

Date of writing report 24/4/63 Received London -- Port HANNOVER No. 136
Survey held at Hameln No. of visits in shop 6 First date 14/12/62 Last date 28/3/63

FIRST ENTRY REPORT ON MAIN ENGINE REDUCTION GEARING

Name of Ship Owners
Hull built at Elmshorn by Messrs. Kremer & Sohn,
Main engines made at Köln-Deutz by Schiffswerft Yard No. 1103 Year 63
Reduction gearing made at Hameln by Messrs. Klöckner-Humboldt-Deutz AG.
Type of engine with which gearing is to be used by Messrs. Eisenwerke Reintjes GmbH. Gear No. 30544-45 Year 63
Deutz SBA SM 517 State if for Class 1 or 2 ice strengthening

The following particulars are to be given as fully and clearly as possible. Wording not applicable should be cancelled by a black line.

Description of gearing, including reversing arrangements and

clutches, if any, and No. of sets (state if ball or roller bearings)
Single reduction:- Spur wheel geared,
multiple dish clutch operated by oil
pressure.

Reverse side:- Planet bevel geared and
band brake operated by oil pressure.

Oil pump:- driven by gearing

Bearings:- Roller and ball

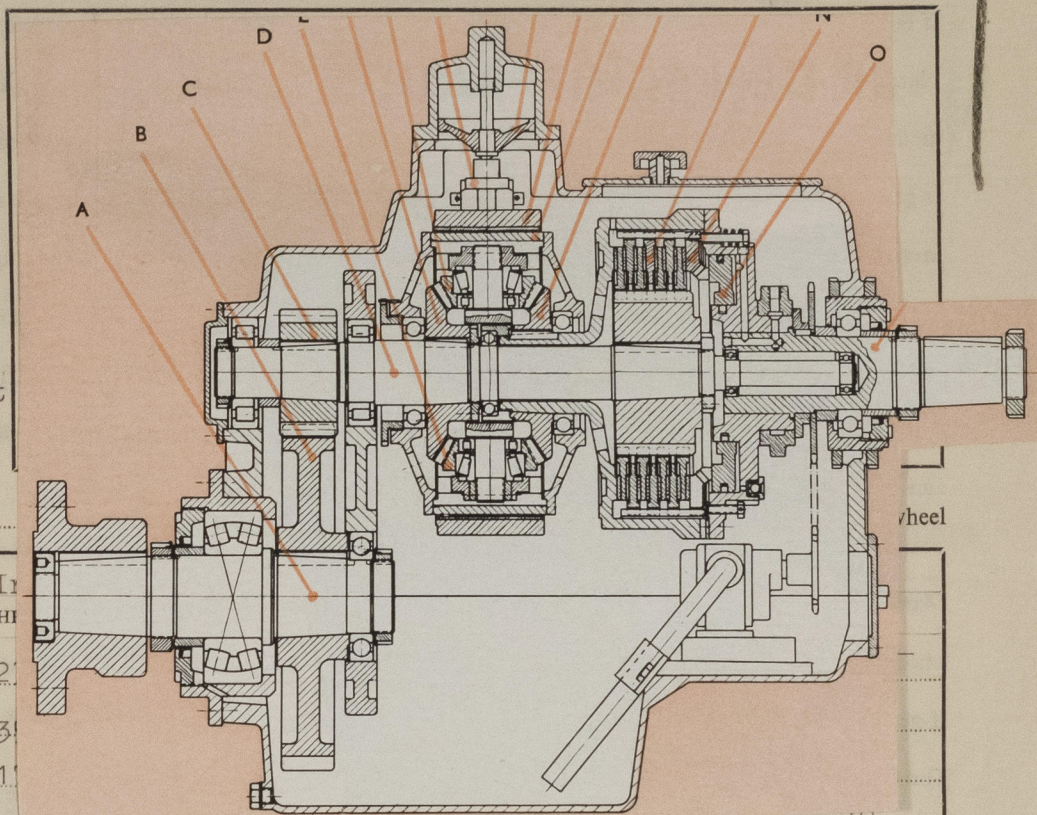
If single helical, what is the position of the gear thrust bearing?

Self aligning roller bearing on output
shaft

Helix angle, primary secondary

Type of involute tooth form

DIAGRAMMATIC SKETCH SHOWING ARRANGEMENTS OF GEARING



PINIONS

Maximum S.H.P. to be delivered to primary pinions ...

Revolutions per minute ...

Diameter of pitch circle, inches/mm. ...

No. of teeth ...

