Approval No. ST152RO Certificate No. TA17352E



APPROVAL OF MANUFACTURING PROCESS

This is to certify that

Sidenor Aceros Especiales, SL, Reinosa Plant Reinosa, Cantabria Spain

has been approved for the manufacturing process of undermentioned materials by the NIPPON KAIJI KYOKAI in accordance with the requirements of 1.2, Part K of the Society's "Rules for the Survey and Construction of Steel Ships" and Chapter 1, Part 1 of the Society's "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use".

MATERIALS

Round Bars for Chains

The details of approval conditions are given in the PARTICULARS OF APPROVAL listed in the reverse of this certificate.

The products for the ships classed with the Society are to be manufactured, tested and inspected in compliance with the Rules.

This Certificate is valid from 29 March 2017 until 28 March 2022. Issued at Tokyo on 29 March 2017.

Initial Approval Date: 29 March 2017

T Amamura General Manager

Material and Equipment Department



List of PARTICULARS OF APPROVAL

Ref. No.

Issue Date

TA17353E 1.

29 MAR. 2017



No.: TA17353E Date: 29 March 2017

PARTICULARS OF APPROVAL

Approval Condition for Manufacturing Process of Round Bars for Chains

1. Manufacturer : Sidenor Aceros Especiales, SL, Reinosa Plant

2. Kind of Product : Round Bars

3. Grade : KSBCR4

4. Deoxidation Practice : Fine-grained Killed

5. Grain Refining Elements : Al

6. Max. Diameter : 191mm

7. Minimum Required Rolling

Reduction Ratio : 5.74

8. Condition of Supply : As Rolled

9. Heat Treatment for Test Sample: QT

10. Remarks:

- Steel blooms manufactured by Sidenor Aceros Especiales, SL, Basauri Plant approved by the Society are to be used.
- 2) Chemical composition is to comply with the requirements specified in Table 1 in addition to Part K of the NK Rules.

T Imamura
General Manager

Material and Equipment Department