

1950

Main

ne of Ship Dieselelectric Icebreaker P22000 1 Owners Sandvikens Skeppsdocka
 Contract No. if name unknown) (Or Consignees)
 sub Built at Wärtsilä-koncernen A/B by Sandvikens Skeppsdocka when 1958/9 Yard No. 365
 y ins Main Wärtsilä-konc. Ab by Wasa Mek. Verkstad when 1958 Eng. Nos. 173/4/5/6
 Engines or ~~Engines~~ made at Wärtsilä-konc. Ab
 at No. of sets and description (including type name) 4 each Wärtsilä-Sulzer type 9MH51/55

INTERNAL COMBUSTION RECIPROCATING ENGINES. No. of cylinders per engine. 9 Dia. of cylinders. 510 mm Stroke. 350 mm
or 4 stroke cycle. 2 Maximum approved BHP. 3250 at 330 RPM Corresponding MIP. 5.3 Maximum pressure. 65kp/cm²
el. Gas oil Are cylinders arranged in Vee or other special formation? Normal If so, No. of
mknshafts per engine. - Is engine of opposed piston type? No No. and type of mechanically driven scavenge pumps or blowers
r engine. Nine Piston pumps No. of exhaust gas driven blowers or superchargers per engine. None Is welded construction
VERIFIED for: Bedplate? No Entablature? No Total internal volume of crankcase (if 20 cu. ft. or over). 8,5 m² No. and total area of
ankcase explosion relief devices. 9x250cm²=2250cm² Are flame guards or traps fitted? No Cooling medium for: Cylinders. Fresh water
istons. Lubr.oil No. of attached pumps: F.W. cooling. None S.W. cooling. None Lubricating oil. None How is engine started? By compr.air

HAFTING. Is a damper or detuner fitted? No No. of main bearings 11 Are bearings of ball or roller type? No Distance between
ner edges of bearings in way of cranks. 570 mm Crankshaft: ~~SM steel~~ SM steel Approved
imum tensile strength 50 kg/mm² Dia. of pins 310 mm Journals 310 mm Breadth of webs at mid throw 450 mm Axial
ickness 163 mm If shrunk, radial thickness around eyeholes - Dia. of flywheel 1330 mm Weight 432 kg Are balance
eights fitted? yes Total weight 45,8 kg + 25,5 kg of gyration 273 mm + 490 mm Dia. of flywheel shaft 310 mm (included in crankshaft)
as each engine been tested in shop? yes How long at full power? 8 hours Was it tested with driven machinery attached? yes Was the
overning tested and found satisfactory? yes Date of approval of torsional vibration characteristics (for engines of 150 BHP and over) April 23rd, 1957
ate of approval of shafting Oct. 6, 1955 Identification marks on shafting 173) Lloyd's No. 6370A 9.11.57 ÅW/Lloyd's No. 6370B 9.11.57
articulars of driven machinery Siemens D.C. gene- 174) Lloyd's No. 6373A 9.11.57 ÅW/Lloyd's No. 6373B 9.11.57 ÅW
ator GM434/808, 2150 kW, 600 V, 3600A 175) Lloyd's No. 6372A 9.11.57 ÅW/Lloyd's No. 6372B 9.11.57 ÅW
176) Lloyd's No. 6371A 9.11.57 ÅW/Lloyd's No. 6371B 9.11.57 ÅW
ort and No. of Certificate for Starting Air Receivers Not yet delivered

AUXILIARY GAS TURBINES.		BHP per set.....		At.....	RPM of output shaft. Open or closed cycle?.....	
Arrangement of turbines.	HP drives.....	at.....	RPM	HP gas inlet temp.....pressure.....		
	IP	at.....	"	IP	"	"
	LP	at.....	"	LP	"	"
No. of air compressors per set.....		Centrifugal or axial flow type?.....		Material of turbine blades.....		
Material of compressor blades.....		No. of air coolers per set.....		No. of heat exchangers per set.....		How are.....
Turbines started?.....		Are the turbines operated in conjunction with free piston gas generators?.....				
Total No. of free piston gas generators.....		Dia. of working pistons.....		Dia. of compressor pistons.....		No. of double strokes.....
per minute at full power.....		Gas delivery pressure.....		Gas delivery temperature.....		
Have the turbines and attached equipment been tested in shop?.....		How long at full power?.....		Were they tested with driven machinery.....		
Attached?.....		Particulars of gearing.....				
Date of approval of plans.....		Identification marks.....		Particulars of driven machinery.....		

