* DIMENSION (L X W X H)	
11	MAIN/ C.O.P.T. CONDENSER COOL'G S.W. PUMP	M.D.V.C (DV300V1 D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 520/900 X 20/9 * BORE (SUC. X DISH.): 300 X 300 * MOTOR (KW X RPM): 26 X 1.765
	PORT USE COOL'G S.W. PUMP	M.D.V.C. (B20V1D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 250 X 20 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 26 X 1.765
	F.W. GEN. EJECT. PUMP	M.D.V.C. (C80V1D1)	* CAP. X TOTAL HEAD (M3/H X MTH): 33 X 48 * BORE (SUC. X DISH.): 80 X 80 * MOTOR (KW X RPM): 15 X 1.755
	M/E JACKET COOL. F.W. PUMP	M.D.H.C. (B125V1D 1)	* CAP. X TOTAL HEAD (M3/H X MTH) : 82 X 30 * BORE (SUC. X DISH.): 125 X 125 * MOTOR (KW X RPM): 15 X 1.755
	CENTRAL COOL'G F.W. PUMP	M.D.V.C. (B200V1D 1)	* CAP. X TOTAL HEAD (M3/H X MTH): 460 X 25 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 55 X 1.765
	PORT USE COOL. F.W. PUMP	M.D.V.C. (B200V1D 1)	*CAP. X TOTAL HEAD (M3/H X MTH): 220 X 25 * BORE (SUC. X DISH.): 200 X 200 * MOTOR (KW X RPM): 26 X 1.765
	HOT WATER CIRC. PUMP	M.D.H.C. (EHC40A)	* CAP. X TOTAL HEAD (M3/H X MTH): 2 X 5 * BORE (SUC. X DISH.): 40 X 32 * MOTOR (KW X RPM): 0.4 X 1.700
	BOILED FEED W. PUMP	M.D.H.C. (MB65/5S)	* CAP. X TOTAL HEAD (M3/H X MTH): 50 X 220 * BORE (SUC. X DISH.): 80 X 65 * MOTOR (KW X RPM): 55 X 3.570
	M/E AIR COOLER CHEM. CLEAN'G PUMOP	M.D.H.C. (EHC40A)	* CAP. X TOTAL HEAD (M3/H MTH): 1 X 30 * BORE (SUC. X DISH.): 40 X 32 * MOTOR (KW X RPM): 1.5 X 3.350
	ECONOMIZER FEED WATER PUMP	M.D.V.C. (MB32-4S)	* CAP. X TOTAL HEAD (M3/H X MTH): 2.5 X 100 * BORE (SUC. X DISH.): 50 X 32 * MOTOR (KW X RPM): 5.5 X 3.480
	BOILER WATER CIRC. PUMP	M.D.H.C. (BCP50AX)	* CAP. X TOTAL HEAD (M3/H X MTH): 8 X 40 * BORE (SUC. X DISH.): 50 X 40 * MOTOR (KW X RPM): 5.5 X 3.480
	BILGE, FIRE &G/S PUMP	M.D.V.C. (2C150V1 B2)	* CAP. X TOTAL HEAD (M3/H X MTH): 160/130 X 30/90 * BORE (SUC. X DISH.): 150 X 150 * MOTOR (KW X RPM): 70 X 1.780
	SCRUBBER COOL. S.W. PUMP	M.D.V.C. (D125V1D 1)	* CAP. X TOTAL HEAD (M3/H X MTH): 140 X 50 * BORE (SUC. X DISH.): 125 X 125 * MOTOR (KW X RPM): 37 X 1.775
	I.G. DECK SEAL WS. W. PUMP	M.D.H.C. (EHC40A)	* CAP. X TOTAL HEAD (M3/H X MTH): 4 X 35 * BORE (SUC. X DISH.): 40 X 32 * MOTOR (KW X RPM): 2.2 X 3.420
		* CAP. X TOTAL HEAD (M3/H X MTH): 40 X 25	

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	C.O.P.T. CONENSATE PUMP	M.D.V.C. (NVC100)	* BORE (SUC. X DISH.): 200 X 100 X RPM): 7.5 X 1.755	* MOTOR (KW)
	MAIN L.O. PUMP	M.D.C. DEEP WELL (SDF-2V200)	* CAP. X TOTAL HEAD (M3/H X MTH): 220 X 4 * BORE (SUC. X DISH.): - X 200 X RPM): 7.5 X 1.780	* MOTOR (KW)
12	M/E CAMSHAFT L.O. BOOSTER PUMP	M.D.H.R (NLG6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 6.5 X 3 * BORE (SUC. X DISH.): 40 X 40 X RPM): 1.5 X 1.120	* MOTOR (KW)
	STERN TUBE L.O. PUMP	M.D.H.R. (NHG - 0.5)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 0.5 X 3 * BORE (SUC. X DISH.): 32 X 35 X RPM): 0.4 X 1.120	* MOTOR (KW)
