

## REPORT ON MACHINERY.

No. 2715

Received at London Office THU. MAR. 25 1920

Date of writing Report Jan. 26<sup>th</sup> 1920 When handed in at Local OfficePort of KobeDate, First Survey July 11<sup>th</sup> 1919 Last Survey Jan. 8<sup>th</sup> 1920on the Steel Single Screw Steamer "DENMARK MARU"(Number of Visits 60)Tons } Gross 5869.86  
Net 4263.50Master K. EHARABuilt at KobeBy whom built Kawasaki Dockyard Co. Ltd. When built 1919Engines made at KobeBy whom made Kawasaki Dockyard Co. Ltd. when made 1919Boilers made at doBy whom made do when made 1919

Registered Horse Power

Owners Kawasaki Kisen Kaisha Port belonging to KobeNom. Horse Power as per Section 28 440Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted yesENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3Dia. of Cylinders 26: 43½: 72 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 15.41 Material of SteelIs the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tightthe propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If twoare fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5' - 5¼"Dia. of Tunnel shaft 13.48 as per rule 13.54 Dia. of Crank shaft journals 14.15 as per rule 14.22 Dia. of Crank pin 14¾" Size of Crank webs 9½" x 20½" Dia. of thrust shaft underas fitted 13¾" as fitted 14¾" as fitted 14¾" State whether moveable yes Total surface 100 sq. ft.No. of Blades 4 State whether moveable yes Total surface 100 sq. ft.of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yes (with Weir's feed)of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yesof Donkey Engines Three Sizes of Pumps Weir's Feed 9½" x 7" x 24" two No. and size of Suctions connected to both Bilge and Donkey pumpsEngine Room Three 3½" Ballast 19" x 11" x 12" dupl. Donkey 5½" x 3½" x 9" In Holds, &c. Nos. 1, 3 + 4 Hold each two 3½"of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Cir. p. Is a separate Donkey Suction fitted in Engine room & size yes 3½"all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible Noneall connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Larger Valves, Smaller Cocksthey fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line abovethey each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yesat pipes are carried through the bunkers None How are they protected ✓all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesthe Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesthe Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Up: platform of Eng. Rm.MATERIALS, &c.—(Letter for record S.) Manufacturers of Steel Illinois Steel Co., Carnegie Stl. Co., Am. Spring Co.al Heating Surface of Boilers 56360 Is Forced Draft fitted yes No. and Description of Boilers Two 5. 6. + Aux. 5. 6.Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 17-11-19 No. of Certificate 17-11-19each boiler be worked separately yes Area of fire grate in each boiler 60½' No. and Description of Safety Valves toboiler Two Spring loaded Area of each valve 3¾" dia. Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yesleast distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 14' - 6" Length 12' - 0" Material of shell plates Steelthickness 1½" Range of tensile strength 2678 to 32000 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Ends doub.seams Double riveted Diameter of rivet holes in long. seams 1¾" Pitch of rivets 8¼" + 4¾" Lap of plates or width of butt straps 19½" x 1¼"percentages of strength of longitudinal joint 95.84 Working pressure of shell by rules 201 lbs. Size of manhole in shell 16" x 12"of compensating ring (7½" flange) 1¾" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 48¼"gth of plain part top ✓ Thickness of plates bottom 2½" Description of longitudinal joint Weld No. of strengthening rings ✓Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1½" Back 1½" Top 1½" Bottom 1½"th of stays to ditto: Sides 8½" x 8½" Back 8½" x 9" Top 8½" x 9½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 lbs.Material of stays Steel Area at smallest part 2.10" Area supported by each stay 8½" x 9½" Working pressure by rules 230 lbs. End plates in steam space:Material Steel Thickness 1½" Pitch of stays 19¾" x 20½" How are stays secured Doub. nuts Working pressure by rules 202 lbs. Material of stays Steela at smallest part 10" Area supported by each stay 19¾" x 20½" Working pressure by rules 260 lbs. Material of Front plates at bottom Steelthickness 1½" Material of Lower back plate Steel Thickness ¾" Greatest pitch of stays 13½" Working pressure of plate by rule 232 lbs.diameter of tubes 3¼" Pitch of tubes 4½" x 4½" Material of tube plates Steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8¾"th across wide water spaces 13¾" x 5½" Working pressures by rules 240 lbs. Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 10¾" x 13/16" (2) Length as per rule 34½" Distance apart 9¾" Number and pitch of stays in each 3 @ 8½"Working pressure by rules 220 lbs. Steam dome: description of joint to shell ✓ % of strength of jointMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesMaterial Steel Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Lloyd's Register Foundation



