

GERDAU ACEROS ESPECIALES EUROPA, S.L.
FABRICA DE REINOSA,
PO. ALEJANDRO CALONJE, 1,
B-01292903, 39200 REINOSA,
CANTABRIA, SPAIN

Reference:
Project Number:

STM/DM 923469 Rev 1
2831645

ATTN : Mr. Esteban Saiz,

**Forge & Rolling Mill Facility Approval to supply bars for offshore mooring application -
 ABS Approval of Gerdau Aceros Especiales Europa, S.L., Reinosa
 to supply forged bars to Vicinay Cadenas S.A for offshore mooring applications**

We have the ABS plant survey report BB2164182 & BB2168595 dated 29 June 2012, your submittals of 29 June 2012 together with enclosures relative to the subject. With regard thereto we advise that Gerdau Aceros Especiales Europa, S.L is considered approved to supply ABS grade forged steel bars to Vicinay Cadenas SA, Bilbao for manufacture of offshore mooring chain as outlined below, provided the *ABS Materials & Welding Rules (2013)* & *ABS guide for Certification of Offshore Mooring Chain (2009)* are adhered to in all respects and all production and inspection are to the satisfaction of the local Surveyor.

Material Categories:	ABS Grade forged/rolled bars intended for offshore mooring chain				
	R3	R3S	R4	R4S	R5
Maximum Diameter:	155mm	185mm	185mm	180mm	174mm
Production :	EAF (Refining: Vacuum Degassing)				
Deoxidation Practice:	Aluminium				
Fine Grain Practice:	Aluminium + Vanadium				
Casting:	Ingots				
Marking:	AB/R5, AB/R4S, AB/R4, AB/R3S, AB/R3				

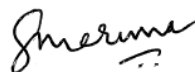
Production of forgings is to be carried out in accordance with the ABS Materials Rules. We note no weld repairs will be carried out to ABS Classed forgings.

The approval is valid for five years from the date of the Plant Survey. ABS Houston Materials are hereby requested to issue the appropriate Certificate indicating the above details. Renewal of approval is to be sought by the subject facility prior to the five year expiry date. It is the responsibility of the facility to inform ABS of any changes in manufacturing parameters. Please find enclosed our invoice to cover the costs of the technical review.

If you have any questions regarding the above review please contact Simon Mills at the following e-mail address smills@eagle.org.

Very truly yours

ABS Europe Ltd.
 Dimitrios G. Kostaras
 Vice President of Engineering, Europe Division



Satya Meruva
 Senior Engineer, Materials
 London Offshore Engineering Department

EC: ABS Bilbao, ABS Houston Materials

Drawing List

Engineering Office:	London Engineering Department	
Submitter:	GERDAU ACEROS ESPECIALES EUROPA, S.L.	
Drawing No	Revision No	Drawing Title
Approval procedure	-	For Info
BB2168595	-	PS Report
Equipment calibration	-	For Info
External audit	-	For Info
Inspection control	-	For Info
List of forging and rolling work instructions	-	For Info
Mill Certificates	-	Statistical Data
Org Chart	-	For Info
Quality certs	-	ISO
Rolling - flow chart	-	Manufacturing process
Spectrometer procedures	-	Chemistry check
NDT qualifications	-	Operators