



FUNDIMIG



“Shape
your
world”

Presentation

Fundimig is a Brazilian company that has been for more than 30 years in the national and international markets. The company is specialized in the production of gray and ductile cast iron parts.

We operate in the manufacturing of castings for the most markets among which are: automotive, agricultural, auto parts (aftermarket).

Currently we have manufacturing facilities, 2 foundries and 1 machine shop. All facilities are ISO 9001-2008 and TS 16949 certified by Rina Certifier.



Quality Policy

Fundimig maintains its efforts in the permanent search for satisfaction of its customers and in the continuous improvement of the effectiveness of its Quality Management, taking into account applicable legal requirements and providing products within the standards set by customers.



Fundimig Standard Product

Certifications



CERTIFICADO Nº
CERTIFICATE No.

25488/12/I

Certificamos que o Sistema de Gestão de Qualidade de / it is hereby certified that the Quality Management System of

FUNDIMIG

RUA SANTO ANTÔNIO, 142 - CLÁUDIO - MG - BRASIL

Nas seguintes unidades operacionais. / In the following operational units

RUA SANTO ANTÔNIO, 142 - CLÁUDIO - MG - BRASIL
BR 464 - KM 23, Nº 25 - KM 85,9 - CARMO DA MATA - MG - BRASIL

Encontra-se em conformidade com a norma / is in compliance with the standard

ISO 9001:2008

Para a(s) seguinte(s) atividade(s). / For the following field(s) of activities

**FUNDIÇÃO E USINAGEM DE PEÇAS EM FERRO CINZENTO E NODULAR PARA
INDÚSTRIAS EM GERAL.**

CASTING AND MACHINING OF PARTS ON GREY AND NODULAR IRON FOR INDUSTRY.

A validade deste certificado depende do resultado de uma auditoria anual/annual and on a complete review, every three years, of the management system.
The validity of this certificate is dependent on the result of an annual audit and on a complete review, every three years, of the management system.
For the use and validity of the certificate are subject to compliance with the IIRAF Agreement. Rules for the Certification of Quality Management Systems.

Primeira emissão
First Issue

04.05.2012

Emissão em vigor
Current Issue

18.11.2015

Validade
Expiry Date

15.09.2018

Natal Vecconcelos
Brazil Certification Manager

Natal Vecconcelos

RINA Services S.p.A.
Via Corsica 12 - 10128 Genova Italy

CISQ é a Federação Italiana das Organizações de Certificação de Sistemas de Gestão

CISQ is the Italian Federation of management system Certification Bodies

FEDERAZIONE
CISQ

CISQ is a member of
I-Net

www.isirnet-certification.com

I-Net, the association of the world's top class certification bodies, is the largest provider of management system Certifications in the world. I-Net is composed of more than 30 bodies and covers over 150 subsectors all over the globe.

Para informações adicionais e validade deste certificado, visite o site www.i-net.org.
For information concerning validity of the certificate, you can visit the site www.i-net.org.

O conteúdo do Manual de Qualidade deve ser verificado para detalhes referentes a(s) exclusões de requisitos da norma.
Reference is to be made to the Quality Manual for details regarding the exemptions from the requirements of the standard.

EA 17



CISQ AUTOMOTIVE
Consortio di Organismi di Certificazione Italiani del settore di gestione aziendale accreditato IATF



CERTIFICADO Nº
CERTIFICATE No.

TS/25488/12

Certificamos que o Sistema de Gestão de Qualidade de / it is hereby certified that the Quality Management System of

FUNDIMIG

RUA SANTO ANTÔNIO, 142 CLÁUDIO (MG) BRASIL

Nas seguintes unidades operacionais. / In the following operational units

RUA SANTO ANTÔNIO, 142 CLÁUDIO (MG) BRASIL

Encontra-se em conformidade com a norma e com os requisitos do esquema
is in compliance with the standard and the scheme requirements

ISO/TS 16949:2009

Para a(s) seguinte(s) atividade(s). / for the following field(s) of activities

FUNDIÇÃO E USINAGEM DE PEÇAS EM FERRO CINZENTO E NODULAR.