	L.O. TRANSFER PUMP	M.D.H.R (NHG -5)	* CAP. X DISH. PRESS. (M3/H3 X KG/CM2): 5 X 3 * BORE (SUC. X DISH.): 40 X 40 X RPM): 2.2 X 1.140	* MOTOR (KW)
	M/E F.O. CIRC. PUMP	M.D.H.R (NHGH 6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5.3 X 6 * BORE (SUC. X DISH.): 50 X 40 X RPM): 3.7 X 1.165	* MOTOR (KW)
	M/E F.O. SUPPLY PUMP	M.D.H.R (NLG 3)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 2.5 X 4 * BORE (SUC. X DISH.): 32 X 32 (KW X RPM): 1.5 X 1.120	* MOTOR
	H.F.O. PURI, SUPPLY PUMP	M.D.H.R. (NLG2)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 2.1 X 3 * BORE (SUC. X DISH.): 25 X 25 (KW X RPM): 1.5 X 1.120	* MOTOR
	MAIN L.O. PURI. SUPPLY PUMP	M.D.H.R. (NLG 1.5)	* CAP X DISH. PRESS. (M3/H X KG/CM2): 1.4 X 3 * BORE (SUC. X DISH.): 40 X 40 (KW X RPM): 1.4 X 3	* MOTOR
	CYL. OIL SHIFTING PUMP	M.D.H.R (NHG - 0.5)	* CAP. X DISH PRESS. (3M/H X KG/CM2): 0.3 X 2 * BORE (SUC. X DISH.): 32 X 25 (KW X RPM): 0.4 X 1.120	* MOTOR
	H.F.O. TRANSFER PUMP	M.D.R.H. (NLG20)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 20 X 3 * BORE (SUC. X DISH.): 80 X 80 (KW X RPM): 7.5 X 1.170	* MOTOR
	M. D. O. TRANSFER PUMP	M.D.H.R (NLG6)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3 * BORE (SUC. X DISH.): 40 X 40 (KW X RPM): 2.2 X 1.140	* MOTOR
	G/E F.O. BOOSTER PUMP	M.D.H.R. (NLG2)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 1.5 X 4 * BORE (SUC. X DISH) 25 X 25 (KW X RPM): 1.5 X 1.120	* MOTOR
	G/E F.O. SUPPLY PUMP	M.D.H.R. (NLG1)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 0.6 X 4 * BORE (SUC. X DISH) 20 X 20 (KW X RPM): 0.75 X 1.110	* MOTOR
	OILY BILGE PUMP		* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3.5	

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		M.D.H. MONO	* BORE (SUC X DISH.) 50 X 50	* MOTOR		
	SLUDGE PUMP	M.D.H. MONO (P131S5)	* CAP. X DISH. PRESS. (M3/H X KG/CM2): 5 X 3.5	* BORE (SUC. X DISH.) 50 X 50	* MOTOR	
			(KW X RPM): 2.2 X 1.140			
13	H.F.O. PURIFIER No. 1 S/N: 6033832 No. 2 S/N: 6034667	MITSUBISHI SELFJECT OR GENIUS SERIES - SJ 30G	* CAPACITY (L/H): 3.600 L/H			
			* OIL VISCOSITY: 380 CST AT 50 DEG. C			
			* BOWL REVOLUTION (RPM): 10.000			
			* MOTOR (KW X RPM): 5.5 X 1755			
			** OUTPUT (KW): 5.5	** SPEED	(RPM): 1755	
			* AUTO.CONTROL DEVICE: MULTIMONITOR MM1			
	MAIN LUBE OIL PURIFIER S/N: 6036206	MITSUBISHI SELFJECT OR GENIUS SERIES - SJ 30G	* CAPACITY (L/H): 2.950 L/H			
			* OIL VISCOSITY: DETERGENT OIL OF SAE # 30 AT 40 DEG.C			
	G/E LUB. OIL PURIFIER S/N: 6025182	MITSUBISHI SELFJECT OR GENIUS SERIES - SJ 20G	* BOWL REVOLUTION (RPM): 10.000			
			* CAPACITY (L/H): 1.200 L/H			
			* MOTOR (KW X RPM): 5.5 X 1755			
			** OUTPUT (KW): 5.5	** SPEED	(RPM): 1755	
			* AUTO.CONTROL DEVICE: MULTIMONITOR MM1			
					MITSUBISHI KAKOKI KAISHA, LTD.	