ELECTRIC GENERATORS. Port and No. of Certificate for generators of 100 Kw. and over.....
For generators under 100 Kw., has Makers' Certificate been obtained?..... Are Certificates attached?.....

The foregoing description is correct and the particulars are as approved for torsional vibration characteristics (strike out words not applicable)


R. H. Hargrave
 Manufacturer

Is this machinery duplicate of a previous case? no If so, which?

GENERAL REMARKS. *State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.*

These Diesel Engines have been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters. Quality of materials and workmanship found good.

	Rpt. No. 6577	No. 6704	No. 6767	No. 6793
Survey Fee Fmk.	267.000:-	267.000:-	267.000:-	267.000:-
Expenses "	10.900:-	8.290:-	8.790:-	9.070:-
Date when a/c rendered	21.5.58,	21.5.58	23.9.58,	23.9.58.


 Engineer Surveyor to Lloyd's Register

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the icebreaker "MOSKVA"
at Helsingfors in a proper manner and found satisfactory when tested on the (date) 11.5.60 under full working conditions.

at Helsingfors in a proper manner and found satisfactory when tested on the (date) 4
7. Petrus
 Engineer Surveyor to Lloyd's Register
 Foundation

71263-012645-0071

Rpt. 4c

Date of writing report.....

Received London.....

Port.....

No.....

Survey held at.....

No. of visits.....

First date.....

Last date.....

FIRST ENTRY REPORT ON AUXILIARY STEAM TURBINE OR STEAM RECIPROCATING ENGINES

Name of Ship.....
(Or Contract No. if name unknown)

Owners.....
(Or Consignees)

Ship Built at.....

by.....

when.....

Yard No.....

Auxiliary turbines or engines made at.....

by.....

when.....

Eng. Nos.....

Total No. of sets and description.....

STEAM TURBINES.

No. of turbines per set.....

BHP per set.....

Steam pressure.....

Steam temperature.....

Type of turbines.....

Particulars of gearing.....

RPM of turbine shaft(s).....

PCD of pinion(s).....

PCD of wheel(s).....

Material.....

pinion(s).....

Material of wheel rim(s).....

Has rotor been dynamically balanced?.....

Diameter of.....

shaft at bearings.....

Does the set include a steam condenser?.....

Is an emergency governor fitted?.....

No. and purpose.....

attached pumps.....

Has the set been tested in the shop?.....

If so, for how long.....

power?.....

Was the governing tested and found satisfactory?.....

Was the set tested with driven machinery attached?.....

Identification marks.....

Particulars of driven machinery.....

STEAM RECIPROCATING ENGINES.

BHP of each.....

at.....

RPM Steam pressure.....

Dia. of cylinders.....

Stroke.....

Dia. of crankshaft journals.....

Pins.....

Material.....

crankshaft.....

Is crankcase enclosed?.....

If so, is the internal volume 20 cu. ft. or over?.....

No. and total area of crank.....

explosion relief devices fitted?.....

Are the bearings forced lubricated?.....

No. and purpose of attached pumps.....

Is a Governor Fitted?.....

Identification Marks.....

Particulars of Driven Machinery.....

ELECTRIC GENERATORS.

Port and No. of Certificate for generators of 100 Kw. and over.....

For generators under 100 Kw., has Makers' Certificate been obtained?.....

Are Certificates attached?.....

The foregoing description is correct.

Is this machinery duplicate of a previous case?.....

If so, which?.....

GENERAL REMARKS.

State if the machinery has been constructed under special survey in accordance with the Rules, approved plans and Secretary's letter. State quality of materials and workmanship. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

Survey Fee.....

Expenses.....

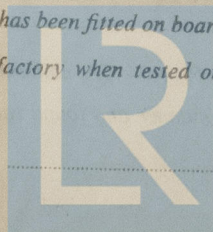
Date when a/c rendered.....

Engineer Surveyor to Lloyd's Register

Declaration to be signed by Surveyor at fitting-out Port:— The above described machinery has been fitted on board the.....

at..... in a proper manner and found satisfactory when tested on the (date).....

conditions.



© 2021

Lloyd's Register
Engineer Surveyor to Lloyd's Register
Foundation