

LLOYD'S REGISTER OF SHIPPING

Works No. 1/48.791

Order No. S 900 822 739 027

SHIP OR ENGINE FORGINGS OR CASTINGS

I have to report that the Forgings ~~or Castings~~ as herein described, manufactured

by Messrs. Klöckner Werke AG., of Osnabrück

Georgsmarienwerke

*for the Engines No.

being constructed by Messrs. Howaldtswerke AG.,

of Hamburg

for the Ship No.

being built by

of

have been inspected by me as set forth below and found to be, so far as can be seen, sound and free from defects. These have been despatched to Hamburg

Indian Navigator

HP 2nd pinion

ITEM

One pinion

Identification No.

LLOYD'S HNO 526 GS 2.3.60

Surveyor's Initials.

G. S.

Materials.

E.-Steel, EN 25

Charge No.

How made.

34 829

forged

Heat treated.

yes

Drawing No.

Dimensions.

9000-33 J

Weight.

3970 kg

Progress on Insp.

rough machined

Yield kg per sq mm

bott.long	bott.tang.	top long	top tang.
71.4	76.4	71.4	76.4

Ult. kg per sq mm

86.7	89.2	86.7	89.2
------	------	------	------

Elong. % on 4 V A

22.0	21.2	22.7	19.2
------	------	------	------

Reduc. of Area %

18.6	16.6	18.3	15.2
------	------	------	------

Cold Bend.

180° satisfactory

Brinell.

HB = 250-280

DVM Imp. test mkg/cm²

10.0	9.7	5.4	6.7	7.3	8.2	7.3	8.9
------	-----	-----	-----	-----	-----	-----	-----

Izod. ft. lbs.

48.5	49.2	40.5	28.9	34.0	42.0	43.4	42.0
------	------	------	------	------	------	------	------

Final date.

47.7

28.2

52.8

38.3

2.3.1960

Date of approval of chemical analysis, physical properties and heat treatment in the case of special steels for reduction gearing forgings Sulphur prints were carried out with satisfactory results. The manufacturers state that

Other tests: supersonic tests have been carried out. Works Cert. attached.

Analysis as stated by the manufacturers:-

Charge No.	C%	Si%	Mn%	P%	S%	Cr%	Mo%	Ni%
34 829	0.30	0.27	0.58	0.012	0.011	0.60	0.42	2.32

Fee:

Report on Material Signature

Expenses:

Received at

*Delete where not applicable

G. Stockfleth

Date 3.3.1960

Surveyor to Lloyd's Register of Shipping

(TURN UP

LLOYD'S REGISTER OF SHIPPING

SHIP OR ENGINE FORGINGS OR CASTINGS

I have to report that the Forgings or Castings as herein described, manufactured

Messrs. Klopner Werke AG., of Gansbrück

for the Engines No. being constructed by Messrs. Howaldtwerke AG.,

of Hamburg for the Ship No. being built by

of

have been inspected by me as set forth below and found to be, so far as can be seen,

sound and free from defects. These have been despatched to

Hamburg

Indian Machinery

ITEM One piston

LLOYD'S HMO 526 GS 2.3.60

Examined finished machined

Port Hamburg

Date 9.11.60 and marked for identification

(Marks) HWM

526 GS 2-3.10

Humb 334 REF 9.11.60

(Sureyor's initials)

Identification No.

Surveyor's Initials

Materials

Charge No.

How made

Heat treated

Drawing No.

Dimensions

Weight

Progress on Insp.

Yield kg per sq mm

Ult. kg per sq mm

Elong. % on 4 V A

Reduc. of Area %

Cold Bend.

Brinell

DVM Imp. test mks/cm

Index. lbs.

Final date

Date of approval of chemical analysis, physical properties and heat treatment in the case of special steels for reduction gearing forgings. The manufacturer's state that out with satisfactory results. The manufacturer's state that super-sonic tests have been carried out. Works Cert. attached.

Analysis carried out by the manufacturer:-

Report on Machinery No.

Received at Lloyd's Register

Surveyor to Lloyd's Register of Shipping