CASTING AND MACHINING OF PARTS BY IRON GREY AND NODULAR.

O conteúdo do Manual de Gestão de Qualidade deve ser verificado para maiores detalhes referentes a exclusões de requisitos da referida norma.
Reference is to be made to the Quality Manual for details regarding the exemptions from the requirements of the standard.
Furano accreditato di accordo con il "Measurement para a norma de certificação ISO/TS 16949 - Quarta Edição Outubro 2009".
Have been assessed in accordance with ISO/TS 16949 certification scheme rules - Fourth Edition October 2009.

Natal Vecconcelos
Brazil Certification Manager

Natal Vecconcelos

RINA Services S.p.A.
Via Corsica 12 - 10128 Genova Italy

A validade deste certificado depende do resultado de uma auditoria anual/annual and on a complete review, every three years, of the management system.

The validity of this certificate is dependent on an annual audit and on a complete review, every three years, of the management system.

Emissão
Issue date

18.11.2015

Validade
Expiry date

14.09.2018

Stefano

CISQ AUTOMOTIVE - Via Corsica 47 - 20128 MILANO

ISO 9001:2008
Certification No. 0204521

Exclusão / exclusion: 7.3.2.1 - 7.3.5.1
FUNDIMIG LTDA
CORPORATE CERTIFICATION /
CERTIFICAÇÃO CORPORATIVA



Per informazioni sulla validità del Certificato, visitate il sito www.itqf.it/italy/eng/.
For information concerning the validity of the certificate, you can visit the site www.itqf.it/italy/eng/.



FUNDIMIG

Cláudio • MG
Foundry

Technical Information

Molding:

We manufacture molded parts in green sand and cold no bake.

Green Synthetic Sand:

- Two high pressure machines FBO III-80 molds / h of 500 x 600 x 200mm
- Automated sand system for 50 tons/ hour

Cold Healing Sand:

- Mixer set 12.0 tons / hour
- Carousel and manual molding system

Core Molding:

Types:

- Manual
- Machining

Processes:

- Shell Molding
- ColdBox
- CO₂ - Alkaline Resin

Fusion:

We have the capacity to produce 1,500 ton/month (liquid metal), carried out by an furnace induction for two 4.5 ton/hour.

Finishing:

Shot blast machine and grinding. Surface protective fund: paint with Anti-corrosion painting line.

Quality Control Engineering

Chemical Tests:

Laboratory equipped for quantitative chemical analysis with optical emission spectrometer for determination of complete analysis of 16 chemical elements in one minute, Quimitron carbon determiner.

Software:

Using MAGMA5 software, a complete and effective simulation tool to improve casting quality and optimize process conditions.



Metallographic Tests:

These tests demand the verification of the structure of the materials, for which we count with the following equipment:

- Grinders
- Metallographic microscope
with increase from 50 to 1,500 times.



Mechanical Tests:

Determination of Brinellou Rockwell hardness in part for the issue of certificates of analysis test with penetrating liquids to check cracks.

Sand Laboratory:

- Moisture
- Volatile materials
- Active clay
- Methylene blue
- Clay content
- Compressive strength
- Compactness
- Permeability
- Granulometry

Dimensional Control:

Trace tabletop with adequate instrumentation.

Processes

Design and development of tooling, models, male boxes, devices and accessories in partnership with third parties supervised by the processes and development dept of the company pattern shops.

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FUNDIMIG

Carmo da Mata • MG
Foundry



Technical Information

Molding:

We manufacture molded parts in green sand and cold no bake.

