

# LLOYD'S REGISTER OF SHIPPING

54

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 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* *Star Wheel shaft and rims*

ITEM	1 wheel shaft	1 wheel rim	1 wheel rim
Identification No.	LLOYD'S HNO 189 GS 9.11.59	287 GS 21.12.59	288
Surveyor's Initials.	G. S.		
Materials.	SM Steel CK 22	E.-Steel EN 8	
Charge No.	56 699	34 860	
How made.	forged		
Heat treated.	yes		
Drawing No.	9000-34 J II	9000-32 J II	
Dimensions.	8420 kg	3650 kg each	
Weight.	rough machined	bott. top	bott. top
Progress on Insp.	24.6 22.7 22.7	39.0 39.6	37.6 38.3
Yield kg per sqmm	44.2 44.0 44.0	66.3 65.6	65.0 65.0
Ult. kg per sqmm	42.0 40.0 40.0	29.8 27.6	31.0 31.0
Elong. % on 4 V A	36.9 34.3 35.0	25.0 24.0	27.0 26.3
5 x d	63.1 58.7 55.9	51.0 49.0	52.0 51.0
Reduc. of Area %	180° satisfactory		
Cold Bend.	HB = 181-186		
Brinell.	31.8 24.6	30.4 36.2	
Izod ft. lbs.	27.5 31.1	25.3 35.4	
	26.8 29.7	28.2 31.1	
Final date.	9.11.1959	21.12.1959	

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 on wheel rims with satisfactory results. The manufacturer states that supersonic tests have been carried out. Works Cert. are attached.

Analyses as stated by the manufacturers:-  
 Charge No. C% Si% Mn% P% S%  
 56 699 0.22 0.30 0.53 0.023 0.018  
 34 860 0.39 0.30 0.79 0.018 0.010  
 Signature: G. Stockfleth  
 Date: 14.1.1960  
 Surveyor to Lloyd's Register of Shipping

\*Delete where not applicable.

of the Society.



