

Declaração de Conformidade do Fabricante para a Conceção, Fabrico, Inspeção de Garrafas de Gás Transportáveis / Manufacturer's "Declaration of Conformity" for Design, Manufacture, Inspection of Transportable Pressure Equipment

Documento N.º

Document N.º 1630_24

| | |
|-----------------------------------|--|
| Fabricante Manufacturer | Amtrol – Alfa Metalomecânica, S.A. |
| Morada Address | Apartado 37 - Lugar de Pontilhões - Brito - 4801-909 Guimarães |
| Cliente Client | LPG EQUIPMENT B.V. |
| Morada Address | DE COMPAGNIE 40 ZWAAG, 1689 AG, NL |

Descrição das Garrafas de Gás Transportáveis/Transportable Pressure Equipment Description :

| | | | |
|--|---------------------|---|---------|
| Identificação (N.º Série): Identification (Serial N.º) | RR14586 - RR15213 | Lote N.º Batch N.º | 0745_24 |
| Desenho do Modelo N.º Model Drawing N.º | G026-02-0089, rev.a | Data de Fabrico Date of Manufacture | 07/2024 |
| Desenho de Fabrico N.º Manufacturing Drawing N.º | G026-03-1127 REV.C | | |

| | | | | | |
|---|---|-------------------------|---|------------|------------|
| Volume Volume | 26.5 min./28.5 max. | Litros Litres | Pressão de Conceção Design Pressure | 30 | bar |
| Conteúdo Contents | Todas as misturas de GPL com pressão de teste ≤ 30 bar / All LPG mixtures with test pressure ≤ 30 bar | | Temperatura Tratamento Térmico Heat Treatment Temperature | 910 -20+10 | °C |
| Corrosão Permitida Corrosion Allowance | -- | | Capacidade Valvula Segurança Safety Valve Capacity | -- | bar |
| Pressão Valvula Segurança Safety Valve Set Pressure | -- | bar | Pressão de Teste Test Pressure | 30 | bar |

Todas as garrafas fornecidas foram inspecionadas visualmente, realizaram o ensaio de fugacidade e ensaio de pressão à pressão de teste referida acima. / All cylinders supplied have been visual inspected, performed the leak test and pressure test at the pressure test referred above.

Norma de Construção EN1442:2017 + Dir. 2010/35/UE (TPED) + ADR/RID 2023 + TPER 2009 SI 1348 + amd SI 1370 (GB) + TPER 2010 SI 160 + amd SI 222 (NI)
Construction Standard

Concepção/Design

Organismo Notificado para Aprovação de Conceção ou Aprovação Modelo/Notified Body for Design Approval or Type Approval

| | | | | | |
|--|--|---|---|---------------------|-------------------------|
| Nome Name | SGS Portugal, S.A. + SGS United Kingdom Limited – Industrial Services | | | | |
| Morada Address | Pólo Tecnológico de Lisboa, R. Cupertino de Miranda, LT 6, Piso 0 e 1, 1600-546 Lisboa, PT + Station Road, Oldbury, West Midlands, B69 4LN, United Kingdom | | | | |
| N.º Identificação ON NB Identification N.º | 1155 + 0120 | Certificado N.º Certificate N.º | PTC23.02213.5125 + UKC23.385710.TA.01/1 | Data Date | 17/02/2023 + 24/04/2023 |

Fabrico/Manufacture

Organismo Notificado para Fabrico e Inspeção/Notified Body for Manufacture and Inspection

| | | | | | |
|--|--|---|--|---------------------|--|
| Nome Name | In-House Inspection Service | | | | |
| Morada Address | Apartado 37 - Lugar de Pontilhões - Brito - 4801-909 Guimarães | | | | |
| N.º Identificação ON NB Identification N.º | 0035 +1266 | Certificado N.º Certificate N.º | | Data Date | |

Os abaixo assinados declaram que a concepção, fabrico e inspeção de garrafas de gás transportáveis estão conformes com os requisitos da norma de construção mencionada acima. / The undersigned declares that the design, manufacture and inspection of this transportable pressure equipment conform to the requirements of the construction standard mentioned above.

Os relatórios dos ensaios realizados de acordo com esta norma e os certificados de materiais encontram-se em anexo. / The tests reports performed according with this standard and the certificates of materials are attached.

| | | | | | |
|---|---|--------------------------------|---|----------------------------|---------|
| Data: Date: | 07/08/2024 | Nome: Name: | Sara Pimenta | Posição Position | Quality |
| Simbolo Fabricante Manufacturer's Stamp |  | Assinatura Signature |  | | |

CERTIFICADO DE CONFORMIDADE DA SUPERVISÃO DO FABRICO /

CERTIFICATE OF CONFORMITY FOR SUPERVISION OF MANUFACTURE

Documento Nº / Document N^o: 1631_24**Organismo In-house Inspection service (IS) da Amtrol-Alfa /
In-house Inspection service (IS) Body of Amtrol-Alfa**