Green Synthetic Sand:

- A SPO Mati Molding Machine 80 molds / hour 710 x 970 x 320 + 320
- One FBO X High Pressure Machine 200 molds / hour 500 x 600 x 200mm

Cold Healing Sand:

- Mixer set 9,0 tons / hour
- Carousel and manual molding system

Core Molding:

Types:

- Manual
- Machining

Processes:

- Shell Molding
- ColdBox
- CO₂ - Alkaline Resin

Fusion:

We have capacity production of 3,000 ton/month (liquid metal), carried out by an furnace induction for two 4.5 ton/hour.

Finishing:

Shot blast machine and grinding. Surface protective fund: paint with Anti-corrosion painting line.





Quality Control Engineering

Chemical tests:

Laboratory equipped for quantitative chemical analysis with optical emission spectrometer for determination of complete analysis of 16 chemical elements in one minute.

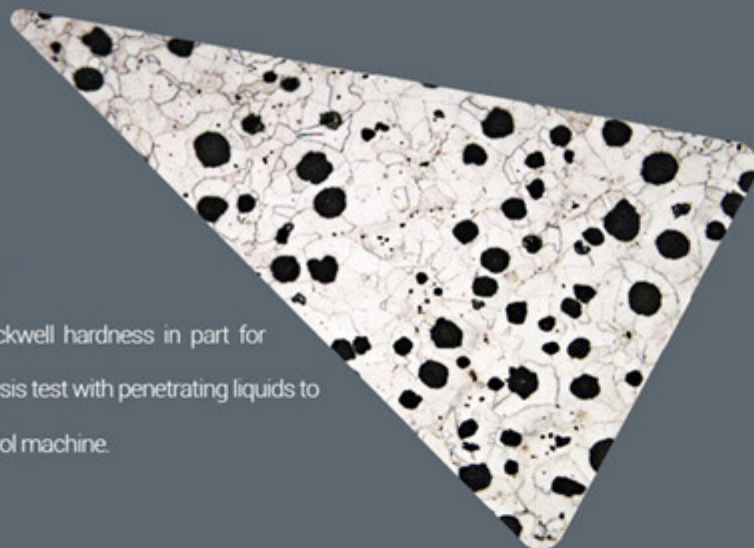
Software:

Using MAGMA5 software, a complete and effective simulation tool to improve casting quality and optimize process conditions.

Metallographic Tests:

These tests demand the verification of the structure of the materials, for which we count with the following equipment:

- Grinders
- Metallographic microscope
with increase from 50 to 1,500 times.



Mechanical Tests:

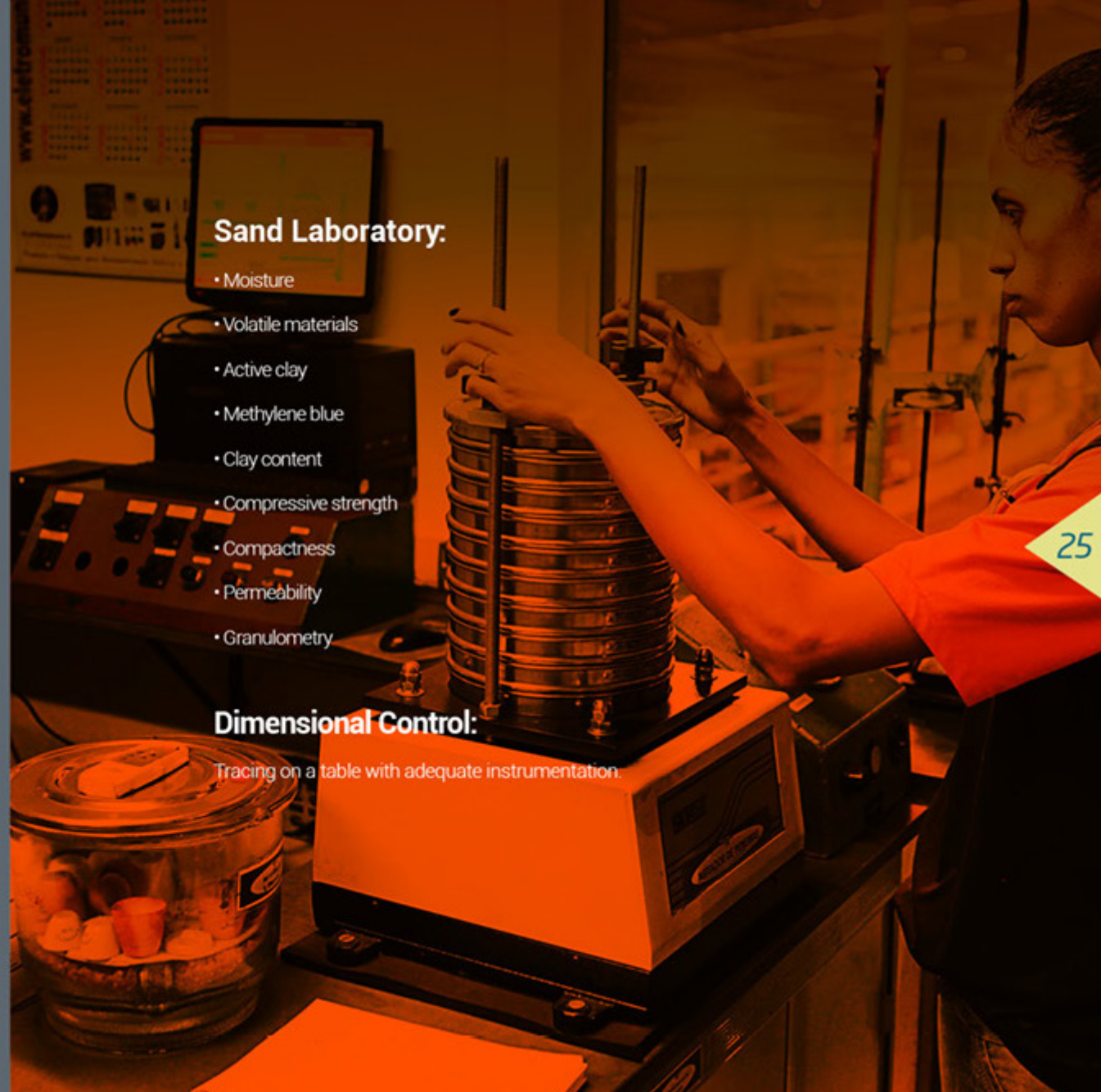
Determination of Brinellou Rockwell hardness in part for the issue of certificates of analysis test with penetrating liquids to check for cracks. Traction control machine.

Sand Laboratory:

- Moisture
- Volatile materials
- Active clay
- Methylene blue
- Clay content
- Compressive strength
- Compactness
- Permeability
- Granulometry

Dimensional Control:

Tracing on a table with adequate instrumentation.



Processes

Design and development of tooling, models, male boxes, devices and accessories in partnership with third parties supervised by the processes and development dept of the company pattern shops.

