

REPORT ON OIL ENGINE MACHINERY.

No. 15220A
APR 13 1930

Received at London Office

Date of writing Report 9 April 1930 When handed in at Local Office 19 Port of Amsterdam
 No. in Survey held at Amsterdam Date, First Survey 15 June Last Survey 4 April 1930
 Reg. Book. Number of Visits 49

584 on the Single Twin Triple Quadruple Screw vessel M.V. OTINA
 Tons Gross 6216.62 Net 3603.90

Built at Odense By whom built Odense's Skibsværft's Yard No. 73 When built 1930
 Engines made at Amsterdam By whom made K. F. Wiersma Engine No. 706 When made 1930
 Donkey Boilers made at Amsterdam By whom made do Boiler No. 2790 When made 1930
 Brake Horse Power 2800 Owners THE ANGLO SAXON PETROLEUM CO. LTD Port belonging to LONDON
 Nom. Horse Power as per Rule 377 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES
 Trade for which vessel is intended OCEAN GOING OIL CARRIER

L ENGINES, &c.—Type of Engines Diesel 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 700 lbs Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 135 lbs Diameter of cylinders 650 mm Length of stroke 1400 mm No. of cylinders 6 No. of cranks 6
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 844 mm Is there a bearing between each crank Yes
 revolutions per minute 120 Flywheel dia. 2260 mm Weight 6000 kg Means of ignition valves Kind of fuel used Diesel oil

Crank Shaft, Solid forged as per Rule approved Semi built dia. of journals as fitted 460 mm Crank pin dia. 460 mm Crank Webs Mid. length breadth 870 mm Thickness parallel to axis 4
 All built as fitted 460 mm Mid. length thickness 190 mm Thickness around eyehole 4

Flywheel Shaft, diameter as per Rule approved as fitted 500/340 mm Intermediate Shafts, diameter as per Rule approved as fitted 350 mm Thrust Shaft, diameter at collars as per Rule approved as fitted 340 mm

Tube Shaft, diameter as per Rule approved as fitted 370 mm Is the tube screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule approved as fitted 19.5 mm Thickness between bushes as per Rule approved as fitted 15 mm Is the after end of the liner made watertight in the

propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft No If so, state type Length of Bearing in Stern Bush next to and supporting propeller 1480 mm

propeller, dia. 4200 mm Pitch 350 mm No. of blades 4 Material bronze whether Moveable no Total Developed Surface 62 sq. feet

Method of reversing Engines by air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

forced Thickness of cylinder liners 55 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnel

cooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps connected to the Main Bilge Line No. and Size 2 rotary type 35 t/h and 1 duplex 8" x 8" x 10" How driven Main engine Steam driven

the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Ballast Pumps, No. and size one 8" x 8" x 10" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 rotary 40 t/h and 1 duplex 8" x 8" x 10"

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

pumps, No. and size:—In Machinery Spaces In Pump Room

Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions in the Machinery Spaces

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks Have they been tested as per Rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

apartment to another Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

Is a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 206-184 Stroke 160 mm Driven by One by steam engine

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Is provision is made for first Charging the Air Receivers 1 compressor driven by steam engine

Avenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule approved as fitted 340 mm No. Position

Are the Auxiliary Engines been constructed under special survey Is a report sent herewith

FOR REMAINING ITEMS PLEASE SEE COPENHAGEN RPT. NO.

15220A

AIR RECEIVERS:—Have they been made under survey

State No. of Report or Certificate 4446-4447 HPB 3.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

Injection Air Receivers, No.

Cubic capacity of each

Internal diameter

Thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

Starting Air Receivers, No.

Total cubic capacity

300 cub feet

Internal diameter 14.95 m

Thickness

by Rules

Actual

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS.

Are approved plans forwarded herewith for Shafting

Receivers

Separate Fuel Tanks

Donkey Boilers

General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

WERKSPOOR N.V.

Manufacturer.