If so, is a report now forwarded? yes

*SPARE GEAR.* State the articles supplied:—

Four main bearing bolts + nuts.	✓	Set packing rings + springs each piston.	✓	Centrifugal pumps
Two Crank pin bolts + nuts.	✓	Set junk ring bolts + nuts.	✓	impeller + shaft +
Two Crosshead bolts + nuts.	✓	1 Set of packing for each piston rods + Valve rods.	✓	A. P. rod + nut
Set coupling bolts + nuts.	✓	Propeller shaft with nut.	✓	3 Safety valve spr
Set Feed + Bilge pump valves.	✓	1 Feed Check valve + Seat.	✓	Cond. + Blr. tubes e
Assorted bolts + nuts + iron.	✓	Slide valve spindle each size.	✓	1 Set A.P. Head va

*The foregoing is a correct description.*

Secretary.

*Manufacturer.*

KAWASAKI Dockyard Co., Ltd.

Dates of Survey while building	During progress of work in shops - -	1919 July 11, 14, 17, 29; Aug. 2, 6, 13, 18, 25; Sept. 2, 8, 10, 11, 13, 15, 16, 17, 18, 23; Oct. 1, 4, 8, 11, 13, 15, 20, 22, 23, 24, 25, 27, 28, 29.
	During erection on board vessel - - -	Nov. 3, 4, 5, 6, 7, 10, 12, 13, 15, 17, 18, 20, 22, 25; Dec. 2, 3, 8, 9, 10, 12, 16, 17, 22, 25, 26; 1920 Jan. 8.
	Total No. of visits	60.

Is the approved plan of main boiler forwarded herewith no

Is the approved plan of main boiler forwarded herewith **no**  
 " " " **Yes** " **for S/S. SPAIN M**  
 " " " **Yes** " **Rbt No**

*Dates of Examination of principal parts—Cylinders 22-10-19 Slides 17-12-19 Covers 10-12-19 Pistons 10-12-19 Rods 16-12*

Connecting rods 8-12-19 Crank shaft 25-11-19 Thrust shaft 15-11-19 Tunnel shafts 17-11-19 Screw shaft 20-10-19 Propeller 15-1

Stern tube 11-11-19 Steam pipes tested <sup>25-10-19</sup> + 3-11-19 Engine and boiler seatings 2-12-19 Engines holding down bolts 22-12-19

Completion of pumping arrangements 26-12-19 Boilers fixed 22-12-19 Engines tried under steam overhaul &

Completion of fitting sea connections 2-12-19 Stern tube 17-11-19 Screw shaft and propeller 20-11-19

Main boiler safety valves adjusted 22-12-19 Thickness of adjusting washers Locknuts (Sealed by Government Inspector)

Material of Crank shaft 3. Steel Identification Mark on Do. 25-11-18 Material of Thrust shaft 3. Steel Identification Mark on Do. 15

Material of Tunnel shafts 7. steel Identification Marks on Do. LLOYDS 17-11-19 Material of Screw shafts 7. steel Identification Marks on Do. 17-11-19

Material of Steam Pipes S. D. Steel Test pressure 600 lbs.

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case yes If so, state name of vessel (S.S. WAR QUEEN Rpt. No

*General Remarks* (State quality of workmanship, opinions as to class, &c.)