Fabricante / Manufacturer Amtrol – Alfa Metalomecânica, S.A.
Morada / Address Apartado 37 - Lugar de Pontilhões - Brito - 4801-909 Guimarães

Cliente / Client LPG EQUIPMENT B.V.
Morada / Address DE COMPAGNIE 40 ZWAAG, 1689 AG, NL

| | | | |
|--|--|---|--|
| N^o Série / Serial N^o | <u>RR14586 - RR15213</u> | Lote N^o / Batch N^o | <u>0745_24</u> |
| Desenho do Modelo N.º / Model Drawing N.º | <u>G026-02-0089, rev.a</u> | Desenho de Fabrico N.º / Manufacturing Drawing N.º | <u>G026-03-1127 REV.C</u> |
| Data de Fabrico / Date of Manufacture | <u>07/2024</u> | Capacidade / Water Capacity | <u>26.5 min./28.5 max.</u> Litros / Litres |
| Pressão de Teste / Test Pressure | <u>30 bar</u> | Pressão Concepção / Design Pressure | <u>30 bar</u> |
| Temperatura Tratamento Térmico / Heat Treatment Temperature | <u>910 -20+10 °C</u> | OE / OC | <u>25334/1</u> |
| Vida Concepção / Design Life | <u>Ilimitada/Unlimited</u> | | |
| Conteúdo / Contents | <u>Todas as misturas de GPL com pressão de teste ≤ 30 bar / All LPG mixtures with test pressure ≤ 30 bar</u> | | |
| Norma Construção / Construction Standard | <u>EN1442:2006 + A1:2008 + Dir. 2010/35/UE (TPED) + ADR/RID 2023 + TPER 2009 SI 1348 + amd SI 1370 (GB) + TPER 2010 SI 160 + amd SI 222 (NI)</u> | | |

Todas as garrafas fornecidas foram inspecionadas visualmente, realizaram o ensaio de fugacidade e ensaio de pressão à pressão de teste referida acima. / All cylinders supplied have been visual inspected, performed the leak test and pressure test at the pressure test referred above.

Concepção/Design:

Organismo Notificado para Aprovação de Concepção ou Aprovação Modelo / *Notified Body for Design Approval or Type Approval*

Nome / Name SGS Portugal, S.A. + SGS United Kingdom Limited – Industrial Services
Morada / Address Pólo Tecnológico de Lisboa, R. Cupertino de Miranda, LT 6, Piso 0 e 1, 1600-546 Lisboa, PT + Station Road, Oldbury, West Midlands, B69 4LN, United Kingdom
N.º Identificação ON / NB Identification N.º 1155 + 0120 **Número certificado / Certificate Number** PTC23.02213.5125 + UKC23.385710.TA.01/1

Organismo de Inspeção ao fabrico / Inspection Body to supervision of manufacture In-house Inspection Body of Amtrol-Alfa
Nº Identificação Organismo notificado / NB Identification N^o 0035 e/and 1266

CERTIFICADO DE CONFORMIDADE DA SUPERVISÃO DO FABRICO /

CERTIFICATE OF CONFORMITY FOR SUPERVISION OF MANUFACTURE

| Lista de verificação / <i>Check list</i> | | Resultado / <i>Result</i> | |
|--|---|-------------------------------------|--|
| 1 | Inspeção de matérias-primas (incluindo verificação do certificado de matérias-primas) <i>Raw material inspection (including check of the raw material certificate)</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 2 | Verificação do certificado de aprovação de modelo <i>Verification of type approval certificate</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 3 | Verificação da documentação exigida para a aprovação de modelo <i>Verification of documentation required for type Approval</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 4 | Documentação sobre a qualificação e aprovação do pessoal <i>Documentation on the qualification and approval of personnel</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 5 | Relatórios dos ensaios destrutivos e não destrutivos <i>Destructive and non-destructive examination reports</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 6 | Registo de tratamento térmico (quando aplicável) <i>Heat treatment record (when applicable)</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 7 | Procedimentos de fabricação e de testes <i>Manufacturing and testing procedures</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 8 | Calibrações <i>Calibrations</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 9 | Registos do processo de Inspeção <i>Process Inspection Records</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| 10 | Inspeção da embalagem da garrafa acabada <i>Finished cylinder packing inspection</i> | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |
| Resultado Final <i>Final result</i> | | <input checked="" type="checkbox"/> | Passou / <i>Pass</i> <input type="checkbox"/> Falhou / <i>Fail</i> |

Os materiais utilizados no fabrico foram identificados por número de lote e as suas propriedades verificadas de acordo com a especificação e com os requisitos de aprovação de modelo. Os relatórios dos ensaios do fabrico realizados de acordo com esta norma e os certificados de materiais encontram-se em anexo. / *The materials used in the manufacture were identified by batch number and their properties verified according to the specification and the type approval requirements. The reports of the manufacturing tests performed in accordance with this standard and the material certificates are attached.*

AMTROL-ALFA tem implementado o INHOUSE INSPECTION SERVICE de acordo com o ponto 1.8.7.7 do ADR/RID 2023 para supervisão do fabrico, inspeção inicial e ensaios. O INHOUSE INSPECTION SERVICE está reconhecido pelos organismos notificados TÜV Rheinland com o certificado nº 01 202 322/IS-110036-T e pela Arrowhead com o certificado nº CDG-1266-021-20240603.