Dates of Survey while building
During progress of work in shops - June 15-19, July 20, Aug 13, Sept 27, Oct 4-8-9-11-12-14-16-18-21-28 Nov 1-4-8-17-18-23-24.
During erection on board vessel - Jan 4-10-13-14-16-18-21-25 Feb 1-2-4-8-10-25-28 March 2-4-8-9-15-21-22-24-25- April 1-4.
Total No. of visits

Dates of Examination of principal parts—Cylinders 19 Jan 12 Feb Covers 19 Jan 12 Feb Pistons 20 Mar 17 Dec Rods 7 Feb 21 Feb Connecting rods 17 Dec 14 Jan

Crank shaft 17 Jan 12 Feb Flywheel shaft 8 March Thrust shaft 17 Dec 19 Jan 8 March Intermediate shafts 17 Dec 4 March Tube shaft

Screw shaft 17 Dec 21 Feb Propeller Stern tube 7 March Engine sealings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material SMS Identification Mark 4387-4388 Flywheel shaft, Material SMS Identification Mark 4387-4388

Thrust shaft, Material SMS Identification Mark 4412-4413 Intermediate shafts, Material SMS Identification Marks 4510-4511

Tube shaft, Material SMS Identification Mark 4400-4401 Screw shaft, Material SMS Identification Mark 4401-4402

