

# Lloyd's Register of Shipping.

Certificate No. 2680.

Port PRAGUE,

1st May, 1937.

Order No. 7811-2 d/5.11.36.  
Job No. G.1209.  
Škoda 78-03.1895.

This is to Certify that

Ing. P. Kertscher,

the undersigned Surveyor to this Society did at the request of

Messrs. Škoda Works Ltd. attend at their Works at Plzeň, Czechoslovakia, on the 5th January, 1937, and subsequent dates in order to test according to specification and examine in finished condition

1-SOLID-FORGED FIVE-THROW CRANKSHAFT, details as below,

ordered by Messrs. BRITISH AUXILIARIES LTD., of Glasgow, Order No. 7811-2 dated 5th November, 1936, Job No. G.1209.

## SPECIFICATION.

To dwg. No. MA.325.M35M-A.304; finished complete with the exception of all drilling and keyway cutting; 230 mm. diam., 285 mm. crank radius, 3985 mm. in length, weight 2430 kilos.; to Specification No. 2-Crankshaft Forging and Machining, Order No. 7811, Sheet 3; of S.M. steel, Yield Point 16 ts. p. sq. in., Ultimate Tensile 28/32 ts. p. sq. in., Tensile plus Elongation 57, Bend test 180 degrees, radius 1/4"; and to Lloyd's tests, requirements and inspection for a classed vessel.

## RESULTS OF TESTS.

The crankshaft was forged from an octagonal ingot weighing 11 ts. without head, 33½" mean diameter, Charge No. 58942, Škoda Forging No. 1505, the larger flange 430 mm. diam. (adjacent to crank No. 5) corresponding to top of ingot.

The crankshaft has been inspected at all stages of manufacture, finally in finished condition with the exception of all drilling and keyway cutting, and was found to be, so far as could be seen, sound and free from defects.

The dimensions of the crankshaft were checked and found to be within the stipulated tolerances.

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This Certificate is issued upon the terms of the Rules and Regulations of the Society, which provide that:—

"While the Committees of the Society use their best endeavours to ensure that the functions of the Society are properly performed, it is to be understood that neither the Society nor any Member of any of its Committees is under any circumstances to be held responsible for any inaccuracy in any report or certificate issued by the Society or its Surveyors, or in any entry in the Register Book or other publication of the Society, or for any error of judgment, default or negligence of any of its Committees or any Member thereof, or the Surveyors, or other Officers or Agents of the Society."



The final heat treatment of the crankshaft was carried out with the full-size axial test prolongation still attached, and the gaps between the crank webs cut out, with the exception of crank No.3 where, for the purpose of identification and control of similar and simultaneous heat treatment the slab was not quite detached but kept in position by a connection of minute cross section.

The results obtained are as follows:-

Number and Position of Test Pieces.	Diam. ins.	Yield	Ultim.	Elongat.	Red.	Tensile
		Point. ts.p. sq.in.	Tens. ts.p. sq.in.	4xVArea. 2 ins. %	of Area. %	plus Elon- gation.
828-L-5, axial prolongation adjacent to crank 5, cut longitudinally,	.564	16.0	29.7	38.0	57.7	67.7
828-R-3, slab removed from between crank 3, cut radially,	.564	17.7	30.0	37.0	55.8	67.0

Two bend test pieces 1" x 3/4" in cross section, out from the same positions and in the same directions as the tensile test pieces, withstood, without fracture, being bent cold through 180 degrees over an internal radius of 1/4".

The crankshaft has been marked on the first web of crank No.1 as follows:-

.....  
 . G.1309. .  
 .  
 . LLOYD'S. .  
 . P.K. 9710. *PK* .  
 . 30.4.1937. .  
 .....

PRAGUE, 1st May, 1937.

*P. Karsten.*

Surveyor to  
Lloyd's Register of Shipping, Prague



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Foundation

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