

DNV GL SE • P.O. Box 11 16 06 • 20416 Hamburg • Germany

GAP Grupo Aluminios de Precision, S.L.
 Attn. Mr. Javier Arozamena
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|----------------|----------------|-------------------|---------------------|------------|
| Your reference | Your Letter of | Our reference | Extension | Date |
| | 2014-12-08 | 112335-14/STEROHR | +49 40 3 61 49-6130 | 2015-02-02 |

Approval of your works for the manufacture of aluminium alloy castings

Dear Mr. Arozamena,

Thank you for your company's commitment to manufacture products with GL certification.

We refer to our Surveyor's report on the inspection of your works performed on 2014-10-30 and to the results of the approval test carried out on aluminium alloy castings in grades EN AC-42100, EN AC-42200 and EN AC-43100 witnessed by him.

Additionally we received a description of your works, the manufacturing process and of your manufacturing and testing facilities.

As the review of these documents has shown us that our requirements are complied with we grant to your works our approval for the manufacture of aluminium alloy castings.

The material grades, supply conditions and dimensions / weights covered by the approval are indicated in the approval annex.

The manufacturing details covered by the approval are as follows:

- 1. Products**
 aluminium alloy castings
- 2. Manufacturing process**
 Pattern making, pattern inspection, mould / core making, mould assembly, melting by furnaces, cast pouring (sand casting), cooling, shake out, grinding, heat treatment, non-destructive testing (NDT) such as visual inspection (VT) or radiographic inspection (RT)

Our approval is granted under provision that all pipes intended to be used for the outfit of ships classed with our Society will comply with our Rules in all respects and will be tested in the presence of our Surveyor.

The quality of your company's manufactured products, within the valid approved scope, contributes to the safety and reputation of GL classed ships.



Your company has been added to the list of approved manufacturers, which is regularly published on the Internet. In order to view the appropriate data start the DNV GL website <http://www.dnvgl.com> , choose "Maritime", "Exchange & Tools", menu "GL Tools", select "Approval Finder", and then "Manufacturers of Materials".

Enclosed please find our certificate of approval no. **WZ 2696 HH** , valid until 2018-02-27, as well as the corresponding annex.

We look forward to working with your company in the future and wish you every success.

Yours faithfully,

for DNV GL SE



Marcus von Busch



Stefan Röhr

Ref. no.: 112335-14

Manufacturer: GAP Grupo Aluminios de Precision, S.L.

List 6: Aluminium and Copper Alloys

| Grade | Key | Supply Condition (1) | max. Thickness, mm | max. Weight | Casting Method (2) | Remarks |
|-------------|------|----------------------|--------------------|-------------|--------------------|---------|
| EN AC-42100 | G-AL | T6 | 300 | 500 kg | sand casting | |
| EN AC-42200 | G-AL | T6 | 300 | 500 kg | sand casting | |
| EN AC-43100 | G-AL | AC, T6 | 300 | 500 kg | sand casting | |

Key: -AL Aluminium BD Strip BL Plates -CU Copper, Copper Alloys FF Hammer Forgings G Castings
 GE Die Forgings HZ Prematerial PR Sections RO Pipes

(1):
 AC, AF, AR = as cast, as forged, as rolled
 CR = controlled rolled
 F = ferritized
 HF = hot formed
 N = normalized

N+T = normalized + tempered
 Q+T = quenched + tempered
 SH = surface hardened
 S+Q = solution annealed + quenched
 TM = thermomechanically rolled

(2):
 CC = continuous casting
 IC = ingot casting

Approval of Material Manufacturers *Zulassung von Werkstoffherstellern*

This is to certify that the works of
Hiermit wird bescheinigt, dass die Firma

GAP GRUPO ALUMINIOS DE PRECISION, S.L.
E-09001 BURGOS
SPAIN

has been subjected to an approval test in accordance with GL Rules with satisfactory results and is approved for the manufacture of the following products:

einer Zulassungsprüfung nach den Vorschriften des GL unterzogen wurde und für die Herstellung folgender Erzeugnisse zugelassen ist:

Aluminium Casting Alloys
in accordance with the GL- Rules for Metallic Materials,
Chapter 3, Section 1.B

This approval is granted provided that all products intended to be used for the construction of ships or installations classed with DNV GL SE comply in every respect with GL Rules and Requirements.

Die Zulassung erfolgt unter der Voraussetzung, dass alle Erzeugnisse, die zum Bau von Schiffen und Anlagen mit Klasse der DNV GL SE bestimmt sind, die Vorschriften des GL in jeder Hinsicht erfüllen.

Certificate of approval No. WZ 2696 HH
Zulassungsbescheinigung Nr.

This Certificate is valid until: 2018-02-27
Diese Bescheinigung ist gültig bis:

Part of the approval is our letter of approval ref. no. 112335-14 of 2015-02-02.
Bestandteil der Zulassung ist das Zulassungsansprechen, Tgb.-Nr. 112335-14 vom 2015-02-02.

Hamburg, 2015-02-03

DNV GL SE



Marcus von Busch



Stefan Röhr