Identification Marks on Air Receivers 4446-4447 4448-4449 4450-4451 4452-4453 4454-4455 4456-4457 4458-4459 4460-4461 4462-4463 4464-4465 4466-4467 4468-4469 4470-4471 4472-4473 4474-4475 4476-4477 4478-4479 4480-4481 4482-4483 4484-4485 4486-4487 4488-4489 4490-4491 4492-4493 4494-4495 4496-4497 4498-4499 4500-4501 4502-4503 4504-4505 4506-4507 4508-4509 4510-4511 4512-4513 4514-4515 4516-4517 4518-4519 4520-4521 4522-4523 4524-4525 4526-4527 4528-4529 4530-4531 4532-4533 4534-4535 4536-4537 4538-4539 4540-4541 4542-4543 4544-4545 4546-4547 4548-4549 4550-4551 4552-4553 4554-4555 4556-4557 4558-4559 4560-4561 4562-4563 4564-4565 4566-4567 4568-4569 4570-4571 4572-4573 4574-4575 4576-4577 4578-4579 4580-4581 4582-4583 4584-4585 4586-4587 4588-4589 4590-4591 4592-4593 4594-4595 4596-4597 4598-4599 4600-4601 4602-4603 4604-4605 4606-4607 4608-4609 4610-4611 4612-4613 4614-4615 4616-4617 4618-4619 4620-4621 4622-4623 4624-4625 4626-4627 4628-4629 4630-4631 4632-4633 4634-4635 4636-4637 4638-4639 4640-4641 4642-4643 4644-4645 4646-4647 4648-4649 4650-4651 4652-4653 4654-4655 4656-4657 4658-4659 4660-4661 4662-4663 4664-4665 4666-4667 4668-4669 4670-4671 4672-4673 4674-4675 4676-4677 4678-4679 4680-4681 4682-4683 4684-4685 4686-4687 4688-4689 4690-4691 4692-4693 4694-4695 4696-4697 4698-4699 4700-4701 4702-4703 4704-4705 4706-4707 4708-4709 4710-4711 4712-4713 4714-4715 4716-4717 4718-4719 4720-4721 4722-4723 4724-4725 4726-4727 4728-4729 4730-4731 4732-4733 4734-4735 4736-4737 4738-4739 4740-4741 4742-4743 4744-4745 4746-4747 4748-4749 4750-4751 4752-4753 4754-4755 4756-4757 4758-4759 4760-4761 4762-4763 4764-4765 4766-4767 4768-4769 4770-4771 4772-4773 4774-4775 4776-4777 4778-4779 4780-4781 4782-4783 4784-4785 4786-4787 4788-4789 4790-4791 4792-4793 4794-4795 4796-4797 4798-4799 4800-4801 4802-4803 4804-4805 4806-4807 4808-4809 4810-4811 4812-4813 4814-4815 4816-4817 4818-4819 4820-4821 4822-4823 4824-4825 4826-4827 4828-4829 4830-4831 4832-4833 4834-4835 4836-4837 4838-4839 4840-4841 4842-4843 4844-4845 4846-4847 4848-4849 4850-4851 4852-4853 4854-4855 4856-4857 4858-4859 4860-4861 4862-4863 4864-4865 4866-4867 4868-4869 4870-4871 4872-4873 4874-4875 4876-4877 4878-4879 4880-4881 4882-4883 4884-4885 4886-4887 4888-4889 4890-4891 4892-4893 4894-4895 4896-4897 4898-4899 4900-4901 4902-4903 4904-4905 4906-4907 4908-4909 4910-4911 4912-4913 4914-4915 4916-4917 4918-4919 4920-4921 4922-4923 4924-4925 4926-4927 4928-4929 4930-4931 4932-4933 4934-4935 4936-4937 4938-4939 4940-4941 4942-4943 4944-4945 4946-4947 4948-4949 4950-4951 4952-4953 4954-4955 4956-4957 4958-4959 4960-4961 4962-4963 4964-4965 4966-4967 4968-4969 4970-4971 4972-4973 4974-4975 4976-4977 4978-4979 4980-4981 4982-4983 4984-4985 4986-4987 4988-4989 4990-4991 4992-4993 4994-4995 4996-4997 4998-4999 5000-5001 5002-5003 5004-5005 5006-5007 5008-5009 5010-5011 5012-5013 5014-5015 5016-5017 5018-5019 5020-5021 5022-5023 5024-5025 5026-5027 5028-5029 5030-5031 5032-5033 5034-5035 5036-5037 5038-5039 5040-5041 5042-5043 5044-5045 5046-5047 5048-5049 5050-5051 5052-5053 5054-5055 5056-5057 5058-5059 5060-5061 5062-5063 5064-5065 5066-5067 5068-5069 5070-5071 5072-5073 5074-5075 5076-5077 5078-5079 5080-5081 5082-5083 5084-5085 5086-5087 5088-5089 5090-5091 5092-5093 5094-5095 5096-5097 5098-5099 5100-5101 5102-5103 