AMTROL-ALFA has implemented an INHOUSE INSPECTION SERVICE according to 1.8.7.7 ADR/RID 2023 with supervision of manufacture, initial inspections, and testes. The INHOUSE INSPECTION SERVICE is recognized by TÜV Rheinland with certificate nº 01 202 322/IS-110036-T and by Arrowhead with certificate nº CDG-1266-021-20240603.

A conceção, fabrico e inspeção de garrafas de gás transportáveis estão conforme os requisitos das normas de construção mencionadas acima.

The design, manufacture and inspection of this transportable pressure equipment conform to the requirements of construction standards mentioned above.

 Data
Date

07/08/2024

 Responsável IS
IS Responsible



RELATÓRIO IS - INSPECÇÃO INICIAL E ENSAIOS de acordo com a Directiva 2010/35/UE e ADR/RID 2023 (1.8.7.7) e TPER 2009 SI 1348 + amd SI 1370 (GB) + TPER 2010 SI 160 + amd SI 222 (NI)

IS REPORT - INITIAL INSPECTION AND TESTS according Directive 2010/35/UE and ADR/RID 2023 (1.8.7.7) and TPER 2009 SI 1348 + amd SI 1370 (GB) + TPER 2010 SI 160 + amd SI 222 (NI)

| | | | | | | | |
|---|--|------------------------|-----------------------|------------------------------------|---------|-------------------|------------------|
| Lote nº/ Batch nº | 0745-24 | Data/ Date | 07/08/2024 | OE/ OF | 25334/1 | Modelo/ Model | G026 |
| Nº Aprovação Modelo/ Type approval number | 063G026 | Nº Série/ Serial nº | RR14586 | Até nº/ Until nº | RR15213 | Cliente/ Costumer | LPG EQUIPMENT |
| Norma de Construção Ap. Modelo/ Type Approval Construction Standard | EN1442:2017 + Dir. 2010/35/UE (TPED) + ADR/RID 2021 + TPER 2009 SI 1348 + amd SI 1370 (GB) + TPER 2010 SI 160 + amd SI 222 (NI) | Desenho/ Drawing | G026-02-0089 Rev.a | Pressão de teste/ Pressure test | | | 30 bar |

| Itens Verificados/ Checked Items | Referência/ Reference | Registo/ Register | Conformidade/ Conformity |
|--|--|------------------------------------|--------------------------|
| Superfície material base/ Surface of base material | ISO 8501-1-2007 | ----- | OK |
| Certificado material base/ Certificate of base material | EN 10120:2017 | ----- | OK |
| Certificado material adição/ Certificate of addition material | ISO 14171:2010-S1 | ----- | OK |
| Calibração Equipamentos/ Equipments Calibration (Próxima Calibração/ Next Calibration) | ----- | TP.1.022 /08-2024 | OK |
| | ----- | M.1.404 /11-2024 | OK |
| | ----- | M.1.461 /12-2024 | OK |
| | ----- | M.1.148 /12-2024 | OK |
| | ----- | M.1.323 /08-2024 | OK |
| | ----- | ----- | ----- |
| Certificados Operadores Soldadura/ Soldadores/ Welding Operators/ Welders Certificate | Circunferencial/ Circunferencial Longitudinal/ Longitudinal Bolacha/ Bung Acessórios/ Accessories | ----- ----- ----- ----- | OK ----- OK OK |
| Procedimento de soldadura/ Welding procedure | Circunferencial/ Circunferencial Longitudinal/ Longitudinal Bolacha/ Bung Acessórios/ Accessories | ----- ----- ----- ----- | OK ----- OK OK |
| | ----- | EPS012SC11086R1 NA | ----- ----- |
| | ----- | EPS012SB11098R1 EPS135SB1107R1 | ----- |
| | ----- | EPS135SG11014R1 EPS135SM11032R1 | ----- |
| Espessura Mínima Coquilha/ Dome minimum thickness (mm) | 1,90 / 1,93 Min. | 1,92 / 1,94 | OK |
| Espessura Mínima Virola/ Shell minimum thickness (mm) | NA | ----- | ----- |
| Altura Mínima do rebaixo/ Height minimum of recess (mm) | 6 Min. | 11,12 | OK |
| Inspecção visual da soldadura/ Visual inspection of welding | ISO 17637 | ----- | OK |
| Diâmetro da garrafa/ Cylinder diameter (mm) | 300±2 | 298,20 | OK |
| Altura do corpo/ Body height (mm) | 449 Min./ 479 Max. | 453,03 | OK |
| Capacidade da garrafa/ Cylinder Capacity (l) | 26,50 Min. / 28,5 Max. | 27,17 | OK |
| Tratamento térmico/ Heat treatment (°C/min.) | 890° a 920° | ----- | OK |
| Ensaio Hidráulico/ Hydraulic Test (bar/seg) | 30/30 | 30/30 | OK |
| Rosca da bolacha/ Thread of the bung | 3/4"-14NGT | 3/4"-14NGT | OK |
| Aspecto interno e externo/ Internal and external aspect | ADR/Standard Const. | ----- | OK |
| Marcas/ Marks | ADR/Proj. | ----- | OK |
| Ensaios/ Tests | Macrográficos/ Macrográfico | ----- | ----- |
| | Mecânicos/ Mechanical (N/mm²) | Construction Standard | Test Report |
| | Hidráulicos/ Hydraulic (bar/l) | Construction Standard | Test Report |
| | Radiográficos/ Radiográfico | Construction Standard | Test Report |
| | Fadiga (nº ciclos/bar) / Fatigue (Number of cycles/bar) | N/A | N/A |