14	CENTRAL F.W. COOLER No. 1 S/N: 33464/1 No. 2 S/N: 33464/2	MODEL: GX-100P TITANIUM PLATE	* CAPACITY			
			** (F.W.) FLOW (M3/H): 235			
			IN/OUTLET TEMP. ©: 49.5 / 36			
			** (S.W.) FLOW (M3/H): 260			
			IN/OUTLET TEMP. ©: 32 /44.4			
			* HEAT DISSIPATION (KCAL/H): ABT 3.174.600 (50% OF TOTAL HEAT)			
* SURFACE AREA (M2): 110.09				SWEPE		

	MAIN L.O. COOLER S/N: 33464/3	MODEL: GX-100P STAINLESS STEEL PLATE	* CAPACITY ** (L.O.) FLOW (M3/H): 220 IN/OUTLET TEMP. (C): 52.2 / 45 ** (F.W.) FLOW (M3/H): 110 IN/OUTLET TEMP. (C): 36 /41.8 * HEAT DISSIPATION (KCAL/H): ABT 636.400 * SURFACE AREA (M2): 203.01	
	S/T L.O. COOLER S/N.: 33464/4	MODEL: GX-12P STAINLESS STEEL PLATE	* CAPACITY ** (L.O.) FLOW (M3/H): 0.5 IN/OUTLET TEMP. (C): 52.4 / 45 ** (F.W.) FLOW (M3/H): 3 IN/OUTLET TEMP. (C): 36 / 36.5 * HEAT DISSIPATION (KCAL/H): ABT 1.500 * SURFACE AREA (M2): 0.60	
15	C.O.P.T. CONDENSER SERIAL NO: 715940-A	SHELL&T UBE	* CAPACITY: COVERING FULL STEAM EXHAUST FROM C.O.P.T. / W.B.P.T. ** (STEAM) FLOW (KG/H): 23.326 / 3.168 IN/OUTLET TEMP. (C): /65 * (S.W.) FLOW (M3/H): ABT. 814 IN/OUTLET TEMP. (C): 27 / 44.48 * HEAT DISSIPATION (KCAL/H): ABT. 13.706.034 * SURFACE AAREA (M2):	DONGHW A PRECISION IND. CO. LTD.
	AIR EJECTOR CONDENSER SERIAL NO: 715940-B	SHELL&T UBE	* CAPACITY * (STEAM) FLOW (M3/H): 536 - 605 * (S.W.) FLOW (KG/H): 40 * HEAT DISSIPATION (KCAL/KG): * SURFACE AREA (M2): 17	
	ATMOSPHERE CONDENSER SERIAL NO: 715920-A	SHELL&T UBE	*CAPACITY: COVERING FULL EXHAUST STEAM FROM C.O. STRIPPING PUMP ** (STEAM) FLOW (KG/H) 650/330/2.580 INLET ENTHALPHYB (KCAL/H): 166/166/645 ** (S.W.) FLOW (M3/H): 190 IN/OUTLET TEMP (C): 36.5 / 45.2 * HEAT DISSIPATION (KCAL/H): 1.600.000 * SURFACE AREA (M2): 34	
16	E/R VENT FAN	AXIAL FLOW REVERSIB LE (AQ- 1250/578)	*CAPACITY (M3/MIN X mmAq): 1.150 X 38 * MOTOR: 18.5 KW X 1.160 RPM	HI-PRES
		AXIAL FLOW NON REVERSIB LE (AQ- 1120/578)	*CAPACITY (M3/MIN X mmAq): 1.150 X 38 * MOTOR: 18.5 KW X 1.160 RPM	

		K8FE33N-KB50)		
	MAIN L.O. DISCH. FILTER	AUTO - BACK FLUSHING (200-K8E7NB-KB50)	* CAPACITY (M3/H): 200	
	G/E F.O. DISCH. FILTER	AUTO - BACK FLUSHING (200-K8E7NB-KB50)	* MESH SIZE (MICRON): 50 * CAPACITY (M3/H): 200 * MESH SIZE (MICRON): 50	
21	M/E F.O. VISCO. CONTROL UNIT (WITHOUT VISCOSITY RECORDER)	PNEUMATIC CONTROL	* FLOW RATE (L/H): 32	DAE HO FLOW INSTUMENT CO.