5104-5105 5106-5107 5108-5109 5110-5111 5112-5113 5114-5115 5116-5117 5118-5119 5120-5121 5122-5123 5124-5125 5126-5127 5128-5129 5130-5131 5132-5133 5134-5135 5136-5137 5138-5139 5140-5141 5142-5143 5144-5145 5146-5147 5148-5149 5150-5151 5152-5153 5154-5155 5156-5157 5158-5159 5160-5161 5162-5163 5164-5165 5166-5167 5168-5169 5170-5171 5172-5173 5174-5175 5176-5177 5178-5179 5180-5181 5182-5183 5184-5185 5186-5187 5188-5189 5190-5191 5192-5193 5194-5195 5196-5197 5198-5199 5200-5201 5202-5203 5204-5205 5206-5207 5208-5209 5210-5211 5212-5213 5214-5215 5216-5217 5218-5219 5220-5221 5222-5223 5224-5225 5226-5227 5228-5229 5230-5231 5232-5233 5234-5235 5236-5237 5238-5239 5240-5241 5242-5243 5244-5245 5246-5247 5248-5249 5250-5251 5252-5253 5254-5255 5256-5257 5258-5259 5260-5261 5262-5263 5264-5265 5266-5267 5268-5269 5270-5271 5272-5273 5274-5275 5276-5277 5278-5279 5280-5281 5282-5283 5284-5285 5286-5287 5288-5289 5290-5291 5292-5293 5294-5295 5296-5297 5298-5299 5300-5301 5302-5303 5304-5305 5306-5307 5308-5309 5310-5311 5312-5313 5314-5315 5316-5317 5318-5319 5320-5321 5322-5323 5324-5325 5326-5327 5328-5329 5330-5331 5332-5333 5334-5335 5336-5337 5338-5339 5340-5341 5342-5343 5344-5345 5346-5347 5348-5349 5350-5351 5352-5353 5354-5355 5356-5357 5358-5359 5360-5361 5362-5363 5364-5365 5366-5367 5368-5369 5370-5371 5372-5373 5374-5375 5376-5377 5378-5379 5380-5381 5382-5383 5384-5385 5386-5387 5388-5389 5390-5391 5392-5393 5394-5395 5396-5397 5398-5399 5400-5401 5402-5403 5404-5405 5406-5407 5408-5409 5410-5411 5412-5413 5414-5415 5416-5417 5418-5419 5420-5421 5422-5423 5424-5425 5426-5427 5428-5429 5430-5431 5432-5433 5434-5435 5436-5437 5438-5439 5440-5441 5442-5443 5444-5445 5446-5447 5448-5449 5450-5451 5452-5453 5454-5455 5456-5457 5458-5459 5460-5461 5462-5463 5464-5465 5466-5467 5468-5469 5470-5471 5472-5473 5474-5475 5476-5477 5478-5479 5480-5481 5482-5483 5484-5485 5486-5487 5488-5489 5490-5491 5492-5493 5494-5495 5496-5497 5498-5499 5500-5501 5502-5503 5504-5505 5506-5507 5508-5509 5510-5511 5512-5513 5514-5515 5516-5517 5518-5519 5520-5521 5522-5523 5524-5525 5526-5527 5528-5529 5530-5531 5532-5533 5534-5535 5536-5537 5538-5539 5540-5541 5542-5543 5544-5545 5546-5547 5548-5549 5550-5551 5552-5553 5554-5555 5556-5557 5558-5559 5560-5561 5562-5563 5564-5565 5566-5567 5568-5569 5570-5571 5572-5573 5574-5575 5576-5577 5578-5579 5580-5581 5582-5583 5584-5585 5586-5587 5588-5589 5590-5591 5592-5593 5594-5595 5596-5597 5598-5599 5600-5601 5602-5603 5604-5605 5606-5607 5608-5609 5610-5611 5612-5613 5614-5615 5616-5617 5618-5619 5620-5621 5622-5623 5624-5625 5626-5627 5628-5629 5630-5631 5632-5633 5634-5635 5636-5637 5638-5639 5640-5641 5642-5643 5644-5645 5646-5647 5648-5649 5650-5651 5652-5653 5654-5655 5656-5657 5658-5659 5660-5661 5662-5663 5664-5665 5666-5667 5668-5669 5670-5671 5672-5673 5674-5675 5676-5677 5678-5679 5680-5681 5682-5683 5684-5685 5686-5687 5688-5689 5690-5691 5692-5693 5694-5695 5696-5697 5698-5699 5700-5701 5702-5703 5704-5705 5706-5707 5708-5709 5710-5711 5712-5713 5714-5715 5716-5717 5718-5719 5720-5721 5722-5723 5724-5725 5726-5727 5728-5729 5730-5731 5732-5733 5734-5735 5736-5737 5738-5739 5740-5741 5742-5743 5744-5745 5746-5747 5748-5749 5750-5751 5752-5753 5754-5755 5756-5757 5758-5759 5760-5761 5762-5763 5764-5765 5766-5767 5768-5769 