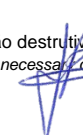
Observações
 Observations

O inspector IS supervisiona a produção e verifica todos os requisitos, rastreabilidade, qualificação do pessoal e ensaios de produção de acordo com o ADR/RID 2023, ISO 9001:2015 e CDG/TPER 2009.

Ok (OK/NOK)

The inspector IS oversees the manufacture and check all the requirements, traceability, personnel qualification and tests of manufacture according to the ADR/RID 2023, ISO 9001:2015 and CDG/TPER 2009. (as amended)

Os técnicos de ensaios não destrutivos verificados para este fabrico apresentam as qualificações necessárias. / The non-destructive testing technicians verified for this manufacture have the necessary qualifications.


 Técnico/ Technician,

Data/ Date

Joaquim Jorge Oliveira

07/08/2024

Certificate

Surveillance of the in-house inspection service for transportable pressure equipment

Certificate no.: 01 202 322/IS-110036-T

Applicant: **AMTROL-ALFA Metalomecanica S.A.**
Apartado 37 Brito
4801-909 Guimaraes-Portugal

Herewith we certify that the applicant operates an in-house inspection service according to 1.8.7.7 ADR/RID. The demands on the personnel, the equipment and the quality system are fulfilled.

The inspections carried out on the products meet the requirements of ADR/RID.

The transportable pressure equipment are marked with the following registered mark of the inspection body:

AAIHS

Inspection basis: 1.8.7.7 ADR/RID 2023
ODV in conjunction with Directive 2010/35/EU

Scope: **Supervision of manufacture, initial inspection and test, exceptional checks and periodic inspections of transportable pressure equipment; for further details see annex to the certificate**

Report-No.: 01 202 322/IS-110036-T from 05.05.2023

Operations Location: **AMTROL-ALFA Metalomecanica S.A.**
Apartado 37 Brito
4801-909 Guimaraes-Portugal

Validity: This authorisation is valid until Mai 22, 2026

Cologne, 06. June 2023



Feldhoff
Dipl.-Ing. Jörg Feldhoff

Notified body for transportable pressure equipment

TÜV Rheinland Industrie Service GmbH
Notified body for transportable pressure equipment (NB 0035)
Am Grauen Stein, 51105 Cologne, Germany

MS-0045102 N-050a Certificate-TPED rev.0

ARROWHEAD INDUSTRIAL SERVICES (UK)

CERTIFICATE of AUTHORISATION

Certificate No. CDG-1266-021-20240603

This is to certify that the Quality Management System of

Amtrol-Alfa Metalomecânica, S.A.

Rua Estrada Nacional 206 km 35. 4805-026, Guimarães, Portugal

has been found to conform with the requirements to operate in house inspection service in accordance with 1.8.7.7; 1.8.7.8.4; 1.8.7.8.6; 6.2.2.5.2.6; 6.2.2.5.3; 6.2.2.5.4; 6.2.2.5.5 and 6.2.3.6.1 of ADR2023. Is authorised to undertake design, manufacture and tests in accordance with standards listed applying Arrowhead registration identity (1266), Arrowhead stamp mark and GB conformity assessment mark, (rho) P, for The Carriage of Dangerous Goods (CDG) and Use of Transportable Pressure Equipment (TPE) (Amendment) (EU Exit) Regulations 2009 (as amended), in accordance with the approved marking drawing to pressure receptacles which comply with this regulation (Audit report V1651-2403-AUD, Inspection visit V1500-2311-INS and decision record dated 31st May 2024).

Approved Arrowhead Registration Identity and Mark: 1266



Registered Mark of applicant: **AAIHS**

This Certificate is valid for the products specified in page 2 of this certificate.
Authorisation for inspection is limited to designs and Type Approval Certificate listed on page 3 of this document.

Certificates of conformity shall be signed by the IS body representative authorised by Arrowhead. The applicant (Amtrol-Alfa) is obliged to inform Arrowhead in writing of any changes that affect the manufacturing operation and or the Quality Management System.