General Remarks (State quantity of workmanship, materials, etc.)	S.S. PORTSAID MARU	"	"
	S.S. ITALY MARU	"	"

S. S. FRANCE MARU " " 2  
S. S. ENGLAND MARU " " 2

(S.S. SPAIN MARU " " )

The Machinery of this vessel has been made and fitted

understand Special Services in accordance with the requirements of the Rule

light bit materials on sand

and the Workmanship + Materials are good.

The vessel is eligible in our opinion for the reward

✠ LMC 1-20

ALL RECORD #1 MC 1325D

1144 1100 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 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500 1501 1502 1503 1504 1505 1506 1507 1508 1509 1510 1511 1512 1513 1514 1515 1516 1517 1518 1519 1520 1521 1522 1523 1524 1525 1526 1527 1528 1529 1530 1531 1532 1533 1534 1535 1536 1537 1538 1539 1540 1541 1542 1543 1544 1545 1546 1547 1548 1549 1550 1551 1552 1553 1554 1555 1556 1557 1558 1559 1560 1561 1562 1563 1564 1565 1566 1567 1568 1569 1570 1571 1572 1573 1574 1575 1576 1577 1578 1579 1580 1581 1582 1583 1584 1585 1586 1587 1588 1589 1590 1591 1592 1593 1594 1595 1596 1597 1598 1599 1600 1601 1602 1603 1604 1605 1606 1607 1608 1609 1610 1611 1612 1613 1614 1615 1616 1617 1618 1619 1620 1621 1622 1623 1624 1625 1626 1627 1628 1629 1630 1631 1632 1633 1634 1635 1636 1637 1638 1639 1640 1641 1642 1643 1644 1645 1646 1647 1648 1649 1650 1651 1652 1653 1654 1655 1656 1657 1658 1659 1660 1661 1662 1663 1664 1665 1666 1667 1668 1669 1670 1671 1672 1673 1674 1675 1676 1677 1678 1679 1680 1681 1682 1683 1684 1685 1686 1687 1688 1689 1690 1691 1692 1693 1694 1695 1696 1697 1698 1699 1700 1701 1702 1703 1704 1705 1706 1707 1708 1709 1710 1711 1712 1713 1714 1715 1716 1717 1718 1719 1720 1721 1722 1723 1724 1725 1726 1727 1728 1729 1730 1731 1732 1733 1734 1735 1736 1737 1738 1739 1740 1741 1742 1743 1744 1745 1746 1747 1748 1749 1750 1751 1752 1753 1754 1755 1756 1757 1758 1759 1760 1761 1762 1763 1764 1765 1766 1767 1768 1769 1770 1771 1772 1773 1774 1775 1776 1777 1778 1779 1780 1781 1782 1783 1784 1785 1786 1787 1788 1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802 1803 1804 1805 1806 1807 1808 1809 1810 1811 1812 1813 1814 1815 1816 1817 1818 1819 1820 1821 1822 1823 1824 1825 1826 1827 1828 1829 1830 1831 1832 1833 1834 1835 1836 1837 1838 1839 1840 1841 1842 1843 1844 1845 1846 1847 1848 1849 1850 1851 1852 1853 1854 1855 1856 1857 1858 1859 1860 1861 1862 1863 1864 1865 1866 1867 1868 1869 1870 1871 1872 1873 1874 1875 1876 1877 1878 1879 1880 1881 1882 1883 1884 1885 1886 1887 1888 1889 1890 1891 1892 1893 1894 1895 1896 1897 1898 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910 1911 1912 1913 1914 1915 1916 1917 1918 1919 1920 1921 1922 1923 1924 1925 1926 1927

2. S.B. & 1 Aux. SB. 27/3/20

face for

the sp. *the sp.*

The amount of Entry Fee ... *yen 30* : ) When applied for, *1 yen / 10*

Special ... 735: Jan 19<sup>th</sup> 1920 *A Watt & W. Law*

Boiler Fee ... £ 1 0 0 Included : When received.

Travelling Expenses (if any) @ 15 : Jan 23 1920

Committee's Minute

1. *Handwritten:* + L<sup>mo</sup> 1:2. 75

Assigned \_\_\_\_\_

Foundation

0007

