



Marine & Offshore

Certificate number: 37274/B1 BV

File number: MAT 73226-2013

Product code: 9019I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

SIDENOR ACEROS ESPECIALES, S.L.

Azkoitia - SPAIN

for the type of product

ROUND BARS FOR OFFSHORE MOORING CHAIN CABLE

Round bars for offshore mooring chain cables in steel grades QR3, QR3S, QR4 and QR5

Requirements:

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 10 Jan 2024

For Bureau Veritas Marine & Offshore,

At BV BILBAO, on 24 Oct 2019,

Juan Jose GUTIERREZ GARCIA



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

Round bars for offshore chain cables.

Steel grade	Delivery condition
QR3;QR3S (1)	As rolled with diameter up to 155mm
QR3S(3)	As rolled with diameter up to 78mm
QR4 (1)	As rolled with diameter up to 116mm
QR5 (2)	As rolled with diameter up to 86mm

(1) Steelmaking in Electric Arc Furnace, Continuous Casting, blooms sizes 350×470mm and 300×400mm are manufactured by Sidenor Basauri. Minimum Reduction ratio is 5.

(2) Steelmaking in Electric Arc Furnace, LF Refining and Vacuum Degassing, Continuous Casting for blooms size 400×300mm/470×350mm are manufactured by Sidenor Basauri. Minimum Reduction ratio is 20.66.

(3) Steelmaking in Electric Arc Furnace, LF Refining and Vacuum Degassing, Continuous Casting for blooms size 470×350mm are manufactured by Sidenor Basauri. Minimum Reduction ratio is 33.56.