

REPORT ON OIL ENGINE MACHINERY.

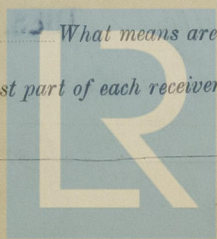
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Received at London Office

Date of writing Report *April 16th 1925* When handed in at Local Office *April 16th 1925* Port of *NEWCASTLE-ON-TYNE*
 No. in Survey held at *Newcastle* Date, First Survey *Oct 26th 1923* Last Survey *April 9th 1925*
 Reg. Book. Number of Visits *92*
 90558 on the *Single* *Triple* Screw vessels *Steel* *SS.* *RABY CASTLE* Tons *Gross*
 Master Built at *Dundee* By whom built *Baldon SB. & Co. Ltd.* Yard No. *290* When built *1925*
 Engines made at *Newcastle* By whom made *N.E. Marine Eng. Co. Ltd.* Engine No. *2557* When made *1925*
 Donkey Boilers made at *Stockton* By whom made *Riley Bros.* Boiler No. *5504* When made *1924*
 Brake Horse Power *2200* Owners *James Chambers & Co.* Port belonging to *Liverpool*
 Nom. Horse Power as per Rule *638* Is Refrigerating Machinery fitted for cargo purposes *No.* Is Electric Light fitted *Yes*

IL ENGINES, &c.—Type of Engines *Inverted Diesel* 2 or 4 stroke cycle *4* Single or double acting *Single*
 Maximum pressure in cylinders *500 lb.* No. of cylinders *8* No. of cranks *8* Diameter of cylinders *28 3/4" 730 mm*
 Length of stroke *1300 mm* Revolutions per minute *92* Means of ignition *Compression* Kind of fuel used *Diesel fuel*
 Is there a bearing between each crank *Yes* Span of bearings (Page 92, Section 2, par. 7 of Rules) *950 mm*
 Distance between centres of main bearings *1450 mm* Is a flywheel fitted *Yes* Diameter of crank shaft journals *as per Rule 459 mm*
 Diameter of crank pins *470 mm* Breadth of crank webs *as per Rule (608.8 mm) 950 mm* Thickness of ditto *as per Rule 286 mm*
 Diameter of flywheel shaft *as per Rule 12.671" 12 7/8" 18 1/2"* Diameter of tunnel shaft *as per Rule 12.78" 12 3/8"* Diameter of thrust shaft *as per Rule 13.419" 13 1/2"*
 Diameter of screw shaft *as per Rule 14.134" 14 5/8"* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes*
 Is the after end of the liner made watertight in the propeller boss *Yes* If the liner is in more than one length are the joints burned
 If 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
 If two liners are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil
 Type of outer gland fitted to stern tube *None* Length of stern bush *66"* Diameter of propeller *16 1/2"*
 Pitch of propeller *13 1/2"* No. of blades *4* state whether moveable *No* Total surface *83* square feet
 Method of reversing *by main Engines* Is a governor or other arrangement fitted to prevent racing of the engine *when decelerated Ramsay* Thickness of cylinder liners *2 3/4"*
 Are the cylinders fitted with safety valves *Yes* Means of lubrication *forced.* Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material *Yes* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine
 led up funnel No. of cooling water pumps *Space* Is the sea suction provided with an efficient strainer which can be cleared
 within the vessel *Yes* No. of bilge pumps fitted to the main engines *one* Diameter of ditto *125 mm* Stroke *450 mm*
 Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines *2* How driven *Electro-motors*
 Sizes of pumps *General Service 6x6 x 302mm Ballast Centrix 402mm* No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room *5 - 3 1/2"*
 and in holds, etc. *11 - 3 1/2" and turned well one 3"* No. of ballast pumps *one* How driven *Electro-motor* Sizes of pumps *6" Centrix*
 Is the ballast pump fitted with a direct suction from the engine room bilges *Yes* State size *4"* Is a separate auxiliary pump suction fitted in
 Engine Room and size *Yes 6"* Are all the bilge suction pipes fitted with roses *and hoses* Are the roses in Engine Room always accessible *Yes*
 Are the sluices on Engine Room bulkheads always accessible *None* Are all connections with the sea direct on the skin of the ship *Yes*
 Are they valves or cocks *valves* Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates *Yes*
 Are the discharge pipes above or below the deep water line *below* Are they each fitted with a discharge valve always accessible on the plating of the vessel *Yes*
 Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times *Yes* Are the bilge suction pipes, cocks and valves arranged so as to prevent any
 communication between the sea and the bilges *Yes* Is the screw shaft tunnel watertight *Yes* Is it fitted with a watertight door *Yes*
 Worked from *upper deck* If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
 No. of main air compressors *One* No. of stages *3* Diameters *150-550-620 mm* Stroke *550 mm* Driven by *main Engine*
 No. of auxiliary air compressors *Two* No. of stages *3* Diameters Stroke Driven by *aux Diesel*
 No. of small auxiliary air compressors *One* No. of stages *2* Diameters Stroke Driven by *Steam*
 No. of scavenging air pumps *None* Diameter Stroke Driven by
 Diameter of auxiliary Diesel Engine crank shafts *as per Rule 177.89 mm 185 mm* Are the air compressors and their coolers made so as to be easy of access *Yes*