The applicant (Amtrol-Alfa) is obliged to ensure that transportable pressure receptacles shipped are marked in accordance with the approved marking drawing.

Initial Certification Date

03 June 2024

This Certificate is valid, subject to continued

surveillance in accordance with ADR until

Revised Certification Issue Date

NA

02 December 2024



Beatriz Campos 

Beatriz Campos

Management Representative

Arrowhead Industrial Services
Barn Hill, Stamford, Lincolnshire PE9 2AE, UK
Tel: +44 (0)1778 243500 e-mail: sales@arrowheadis.com

Accredited to EN ISO/IEC 17020:2012



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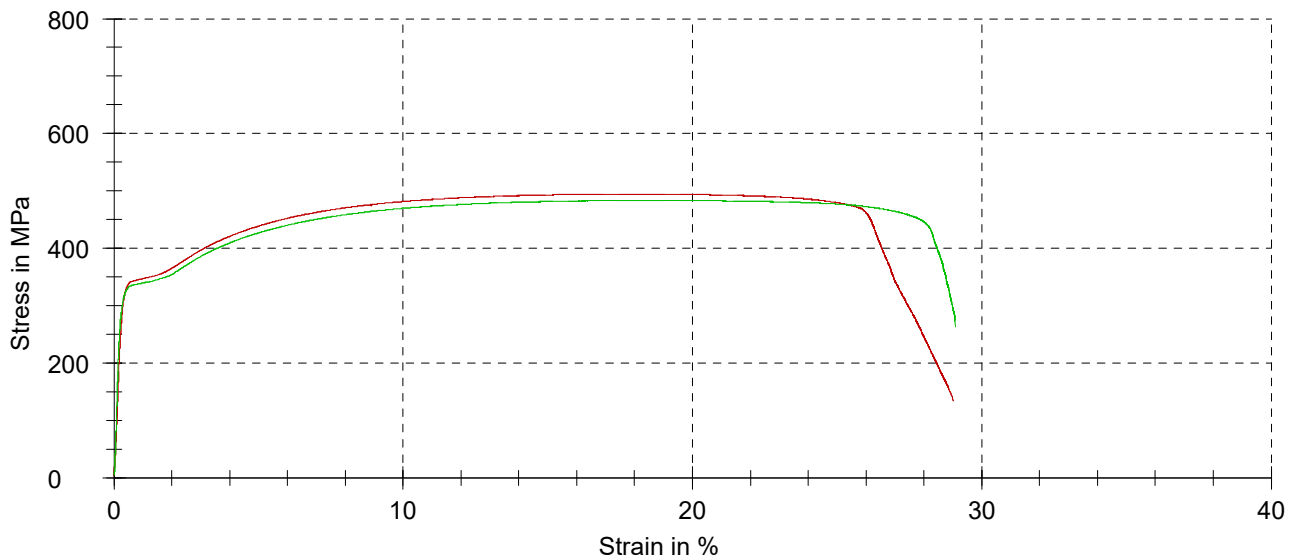
Ensaio Mecânico/Mechanical Test

Cliente/Customer : LPG EQUIPMENT
 Lote/Batch : 0745/24
 Modelo/Type : 063G026
 1º e Último N.º Série/Range Serial N.º : RR14586 - RR15213
 Norma Construção/Construction Standard : EN1442:2017 (ISO6892-1)
 Material/Material : P310NB
 Encomenda/Order N.º : 25334/1
 Operador/Operator : J.MARQUES
 Entidade Inspetora / Notified Body : In-House Inspection Service
 OBS :
 Date/Data : 02/08/2024

Resultados/Results:

| Legend | Specimen no. | Garr/Cyl N.º | Prov/Specm type | S ₀ mm ² | L ₀ mm | E GPa | R _{p0.2} MPa | R _m MPa | A _{80mm} % | Along/Elong grip % |
|--------|--------------|--------------|-----------------|-----------------------------------|----------------------|----------|--------------------------|-----------------------|------------------------|-----------------------|
| max | | | | | | | --- | 550 | --- | --- |
| min | | | | | | | 310 | 460 | 21,0 | 21,0 |
| | 1 | RR14784 | A | 46,35 | 80,03 | 103 | 340 | 494 | 28,9 | 34,2 |
| | 2 | RR15172 | A | 43,61 | 80,00 | 159 | 326 | 483 | 28,9 | 34,7 |

Series graph:



Referência do equipamento de ensaios mecânicos / Mechanical equipment Reference: MQ.1.010

