

Peças, componentes e equipamentos

Indústria

Parts, components and equipments

Industry



Peças, componentes e equipamentos para a indústria

Parts, components and equipment for the industry

O setor operacional da NG estruturado para atender a indústria de modo geral possui uma equipe de engenharia com larga experiência em projetos.

Podemos projetar mecanicamente e fabricar vasos de pressão, trocadores de calor, colunas de processo, tanques de armazenamento e outros equipamentos nas mais variadas disponibilidades de materiais: aço carbono (SA-516-70/60, SA-285-C, SA-36), aços inoxidáveis (SA-240-304/304L/316/316L/317/321), aços duplex e super-duplex (2205, 2304, 2507) e aços superausteníticos (254 SMO, 904, 14529).

The operational area of NG structured to attend the industry in general has a team of experienced and well prepared engineers for all projects.

We are able to design and manufacture pressure vessels, heat exchangers, process columns, storage tanks and other equipment on the most variety of materials such as carbon steel (SA-516-70/60, SA-285-C, SA-36), stainless steel (SA-240-304/304L/316/316L/317/321), duplex and super-duplex steel (2205, 2304, 2507) and super austenitic steel (254 SMO, 904, 14529).

Legendas/Legends

Capacidade/Capacity - c
Altura/Height - a/h
Comprimento/Length - co/l
Largura/Width - la/w
Peso/Weight - p/we
Diâmetro/Diameter - Ø

Vasos de pressão e Colunas de Processo

Pressure Vessels and Process Columns

Projetados e fabricados conforme o Código ASME, para as mais variadas aplicações: filtros, flotores, hidrociclones, fermentadores, reatores, colunas desaeradoras, separadores, cristalizadores e garrafas de pulsação.

Quando requerido, podem ser certificados por entidades de terceira parte como ABS (American Bureau of Shipping) e DNV (Det Norske Veritas) ou estampados com Selo "U" (ASME "U" Stamp), atendendo também todos os requisitos da NR-13 (Norma Regulamentar Brasileira para vasos de pressão e caldeiras).

Designed and manufactured according to the ASME Code, for the most variety of applications such as filters, flotation cells, hydro cyclones, fermenters, reactors, deairing columns, separators, crystallizers and pulsing bottles.

When and if required, can be certified by third parties such as ABS (American Bureau of Shipping) and DNV (Det Norske Veritas) or yet stamped with ASME "U" Seal (ASME "U" Stamp), also attending all the requirements of NR-13 (Brazilian Regulatory Standard for Pressure Vessels and Boilers).



Desaerador/Deairator



Torre de Desaeração/
Deairing Column
Ø 3.800 mm
a/h - 22.200 mm
p/we - 50.000 kg

Vaso/Vessel



Garrafas de pulsação, sucção e descarga, projetadas para trabalhar com hidrogênio (H₂) com pressão de projeto variando de 26 a 150 kgf/cm² e temperaturas de 80 a 150°C.

Pulsing bottles, suction and discharge, designed to work with hydrogen (H₂) at project design pressures varying from 26 to 150 kgf/cm² and temperatures from 80 to 150°C.



Filtros/Filters
Ø - 3.800 x 3.200 mm LT/LT



Flotador/
Flotation Cell
a/h - 13.000 mm
Ø 4.800 mm

Fermentadores/
Main Fermenters
c - 423 m³
a/h - 11.500 mm
Ø - 7.300 mm



Torre Desaeradora/
Deairing Column ("U" Stamp)
co/l - 19.900 mm LT/LT
Ø 4.500 mm



Trocadores de calor

Heat Exchangers

Projetados conforme o Código ASME Seç.VIII, Div.I e TEMA (classes B, C e R).

As aplicações mais comuns dos trocadores de calor são como aquecedores, resfriadores, condensadores, evaporadores (convencionais ou “falling film”), entre outros. Podem também ser certificados em todas as modalidades citadas anteriormente.

Designed according to the ASME Code, Section VIII, Division I and TEMA (classes B, C and R).

The most common applications for heat exchangers are heaters, coolers, condensers, evaporators (conventional or falling film) among others. They can also be certified on and by all modes described before.

Trocadores de calor tipo casco/tubo, com espelhos cladeados de inox com titânio, tubos do feixe em titânio e cabeçotes em aço carbono emborrachado.

Shell and tube type heat exchangers, with cladded titanium alloy stainless steel tube sheets, titanium tubes and rubber sealed header plates.



Evaporator Falling Film/
Falling Film Evaporator

Tanques de Armazenamento

Storage Tanks

Projetados conforme as Normas API-650 ou API-620, são utilizados na grande maioria das indústrias de processo (química, petroquímica, alimentícia, papel e celulose, farmacêutica), podendo ser fabricados e testados na fábrica (produtos prontos) ou, dependendo das condições e viabilidade de transporte, podem ser fabricados em partes, para execução da montagem e testes no campo.

Designed according to the API-650 or API-620 Standards, are most commonly used in the process industry (chemical, petrochemical, food and drugs, pulp and paper) and can be manufactured and shop tested or, depending on transport conditions and feasibility, be manufactured in separate parts and then field assembled and tested.



c - 270 m³
 Ø - 5.720 mm
 a/h - 14.022 mm



c - 250 m³
 Ø - 6.100 mm
 a/h - 10.327 mm



Pulper/Pulper
 co/l - 10.400 mm
 la/w - 32.000 mm
 a/h - 4.000 mm



c - 2.000 m³
 a/h - 15.000 mm
 la/w - 13.500 mm



Torre/Tower

Equipamentos para a área de secagem, com destaque para duas torres de processo./
 Equipment for the drying section, emphasizing the two process columns.

