

Rpt. 4b (Cons) REPORT ON MAIN INTERNAL COMBUSTION RECIPROCATING ENGINE

FOR CONSIDERATION BY THE COMMITTEE OF LLOYD'S REGISTER OF SHIPPING

3 JUN 1965
Received London

Ship's Name	m.s. "GUANG MING"	Port	Rotterdam
Gross tons	7314	Date of completing rpt.	29-4-'65
		Rpt. No.	60636
Place of survey, if different from above	Flushing		
No. of visits in shops	38	First date	13-3-'64
		Last date	11-1-'65
Ship built by	Messrs. Koninklijke Maatschappij "De Schelde"	Yard No.	327
Engine made by	Messrs. Koninklijke Maats.	Engine No.	927
	"De Schelde"	When	Yr. '65 Mo. 1
Fee	Consol. FLS 3575 = 4665	Expenses	1295.-
	forings, castings, welded cons. 16525	Turbover Tax	183,13
Licence name & type of engine	Schelde-Sulzer 6RD68	If cyls in vee or other special formation state (a) vee angle and (b) No. of crankshafts each engine	(a) - (b)
No. of engines	one	BHP on which fees have been calculated	6600
2 or 4 stroke cycle	2	Corresponding RPM	135
Single (SA), or opposed piston (OP)	S.A.	Corresponding MIP	8,97 kg/cm2
No. of cylinders, each engine	6	Maximum cylinder pressure	70 kg./cm2
Diameter of cylinders	680 mm.	Machinery numeral	1320
Stroke(s)	1250 mm.	Is the exhaust discharged through ports in the cylinders or valve(s) in the cylinder covers?	ports in cylinders
TWO STROKE ENGINES ONLY			
Is engine of opposed piston type?	no		
If so, how are upper pistons connected to crankshaft?			
No. and type of mechanically driven scavenge pumps or blowers, each engine, and how driven			
Where exhaust gas driven blowers only are fitted can engine operate with one out of action?			
If not, and emergency means are provided, what are they?			
TWO & FOUR STROKE ENGINES			
Is the engine supercharged?	yes	Is welded construction used for:	BEDPLATE? yes FRAMES? yes ENTABLATURE? no
No. of exhaust gas driven supercharge blowers, each engine	2	Are tie-bolts fitted?	
No. and type of mechanically driven charging pumps or blowers, each engine	none	Is crankcase separated from under sides of pistons?	
Are the under sides of pistons used as scavenge pumps?		yes	
Are relief valves fitted to scavenge manifold?		yes	
Is crankcase readily accessible?		yes	
No. of supercharge air coolers, each engine	2	Is engine of crosshead or trunk piston type?	
Supercharge air pressure at full power	10,5 lb./sq.in.	crosshead type	
Can engine operate without supercharger?	yes	Total internal volume of crankcase	
If not, and emergency means are provided, what are they?	-	52 M ³	
		No. and total area of explosion relief devices	
		6-7500 cm ²	
		Are flame guards or traps fitted to:	
		Crankcase relief devices?	
		yes	
		Starting air pipes at cyl. starting air valves?	
		flame retarders fitted	
		Can engine be reversed?	
		yes	
		How is engine started?	
		by air	
		Type of governor fitted	
		Woodward UG 40	
		How long has the engine been tested at full power in the shop?	
		8 hours	
No. of valves each cylinder:			
INLET		EXHAUST	
none		one rotating	
FUEL		RELIEF	
one		one	
Cooling medium for:		CYLINDERS	
fresh water			
PISTONS		FUEL VALVES	
fresh water		fresh water	
Material of			
Cylinder covers		cast steel	
Piston crowns		cast steel	

NOTE:—The particulars in this report are to be given as fully and as clearly as possible. Where the answer is "NO" or "NONE" say so. Ticks and other signs of doubtful meaning are not to be used. Wording not applicable to be cancelled.

012333-012339-0137

Is a torsional vibration damper or
detuner fitted? no

Date of approval of torsional vibration
characteristics of engine/flywheel system

20-6-'62 and
27-5-'64

~~Where existing machinery is submitted for classification, the circumstances are to be explained as fully as possible, and the recommendation should be suitably amended.~~

~~XXXXXX~~

CRANKSHAFT

Total weight of balance wts. none

Radius of gyration -

No. of main bearings 7

Are main bearings of ball or
roller type? no

Distance between inner edges of
bearings in way of cranks 922 mm.

~~Distance between centre lines of side
crank pins 922 mm.~~

Built, semi-built or solid
crankshaft semi-built

Diameter of: Journals 500 mm.

Centre crank pins 500 mm.

Side crank pins none

Breadth of webs at mid-throw 820 mm.

Axial thickness of webs 315 mm.

If webs shrunk, radial thickness
round eye-holes 222,5 mm.

Nominal shrinkage allowance
if dowel pins are not fitted 1,62-1,71⁰/100

Material of:
(State whether
cast or forged)

Pins forged

Webs forged

Journals forged

Minimum approved
tensile strength for:

Pins }
Webs } 50 kg./mm²

Journals }

FLYWHEEL SHAFT. Separate,
integral with crank or thrust shaft

flywheel bolted to thrustshaft

~~Material~~ -

~~Flywheel~~ ~~XXXXXX~~ -

Diameter -

~~Weight~~ -

~~Weight~~ -

THRUST SHAFT. Separate, integral
with crank or flywheel shaft

separate

Material forged steel

Diameter adjacent to collar 500 mm.

Minimum approved tensile strength 50 kg./mm²

MAIN ENGINE DRIVEN PUMPS (each engine. State No. and purpose of each pump and, for bilge pumps, the capacity at normal r.p.m.)
also AIR COMPRESSORS (No. and whether they can be declutched)

One O.F. injection pump per cylinder

DECLARATION TO BE SIGNED BY ENGINE BUILDERS

To the best of our knowledge this machinery has been soundly constructed in conformity with the Rules, Regulations and requirements
of Lloyd's Register of Shipping, and the foregoing particulars of main engines are correct.

N.V. Koninklijke Mij. "De Schelde"

p. proc.

(date)

(signature)

Engine No. 1919-1920

Port and Report No. 58868-58885

A previous similar case was for M.S.

"SEA AMBER" and SEA CORAL"

IDENTIFICATION MARKS of important forgings and castings. (Copies of certificates to be forwarded)

Piston &
connecting rods

Piston rods: LLOYD'S KLN. 271-272-273-275-276
362 - KW.

AvB. 28-10-'64

Conn. rods : LLOYD'S KLN. 829-831-834-921-922-957-AS.
AvB 28-10-'64.

Crankshaft LLOYD'S VNA.

16321-FK. 2-6-'64

Thrust/flywheel shaft LLOYD'S VNA.

16322-FK 2-6-'64

AIR RECEIVERS if supplied with engine. (Copies of certificates to be forwarded)

Port & Cert. No.

CRANKSHAFT

THRUST/FLYWHEEL SHAFT

AIR RECEIVERS

Dates of approval of plans: 1-2-1963

1-2-1963

The machinery reported above has been built under Special Survey in accordance with the Rules, approved plans and Secretary's letters,
examined running on the test bed and found satisfactory. The materials and workmanship are good, the spare gear required by the Rules
has been supplied and the machinery is eligible, in my opinion, to be fitted in a classed ship.

Date of Committee

FRIDAY 18 JUN 1966

Minute

See Rep. 1.

NOTE: Screwshafts have been approved for
4 yearly surveys.

Surveyor to Lloyd's Register of Shipping

A.C. van Bezuije.