

LLOYD'S REGISTER OF SHIPPING

Cert.No. 60/ 1562

Port of Augsburg, Moritzplatz 4

16th September, 1960

131 755
A 80 So
BD 63

This is to Certify that

Günther H a a k

the undersigned Surveyor to this Society did at the request of Messrs. Zahnräderfabrik Renk A.G. of Augsburg attend their works at Augsburg on 21st March, 1960 subsequently for the purpose of testing and surveying during construction one gear made to the order of Messrs. A.G. "Weser" of Bremerhaven and intended for a floating crane, Yard No. 1343.

The gear has been constructed under special survey in accordance with the requirements of the Rules and otherwise with the approved plans. Date of approval: 17th February, 1960.

The output of the engines is 450 BHP at 500 RPM and the generators have a power of 90 kW at 1298.1 RPM. The gear ratio is 2.6 : 1.

The materials used in the construction have been procured from Steelworks recognised by the Committee and were tested with satisfactory results as shown on Augsburg certificate: 60/1559, Dortmund certificates: F59/559; F60/496; F60/497, Mannheim certificates: M60/277; M60/319 and Köln certificate: F60/735.

The material of the output shaft has been tested at the works of Messrs. Renk A.G. and the following results were obtained:-

Sample No.	Yield ₂ P. kg/mm	U.T.S. ₂ kg/mm	Elong. % on 50mm	Reduct. of area %	Bend test
2216	41.5	65.6	29.4	57.8	180° good

On completion of construction the gear was tested running on makers' test bed for a suitable time with no load. The results were satisfactory. After the trial the gear was dismantled for inspection and the inner parts were found, so far as could be seen, to be sound and in order and the workmanship to be satisfactory.

The shrinkage allowances were checked and found to be in order.

The pinion, rim and intermediate wheel were magnetic crack detected with satisfactory results. As stated by the makers supersonic tests have been carried with satisfactory results.

For identification the gear-box was stamped with:-

131 755
LLOYD'S AUG BD 63
G.H. 17.8.60 G.H.

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is issued upon the terms of the Rules and Regulations of the Society, which provide that:-
The Committees of the Society use their best endeavours to ensure that the functions of the Society are properly
is to be understood that neither the Society nor any Member of any of its Committees is under any circumstances
be held responsible for any inaccuracy in any report or certificate issued by the Society or its Surveyors, or in any
Register Book or other publication of the Society, or for any error of judgment, default or negligence of any of
es or any Member thereof, or the Surveyors, or other Officers or Agents of the Society."

The inner parts of the gear are stamped as follows:-

Gear-box bottom part	Input shaft	Wheel body
<u>St.37.12</u>	<u>C.45V</u>	<u>GC-22</u>
131 755 HK	131 755	131 755
LLOYD'S A/C DG 91	137 275	2120
OEL 26.4.60 GH	61 805	
GH 25.3.60	LLOYD'S DTM	
	HAK 24 GH 14.9.59	
	(M)	

Rim	Intermediate shaft	Intermediate wheel
<u>4CrMo4V</u>	<u>C45V</u>	<u>42CrMo4V</u>
131 755	131 755	131 755
49544	137 275	8255
54513	61805	LLOYD'S KLN
LLOYD'S DTM	LLOYD'S DTM	2957E
HD 25.5.60	HAK 23 GH	KW 23.6.60 GH
HD 25.5.60	14.9.59	WPUS 1468
WPUS 1417	(M)	(M)
(M)		

Output shaft	Pinion	Oilfilter cooler
<u>C.45</u>	<u>34 CrNiMo6V</u>	<u>No. 15040</u>
131 755	131 755	LLOYD'S MHM
CH 027254	LLOYD'S DTM	TP 12/12 kg/cm ²
GH. 2216 GH	HD 282 HD	KS 5.5.60 KS
(M)	8.6.60 HD	
	WPUS 1439	
	W 5702	
	(M)	

Oil Pump
No. 767724
LLOYDS MHM
T.P. 6 kg/cm²
H.W. 24.5.60 HW

Retain with Bremen
Machinery First Entry
Report No. 4892

PONTOON ~~SCMS~~ GABBAR

Surveyor to Lloyd's Register of Shipping.

KEY TO ABBREVIATIONS

Special Survey
Special Survey
Special Survey
Special Survey not fitted (No Sparring)

SS Hull Special Survey
SS(D) Hull Special Survey (Deck)
SS(M) Hull Special Survey (Machinery)
SS(P) Hull Special Survey (Paint)

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Foundation