Ø - 12.000 mm
 a/h - 35.000 mm

c - 4.950 m³
 a/h - 22.000 mm
 la/w - 17.000 mm





co/l - 15.500 mm
 la/w - 17.000 mm
 a/h - 5.050 mm
 p/we - 42.000 kg



Torres de Armazenagem/
 Storage Tower
 Ø - 14.000 mm
 a/h - 34.000 mm

c - 100 - 5.000 m³



co/l - 9.700 mm
 Ø - 6.000 mm



c - 70 m³
 Ø - 3.800 mm
 a/h - 7.000 mm



Equipamentos conforme projeto do cliente

Equipment Manufactured to Customer Drawings (OEM)

Equipamentos especiais (desenhos do cliente), cujos projetos já são validados pelos clientes que detém tecnologias e know how especiais, podem ser fabricados pela NG, respeitando acordos de confidencialidade, aplicando as mesmas técnicas e procedimentos de fabricação e garantindo os mesmos níveis de qualidade dos equipamentos por nós projetados.

Specific equipment (per customer drawings), for which design is already validated by customers who own special technologies and know-how can be manufactured by NG, duly respecting confidentiality agreements, applying the same techniques and manufacturing procedures which guarantees the same quality levels of the NG designed products.



Manifold/Manifold
la/w - 7.500 mm
co/l - 17.000 mm
a/h - 4.500 mm
p/we - 60.000 kg

Flotadores/Flotators
c - 110 m³/h
co/l - 7.800 mm
la/w - 2.100 mm
p/we - 7.000 kg



Caixa espiral com pré-distribuidor/
Spiral Case
7.300 x 8.300 mm
Ø - 2.500 mm
p/we - 15.000 kg



Plem/Plem
co/l - 9.000 mm
la/w - 6.944 mm
a/h - 2.420 mm
p/we - 17.551 kg



Forno de enxofre/
Brimstone Furnace
co/l - 19.800 mm
Ø - 5.200 mm
p/we - 76.000 kgf

Depurador/
Scrubber



CERTIFICATE OF AUTHORIZATION

The member company is authorized by the American Society of Mechanical Engineers (ASME) for the scope of activity shown herein in accordance with the applicable rules of the ASME Boiler and Pressure Vessel Code. The use of this authorization must and its activity granted by this Certificate of Authorization are subject to the provisions of the agreement set forth in the application. Any construction agreement with the contractor must have been fully signed in accordance with the provisions of the ASME Boiler and Pressure Vessel Code.

COMPANY:
 NG Metalúrgica S.A.
 R.º Lazaro Pedro de Oliveira
 n.º 300 - Capim Fino
 Piracicaba - SP 13410-300
 Brasil

SCOPE:
 Manufacture of pressure vessels of the above location and field sites controlled by the above location (This authorization does not cover transportation graphics)

AUTHORIZED: December 2, 2016 **REVISED:** January 8, 2019
EXPIRES: January 11, 2020

CERTIFICATE NUMBER: 48364

David S. Tietz
 Board Chair, Confirably Assessor

Luiz Antonio
 Managing Director, Confirably Assessor

DNV-GL
 CERTIFIED MANUFACTURER

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:
NG METALÚRGICA S.A.
PIRACICABA, Brazil

is approved for the:
Manufacture of welded pressure vessels, Class 1 & 2

The approval is granted on condition that:
DNV GL Code programme 2001-CP-001 - Manufacture of pressure vessel
DNV GL Code programme 2001-CP-002 - Manufacture of welded pressure Vessels
 are complied with in all respect

Manufacture is governed by this certificate when accepted to deliver according to DNV GL rules and rules.

Issued at Oslo on **2016-05-18**

The Certificate is valid until **2020-05-16**
 DNV GL logo address: **Westerholmen 66, NO-1202, Norway**
 NG/DAV/Approved

Approved Engineer: **Markus Nordmark**
 Head of Section

Approved Issued

Product Category:
 Pressure vessels and heat exchangers
 Product Approval Code:

ASME CODES:
 - Division of pressure equipment (DVI 01-01-001)
 - Division of pressure equipment (DVI 01-01-002)
 - Non-pressure vessels (DVI 01-01-003)

The approval is granted on condition that:
 - The design is performed in accordance with the applicable ASME Code and the applicable ASME Section
 - The design is performed in accordance with the applicable ASME Code and the applicable ASME Section
 - The design is performed in accordance with the applicable ASME Code and the applicable ASME Section

Certificate Subsequent Survey
 The certificate is valid for three years with no intermediate assessment unless otherwise requested by the holder.

ABS Quality Evaluations
 Certificado de Conformidade

NG Metalúrgica S.A.
 R.º Lazaro Pedro de Oliveira, 300
 Piracicaba - SP 13410-300
 Brasil

ISO 9001:2015

Design, development, production, installation and repair of steam turbines and non-steam production units, steam turbines and accessories of steam turbines, heat exchangers and pressure vessels for the petrochemical, pulp and paper, power generation, manufacturing and sales of welded components made by process for pressure and equipment for chemical, petrochemical, pharmaceutical and construction of machines, control and control panels, mechanical, welding parts and production of mechanical services for the metallurgical industry.

2760
 Date of Confirmation: 05 November 2016
 Date of Issue: 05 November 2016
 Date of Expiry: 05 November 2019
 Date of Renewal: 17 October 2016

ANAB IAF

ABS Quality Evaluations
 Certificate Of Conformance

ISO 9001:2015
 ANEX
 NG Metalúrgica S.A.
 At: Osório Fabricao

2760
 Date of Confirmation: 05 November 2016
 Date of Issue: 05 November 2016
 Date of Expiry: 05 November 2019
 Date of Renewal: 17 October 2016

ANAB IAF



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