Total width of face, parallel to axis, inches/mm. ...

Width of gap, inches/mm. ...

Diameter of shaft at bearings, inches/mm. ...

No. of bearings ...

Span of bearing centres, inches/mm. ...

Material, state nominal composition and heat treatment

Shaft forged

gear wheels case hardened

Tensile strength, tons per sq. in./kg. per sq. mm. ...

QUILL SHAFTS

Diameter, inches/mm. ...

Material, state nominal composition ...

Tensile strength, tons per sq. in./kg. per sq. mm. ...

FLEXIBLE COUPLINGS

Type of coupling ...

Material, driving member ...

Tensile strength, tons per sq. in./kg. per sq. mm. ...

Material, driven member ...

Tensile strength, tons per sq. in./kg. per sq. mm. ...

Do couplings permit axial float of pinions? no

balanced? no

Have primary pinions been dynamically
balanced? no
Have secondary pinions been dynamically or statically balanced? no

WHEELS

Revolutions per minute ...

Diameter of pitch circle, inches/mm. ...

No. of teeth ...

PRIMARY			MAIN
HP	MP	LP	

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FIRST ENTRY REPORT ON MAIN ENGINE REPAIR RING

Name of Ship
Hull built at Elmshorn
Main engines made at Köln-Deutz
Reduction gearing made at Hameln
Type of engine with which gearing is to be used Deutz

The following particulars are to be given as fully and clearly as possible
Description of gearing, including reversing arrangements and
clutches, if any, and No. of sets (state if ball or roller bearings)
Single reduction:- Spur wheel geared,
multiple dish clutch operated by oil
pressure.
Reverse side:- Planet bevel geared and
band brake operated by oil pressure.
Oil pump:- driven by gearing
Bearings:- Roller and ball

If single helical, what is the position of the gear thrust bearing?
Self aligning roller bearing on output
shaft
Helix angle, primary secondary

Type of involute tooth form Approved maximum total S.H.P. at R.P.M. of main wheel

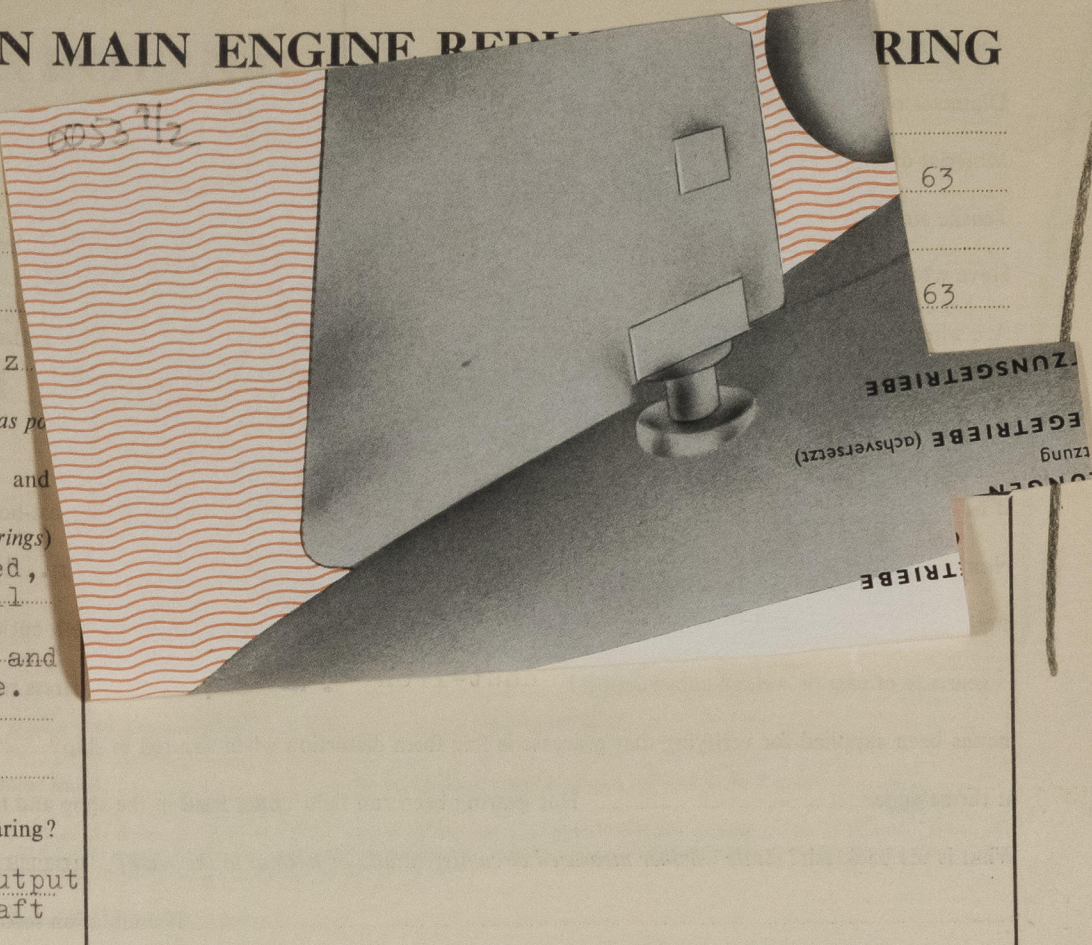
PINIONS
Maximum S.H.P. to be delivered to primary pinions
Revolutions per minute
Diameter of pitch circle, inches/mm.
No. of teeth
Total width of face, parallel to axis, inches/mm.
Width of gap, inches/mm.
Diameter of shaft at bearings inches/mm.
No. of bearings
Span of bearing centres, inches/mm.
Material, state nominal composition and heat treatment
Shaft forged
gear wheels case hardened
Tensile strength, tons per sq. in./kg. per sq. mm.