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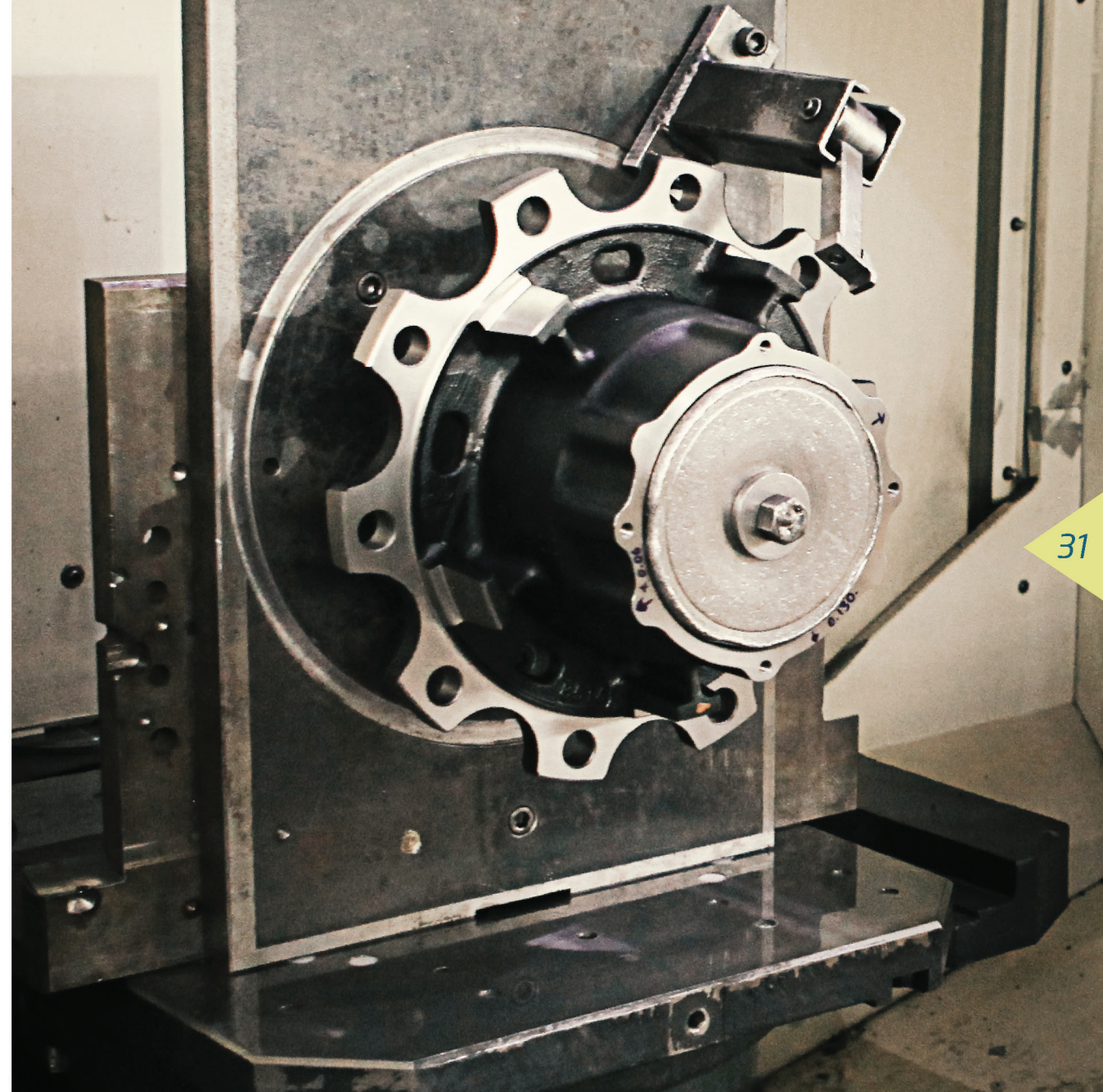
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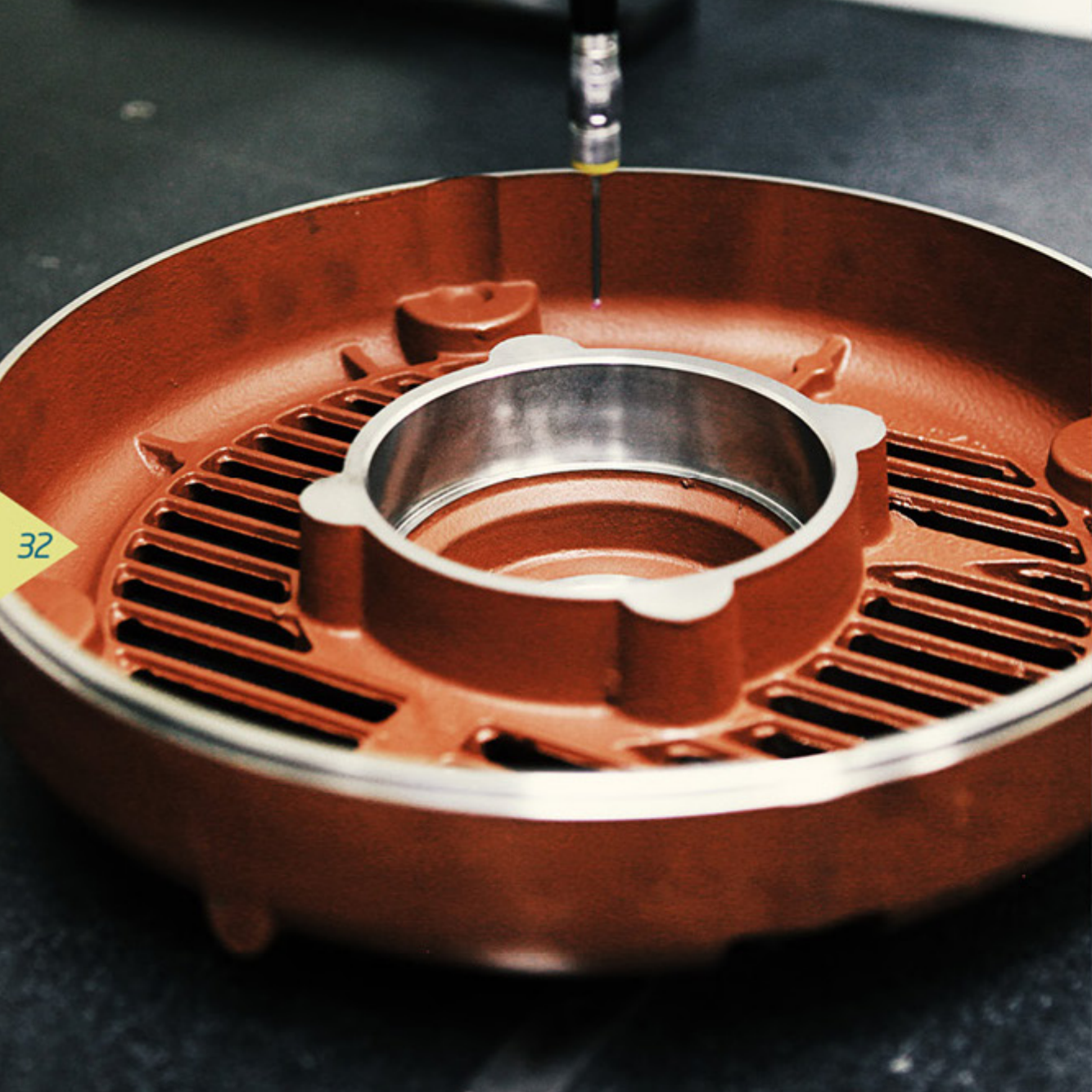
Cláudio • MG
Machining



Equipments

- 01 • Romi CNC vertical machining center Siemens D600.
- 03 • Vertical machining centers Romi CNC Siemens D760
- 01 • Horizontal lathe CNC Romi GL 280
- 04 • CNC lathes Index GU 800
- 01 • Wotan boring machine.
- 01 • Mechanical lathe
- 01 • Drilling machine Kone MK-38
- 01 • Romi CNC vertical machining center Siemens D1000 with 4 axes.
- 02 • Horizontal Heller H4000 machining centers
- 04 • Hwacheon VT 550 CNC vertical lathes
- 03 • Hwacheon VT 650 CNC vertical lathes





Control Instruments

- Three-dimensional table Dea Global Silver Performace (1200 in X, 3000 in Y, 1000 in Z)
- Three-dimensional table Dea Global Silver Performace (900 in X, 1200 in Y, 800 in Z)
- Easson profile projector
- Height plotter
- Ultrasonic
- Digital calipers
- Analog calipers
- Performance tables
- Micrometers
- Alarms
- Comparator clocks
- Calibrators
- Digital scatterometer
- Tool preset M. Conti Leader

Fundimig



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