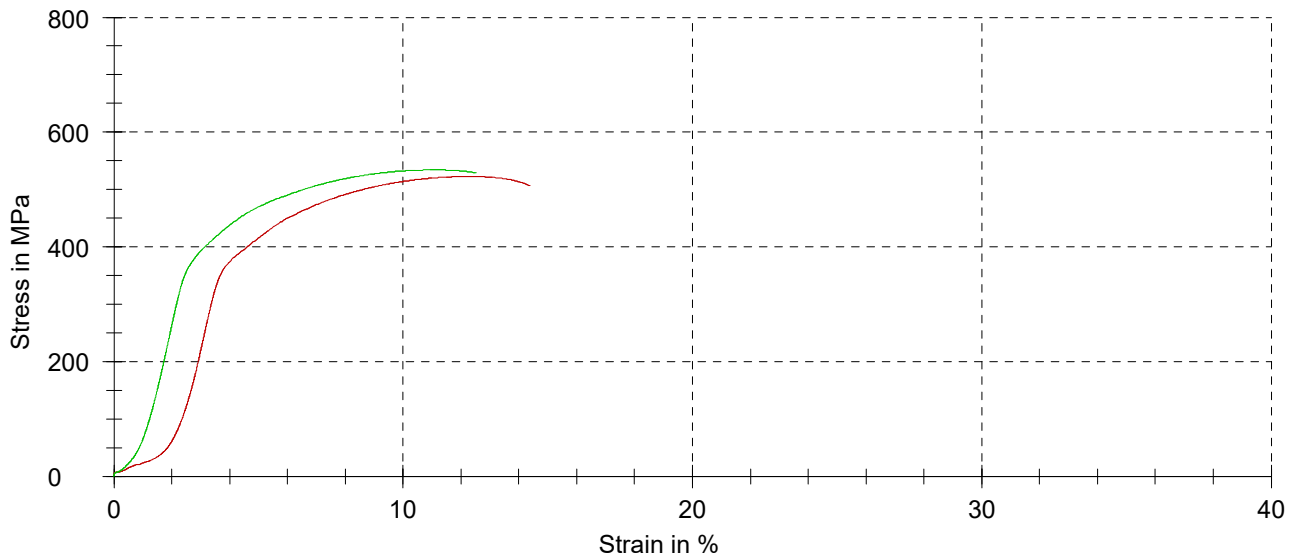
Ensaio Mecânico/Mechanical Test

Cliente/Customer : LPG EQUIPMENT
 Lote/Batch : 0745/24
 Modelo/Type : 063G026
 1º e Último N.º Série/Range Serial N.º : RR14586 - RR15213
 Norma Construção/Construction Standard : EN 1442:2017 (EN ISO 4136:2012)
 Material/Material : P310NB
 Encomenda/Order N.º : 25334/1
 Operador/Operator : J.MARQUES
 Entidade Inspetora / Notified Body : In-House Inspection Service
 OBS :
 Date/Data : 02/08/2024

Resultados/Results:

| Legend | Specimen no. | Garr/Cyl N° | Prov/Specm type | S ₀ mm ² | R _m MPa |
|--------|--------------|-------------|-----------------|-----------------------------------|-----------------------|
| max | | | | | 550 |
| min | | | | | 460 |
| | 1 | RR14784 | B | 60,98 | 523 |
| | 2 | RR15172 | B | 59,13 | 534 |

Series graph:



Referência do equipamento de ensaios mecânicos / Mechanical equipment Reference: MQ.1.010

Ensaio de dobragem e macroscopia/ Bend and macroscopic Tests
Relatório nº/ Report n°:
Cliente/ Customer:
LPG EQUIPMENT
Lote/ Batch:
0745/24
Modelo/ Type:
063G026
1º e Último número de série/
RR14586 - RR15213
Range Serial N°:
Norma Construção/ Construction
EN 1442:2017 (ISO 5173:2009)
Standard:
Material/ Material:
P310NB
Encomenda/ Order N°:
25334/1
Operador/ Tester:
J.MARQUES
Data/ Date:
02/08/2024
Entidade Inspectora/ Notified Body: In-House Inspection Service
OBS:

| N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results |
|------------------------------------|-----------------------------------|---------------------------------------|---------------------------|-----------------------------------|---------------------------------------|---------------------------|-----------------------------------|---------------------------------------|
| RR14784 | C | GOOD | RR15172 | C | GOOD | | | |
| | D | GOOD | | D | GOOD | | | |
| | | | | | | | | |
| | MACRO | GOOD | | MACRO | GOOD | | MACRO | |
| N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | MACRO | | | MACRO | | | MACRO | |
| N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | MACRO | | | MACRO | | | MACRO | |
| N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results | N. Garrafa/ Serial N.º | Tipo Provete/ Specimen Type | Resultados Ensaio/ Test Results |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | MACRO | | | MACRO | | | MACRO | |
| Punção (raio) Punction (radius) | | 3 | | | | | | |

Bom/Good - Nenhuma fratura detetada ou fraturas abaixo de 3mm (NCh078:1999 or NC02:2000-08)/Any crack detected or crack below 3 mm (NCh078:1999 or NC02:2000-08)

Mau/Bad - Fratura detetada ou fraturas acima de 3mm (NCh078:1999 or NC02:2000-08)/Crack detected or crack above 3 mm (NCh078:1999 or NC02:2000-08)