	M/E F.O. VISCO. CONTROL UNIT (WITHOUT VISCOSITY RECORDER)		* FLOW RATE (L/H): 1.5	
22	G/E F.O. FLOWMETER	POSITIVE DISPLACEMENT	* FLOW RATE (L/H): ** MAX.: 2.500 ** NOR.: 1.670 ** MIN.: 60	DAE HO FLOW INSTUMENT CO.
	G/E H.F.O. FLOWMETER		* KINEMATIC VISCOSITY: 700 CST AT 50°C	
			* FLOW RATE (L/H): ** MAX.: 600 ** NOR.: 282 ** MIN.: 35	
			* KINEMATIC VISCOSITY: 700 CST AT 50°C	
23	STERILIZER	ULTRAVIOLET RAY (JS - 1000)	* CAPACITY (L/H): 1000 * DIMENSION (L X W X H): 500X 330 X 650 mm	SU HYANG
24	CALORIFIER	STEAM HEATED/ W ELEC. HEATING	* FLOW (L/H): 2.000 * TEMP. (C) : 10-70 * TANK CAP. (L): 300 * ELEC. HEATER (KW): 15 X 1	KANG RIM INDUSTRIES CO.
25	MINERALIZER	DOLOMITE SWM 1.0	* FLOW (L/H): 1.100 * TANK CAP. (L) : 140	SE WON
26	F.W. HYDROPHORE UNIT	UHU 40A-1.0-2R	* CAPACITY ** TANK: 1000 L/H X 1 SET ** PUMP: 5 M3/H X 45MTH X TWO (2)	SHIN SHIN MCH CO. LTD.
27	UNIT COOLER	MARINE PACKAGE D (MP-G5 HSS2)	* CAPACITY (KCAL/H): 15.000 FOR COOLING 15.000 FOR HEATING	KYUNG WON
28	LATHE	NSL 480 X 1000G	* DISTANCE OF CENTER (mm): 1000 * SWING OVERBED (mm): 480 * MOTOR (KW): 5.5	NAMSUN PRECISION
	DRILL'G MACHINE	YKD-25	* DRILLING MACHINE: MAX. 32 mmDIA * MOTOR (KW): 0.75	YOUNGK WANG
	GRINDER		* WHEEL SIZE: 255 mm STONE DIA	

		YKGV - 255	* MOTOR (KW): 0.75	
	GAS WELDER	GAS CENTRAL FOR 5 CYL: 2AC + 3OX	* OXIGEN BOTTLE: THREE (3) * ACETYLENE BOTTLE: TWO (2)	UNITOR
	HACK SAW MACHINE	HYDRAULIC TYPE SM-250	* CAPACITY: MAX. 250 mm DIA	DONG JIN
29	E/R CRANE	MOTOR DRIVEN	* CAPACITY (S. W. L.): 3.2 TON * SPAN LENGTH (MM): 6.900	DONG NAM
30	M.G.P.S.	IONIZING ELETRODES TYPE	* SPAN LENGTH: 6.900 (mm) * CAPACITY (M3): 700	CATHELCO
31	SEWAGE TREATMET PLANT	BIOLOGICAL TYPE (AEROB-18)	* CAPACITY: 36 PERSONS * DESIGNED HYDARULIC LOADING M3/d 3.15 * DESIGNED ORGANIC LOADING Kg/d 1.34	JONG HAP MACHINE RY CO., LTD. YONG SAN

**CHAPTER IV
TERMS AND CONDITIONS OF THE MOA
(ATTACHED)**