AIR RECEIVERS:—No. of high pressure air receivers *Two* Internal diameter *15 3/4"* Cubic capacity of each *8 cft*
 Material *Steel* Seamless, lap welded or riveted longitudinal joint *Solid drawn* Range of tensile strength *32 tons min.*
 Thickness *5/8"* Working pressure by Rules *1207 lbs* No. of starting air receivers *Two* Internal diameter *66"*
 Total cubic capacity *1100 cft.* Material *Steel* Seamless, lap welded or riveted longitudinal joint *B. Butt Joints.*
 Range of tensile strength *28/32 tons.* thickness *29/32"* Working pressure by rules *350 lb.* Is each receiver, which can be isolated,
 fitted with a safety valve as per Rule *Yes* Can the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their
 inner surfaces *man hole* Is there a drain arrangement fitted at the lowest part of each receiver *Yes.*



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IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	28-4-24	500 lbs	1000 lbs	R.L.A. (8 Cyls)	
COVERS	25-7-24			M.R. (1 Cyl)	
JACKETS	8. 8. 24	20 lbs	30 lbs	R.L.A.	
PISTON WATER PASSAGES	24. 8. 24 11. 24	20 lbs	30 lbs	M.R. + R.L.A.	
MAIN COMPRESSORS-1st STAGE	30. 10. 24	50 lbs	640 lbs	M.R.	
2nd		200 lbs	640 lbs	M.R.	
3rd	10. 11. 24	900 lbs	1850 lbs	M.R.	
AIR RECEIVERS-STARTING	28. 10. 24	350 lbs	550 lbs	R.L.A.	
INJECTION		900 lbs	2000 lbs	See Keppell Surveyors.	
AIR PIPES		900 lbs	2000 lbs	R.L.A.	
FUEL PIPES		900 lbs	2000 lbs	R.L.A.	
FUEL PUMPS		900 lbs	2000 lbs	M.R.	
SILENCER					
WATER JACKET	6. 10. 24 + 20. 11. 24	15 lbs	30 lbs	M.R. R.L.A.	
SEPARATE FUEL TANKS			15 lbs	M.R.	Settling Tanks.

PLANS. Are approved plans forwarded herewith for shafting (If not, state date of approval)

Receivers

20

Separate Tanks

Settling tanks.

SPARE GEAR

See List of Spare Gear enclosed.
(Blue print in bag of plans)

Plans forwarded. Settling tanks, crankshaft, measuring air receivers. Thrust shaft attachment. Air con-
-sor crankshaft. Pumping plan. Reports No. 12059- Bundle 85.21- and 9492-9493 + Donkey boiler.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO., LTD.

Manufacturer.

1923-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-1229-1230-1231-1232-12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