QUILL SHAFTS
Diameter, inches/mm.
Material, state nominal composition
Tensile strength, tons per sq. in./kg. per sq. mm.

FLEXIBLE COUPLINGS
Type of coupling
Material, driving member
Tensile strength, tons per sq. in./kg. per sq. mm.
Material, driven member
Tensile strength, tons per sq. in./kg. per sq. mm.

Do couplings permit axial float of pinions? no Have primary pinions been dynamically
balanced? no Have secondary pinions been dynamically or statically balanced? no

WHEELS
Revolutions per minute
Diameter of pitch circle, inches/mm.
No. of teeth



Input	PRIMARY	Intermediate	SECONDARY	Output
HP	MP	LP	MP	LP
230				
1350				386
117.755				401.245
20				70
84				80
82 at top of cone for separate coupling		65		85
C 45		C 45		C 45
		EC 80		
multiple dish clutch				
C 35				
GG 22 (cast iron)				
min 22				

PRIMARY			MAIN
HP	MP	LP	

[illegible]

EISENWERKE REINTJES GMBH

Manufacturer

These main reversible reduction gears have been constructed under special survey in accordance with the requirements of the Rules, approved plans and Secretary letters. The material used was tested and the workmanship satisfactory. The gears would be eligible for the notation + LMC (with date) when the whole machinery has been satisfactory fitted on board and tried under full working condition.

Expenses.....

Date when a/c rendered

Gearing No. 30544

No. 30545

Engineer Surveyor to Lloyd's Register of Shipping

PRIMARY PINIONS

LLOYD'S HNO

LLOYD'S HNO

Input shafts:

HB 25/3/63

HB 28/3/63

PRIMARY QUILL SHAFTS 657✓LLOYD'S KLN 1927 HL 6.11.62 KN

Coupling cover:659 ✓ LLOYD'S KLN 1927 HL 22.11.62 FK

SECONDARY PINIONS: Intermediate shafts: 656 ✓ LLOYD'S KLN 1927 HL 6.11.62 KN
Output shafts: 654 LLOYD'S KLN 1927 HL 6.11.62 KN

Output shafts: 654 ✓ LLOYD'S KLN 1927 HL 6.11.62 FK
SECONDARY QUILL SHAFTS.....

Coupling flange prop.side: 957 LLOYD'S HNO E50 FK 13.12.62 ✓
FLEXIBLE COUPLINGS:

Bevel gear wheels: 43156 T 14169, 226, 146513 BV LLOYD'S DSF HS 29.11.62

PRIMARY WHEEL RIMS

Spur wheels: 227-43 187 T 14 168 SW 668 OK LLOYD'S DSE 29.11.62 H

PRIMARY WHEEL SHAFTS

228-43 187 T 14 168 SW 668 OK LLOYD'S DSE 29.11.62 HS

MAIN WHEEL RIM

40 847 /
40 847..... MAIN WHEEL SHAFT

The above reduction gearing has been fitted on board the.....at.....

in a proper manner and found satisfactory when tested on the (date)..... under full-power working conditions for.....

hours and when examined subsequently.

MONDAY 27 APR 1964

DATE OF COMMITTEE

DECISION..... See Ham 13425-

Engineer Surveyor to Lloyd's Register of Shipping

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The Register of Shipping