5770-5771 5772-5773 5774-5775 5776-5777 5778-5779 5780-5781 5782-5783 5784-5785 5786-5787 5788-5789 5790-5791 5792-5793 5794-5795 5796-5797 5798-5799 5800-5801 5802-5803 5804-5805 5806-5807 5808-5809 5810-5811 5812-5813 5814-5815 5816-5817 5818-5819 5820-5821 5822-5823 5824-5825 5826-5827 5828-5829 5830-5831 5832-5833 5834-5835 5836-5837 5838-5839 5840-5841 5842-5843 5844-5845 5846-5847 5848-5849 5850-5851 5852-5853 5854-5855 5856-5857 5858-5859 5860-5861 5862-5863 5864-5865 5866-5867 5868-5869 5870-5871 5872-5873 5874-5875 5876-5877 5878-5879 5880-5881 5882-5883 5884-5885 5886-5887 5888-5889 5890-5891 5892-5893 5894-5895 5896-5897 5898-5899 5900-5901 5902-5903 5904-5905 5906-5907 5908-5909 5910-5911 5912-5913 5914-5915 5916-5917 5918-5919 5920-5921 5922-5923 5924-5925 5926-5927 5928-5929 5930-5931 5932-5933 5934-5935 5936-5937 5938-5939 5940-5941 5942-5943 5944-5945 5946-5947 5948-5949 5950-5951 5952-5953 5954-5955 5956-5957 5958-5959 5960-5961 5962-5963 5964-5965 5966-5967 5968-5969 5970-5971 5972-5973 5974-5975 5976-5977 5978-5979 5980-5981 5982-5983 5984-5985 5986-5987 5988-5989 5990-5991 5992-5993 5994-5995 5996-5997 5998-5999 6000-6001 6002-6003 6004-6005 6006-6007 6008-6009 6010-6011 6012-6013 6014-6015 6016-6017 6018-6019 6020-6021 6022-6023 6024-6025 6026-6027 6028-6029 6030-6031 6032-6033 6034-6035 6036-6037 6038-6039 6040-6041 6042-6043 6044-6045 6046-6047 6048-6049 6050-6051 6052-6053 6054-6055 6056-6057 6058-6059 6060-6061 6062-6063 6064-6065 6066-6067 6068-6069 6070-6071 6072-6073 6074-6075 6076-6077 6078-6079 6080-6081 6082-6083 6084-6085 6086-6087 6088-6089 6090-6091 6092-6093 6094-6095 6096-6097 6098-6099 6100-6101 6102-6103 6104-6105 6106-6107 6108-6109 6110-6111 6112-6113 6114-6115 6116-6117 6118-6119 6120-6121 6122-6123 6124-6125 6126-6127 6128-6129 6130-6131 6132-6133 6134-6135 6136-6137 6138-6139 6140-6141 6142-6143 6144-6145 6146-6147 6148-6149 6150-6151 6152-6153 6154-6155 6156-6157 6158-6159 6160-6161 6162-6163 6164-6165 6166-6167 6168-6169 6170-6171 6172-6173 6174-6175 6176-6177 6178-6179 6180-6181 6182-6183 6184-6185 6186-6187 6188-6189 6190-6191 6192-6193 6194-6195 6196-6197 6198-6199 6200-6201 6202-6203 6204-6205 6206-6207 6208-6209 6210-6211 6212-6213 6214-6215 6216-6217 6218-6219 6220-6221 6222-6223 6224-6225 6226-6227 6228-6229 6230-6231 6232-6233 6234-6235 6236-6237 6238-6239 6240-6241 6242-6243 6244-6245 6246-6247 6248-6249 6250-6251 6252-6253 6254-6255 6256-6257 6258-6259 6260-6261 6262-6263 6264-6265 6266-6267 6268-6269 6270-6271 6272-6273 6274-6275 6276-6277 6278-6279 6280-6281 6282-6283 6284-6285 6286-6287 6288-6289 6290-6291 6292-6293 6294-6295 6296-6297 6298-6299 6300-6301 6302-6303 6304-6305 6306-6307 6308-6309 6310-6311 6312-6313 6314-6315 6316-6317 6318-6319 6320-6321 6322-6323 6324-6325 6326-6327 6328-6329 6330-6331 6332-6333 6334-6335 6336-6337 6338-6339 6340-6341 6342-6343 6344-6345 6346-6347 6348-6349 6350-6351 6352-6353 6354-6355 6356-6357 6358-6359 6360-6361 6362-6363 6364-6365 6366-6367 6368-6369 6370-6371 6372-6373 6374-6375 6376-6377 6378-6379 6380-6381 6382-6383 6384-6385 6386-6387 6388-6389 6390-6391 6392-6393 6394-6395 6396-6397 6398-6399 6400-6401 6402-6403 6404-6405 6406-6407 6408-6409 6410-6411 6412-6413 6414-6415 6416-6417 6418-6419 6420-6421 6422-6423 6424-6425 6426-6427 6428-6429 6430-6431 6432-6433 64