Cliente/Utilizador: LPG EQUIP. Lote n.º 0745/24 Modelo: 063G026 Norma Construção: EN 1442 : 2017
Client/User *Batch n.º* *Type* *Construction Standard*
 Equipamento de teste: ER01_B.2.016
Test Equipment

No caso de Ensaios pela Norma CFBP MA.CD/ST.01 ou exigência Cliente emitir o Anexo II / *In case of CFBP MA.CD/ST.01 Standard or Client requirement issue the Annex I*

| N.º Série Serial n.º | Peso (1) Tare Weight | | | Capacidade Volumetric Capacity | Expansão volumétrica Hydrostatic test at | | | Rotura (instab. plástica) Burst Test | | | | Instab. Elastica Elastic Instabil. (bar) | Símbolo Rotura (*) Burst Symbol (*) | Obs.: |
|---|--------------------------|--------|--------------------------------------|--------------------------------------|---|----------|-------|--|-----|------------------------|-------------|--|--|-------|
| | Vazia Empty | | Cheia Full | | psi | bar | | Pressão Pressure | | Dilatação Expansion | % | | | |
| | Total Total Expansion | | Permanente Permanent Expansion | | % | (bar) | (psi) | (l) | | | | | | |
| | (lb) | (kg) | (kg) | | | (kg) (l) | (ml) | (ml) | | | | | | |
| RR14614 | --- | 10,015 | 36,985 | 27,10 | --- | --- | --- | 92,30 | --- | 7,75 | 28,6 | --- | B | |
| RR14959 | --- | 10,105 | 37,085 | 27,11 | --- | --- | --- | 92,60 | --- | 7,25 | 26,7 | --- | B | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| Especificação Min/ Min Specification | | | | 26,50 | | | | 67,50 | | | 20,0 | | | |

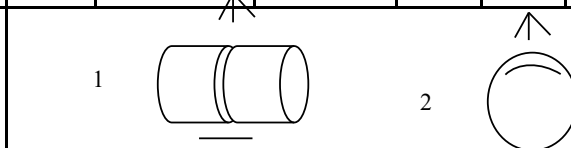
Nota (1): para transformar kg de água em litros multiplicar por: 1,0050

Note (1): to convert kg of water in litre multiply by:

Data: 01/08/2024 Operador: César Entidade Inspectora In-House Inspection Service Aprovado/Approved
Date *Lab Worker* *Inspector* *Rejeitado/Rejected*

(*) O ensaio de rotura não deve provocar nenhuma fragmentação da garrafa. A fractura não deve fazer aparecer defeito caracterizado no metal.
/No fragmentation of the cylinder. The main fracture must not show any brittleness, i.e. the edges of the fracture must not be radial but must be at an angle to a diametral plane and display a reduction of area throughout their thickness. The fracture must not reveal a clear defect in the metal.

B -Boa fractura comprimento longo/Good fracture Long lenght **b** - Boa fractura comprimento curto/Good fracture short lenght **M** - Má fractura/Bad fracture

| | | | | | | | | | | | | | | |
|---|---|-----------------------------------|---------------------------------------|---|-----------------------------------|----------------|------------------------------|----------|--|---|-------------------------------|---------------------------|----------------|---------------|
| Cliente: Cliente: | LPG EQUIP. | | | | Modelo: Type: | 063G026 | | | Lote nº Batch nº | 0745/24 | | | | |
| Documento Execução: Execution Documente: | EN1442:2017 | | | | Classificação: Classification: | Class B | | | Documento Aceitação: Acceptable Document: | EN1442:2017 | | | | |
| Material Material | Proc. Soldadura Weiding Proc. | Chanfro Loggle | Espes. Radio. Radio.Thick. (mm) | Espes. Interp. Interpret. Thickness (mm) | Densidade Density | Ecrans (mm) | Sensibilidade Sensibility | IQI | Ug (mm) | Equipamento Equipment | Intensidade Intensity (mA) | Tensão Voltage (kv) | Filme Film | DFF 1 (mm) |
| P310NB | S.A.S S.A.W | C/ REBAIXO JOGGLE JOINT | 8,3 | 5,0 | >2,3 | 0,1 | W15 | 13 FE EN | 0,028 | ERD1 | 10 | 144 | KODAK MX125 | 770 |
| Diâmetro Focal Focal Diameter (mm) | Tempo Exposição Exposition Time (s) | OBS | | | | | | | Téc. Tec. |  | | | | |
| (3X3) 4,24 | 90 | | | | | | | | | | | | | |
| Maquina Machine | Garrafa nº Cylinder nº | Soldadura Welding | Raio X X Ray | Interpret. | Decisão Decision | Tec. | OBS | | | | | Decisão Decision | | |
| N1 | RR14592 | Circunferencial / Circumferential | 0-1 | | - | 1 | | | | | | Bom / Good | - | |
| N2 | RR14594 | Circunferencial / Circumferential | 0-1 | | - | 1 | | | | | | Aceitável/Aceptable | / | |
| N3 | RR14595 | Circunferencial / Circumferential | 0-1 | | - | 1 | | | | | | Reparar/Repair | + | |
| D1 | RR14720 | Circunferencial / Circumferential | 0-1 | | - | 1 | | | | | | Aceit.A Rep/Acep. A Rep. | x | |
| D3 | RR14726 | Circunferencial / Circumferential | 0-1 | | - | 1 | | | | | | Rejeitar/Reject | o | |
| | | | | | | | | | | | | Amtrol-Alfa | | |
| | | | | | | | | | | | | Técnico | Vitor Carlos | |
| | | | | | | | | | | | | Technician | | |
| | | | | | | | | | | | | Data | 02/08/2024 | |
| | | | | | | | | | | | | Date | | |
| | | | | | | | | | | | | Validado por: | | |
| | | | | | | | | | | | | Approved by: | | |
| | | | | | | | | | | | | Data | | |
| | | | | | | | | | | | | Date | | |

Nota 1/Note 1 min. DFO = DFF-ØC Cilindro / min. DSO = DSF-Øc Vessel (ASME CODE) max. DOF = espessura + 4 /max. DOF = Thickness + 4mm

| Chave de Interpretação / Interpretation Key | | IIW | ISO 6520-1 / ISO 5817 | |
|---|---|---|-----------------------|-----|
| INCLUSÕES GASOSAS/GAS INCLUSIONS | Esféricas/ <i>Pore</i> | Aa | 2011 | |
| | Vermiculares/ <i>Worm-hole</i> | Ab | 2016 | |
| INCLUSÕES SÓLIDAS/SOLID INCLUSIONS | Quaisquer/ <i>Any</i> | B | 300 | |
| | Inclusões escória/ <i>slag inclusions</i> | Ba | 301 | |
| | Alinhadas/ <i>aligned</i> | Bb | 3011 | |
| | Alternadas/ <i>alternated</i> | Bc | 3012 | |
| | Fluxo/ <i>Flux</i> | G | 302 | |
| | Metais/ <i>Metallic</i> | H | 304 | |
| | Oxidos/ <i>Oxide</i> | J | 303 | |
| | Inclusões de tungsten/ <i>Tung. Inclusions</i> | T | 3041 | |
| | DESC. GEOMÉTRICAS/GEOMETRIC | Rebarbagem/ <i>Grinding</i> | Bd | 604 |
| | DESC. PLANARES/PLANNING DESCONT. | Bordos Queimados/ <i>Undercut</i> | F | 501 |
| Sulcos superficiais/ <i>Intermittent undercut</i> | | Fa | 5012 | |
| Sulcos na raíz/ <i>Shrinkage undercut</i> | | Fb | 5013 | |
| Excesso de penetração/ <i>Excess Penetration</i> | | Fd | 504 | |
| Excesso de metal/ <i>Excess weld metal</i> | | Fc | 502 | |
| Abatimento na raíz/ <i>Root concavity</i> | | Fe | 515 | |
| Abatimento na face/ <i>Face concavity</i> | | - | 511 | |
| Def. mudança electr./ <i>Elect. change def.</i> | | Be | 517 | |
| Cratera/ <i>Crater</i> | | K | 2024 | |
| Expulsão de metal/ <i>Melt through</i> | | L | 602 | |
| OUTROS/OTHER | | Fissura longitudinal/ <i>Longitudinal crack</i> | Ea | 101 |
| | | Fissura transversal/ <i>Transverse crack</i> | Eb | 102 |
| | | Fissura de cratera/ <i>Crater crack</i> | Ec | 104 |
| | Falta de fusão/ <i>Lack of fusion</i> | C | 401 | |
| | Falta penetração/ <i>Lack of penetration</i> | D | 402 | |
| | Desalinhamento linear entre placas/ <i>Linear</i> | Da | 5071 | |
| | Outras imperfeições/ <i>Miscellaneous</i> | Z | 600 | |



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A02
CERTIFICATE
A03 Page: 01/ 02
20240044102-00
Inspection certificate 3.1 EN 10204
A05 ORIGINATOR OF THE DOCUMENT
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A09 DISPATCH NOTE
DATE 0000481107
SHIP 21.06.2024
ANHOLT
A08.1 MANUFACTURER'S ORDER NR **2463861**
DATE 30.04.2024
AGENCY'S ORDER NR. GH42033016001
A07 CUSTOMER'S ORDER NUMBER
163736/163736/1.1
A10 PART NUMBER
MP.CBP310.22570

A06.1 CUSTOMER
AMTROL - ALFA METALOMECANICA S.A.
Estrada Nacional 206, Km38 - BRITO
4805-026 GUIMARAES
Portugal
A06.2 CONSIGNEE
AMTROL - ALFA METALOMECANICA S.A.
Estrada Nacional 206, Km38 - BRITO
4805-026 GUIMARAES
Portugal

PRODUCT: **hot rolled pickled coil** QUALITY: **P310NB** STANDARD: **Amtrol-Alfa CA003 Ed.10**
TERMS OF DELIVERY: **EN 10051 (2010)**

JITZ 1.84

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