











# MANUFACTURER OF INDUSTRIAL EURNACES

TOGETHER, WE MAKE THE DIFFERENCE

- ICBP® ■
- SPECIAL FURNACES
- VACUUM FURNACES
- MELTING FURNACES AND INDUCTION -
  - SERVICES |

### ECM PRESENTATION

We started heat-treating furnaces in 1928. Since that time, ECM Technologies' personnel have always been totally committed to extending their knowledge in the field of temperature control, high pressure, vacuum and to the behavior of materials.

# AN INTERNATIONAL COMPANY ON A HUMAN SCALE

The strength of any company is its people

Engineering, manufacturing for vacuum and pressure vessels along with, piping, heat insulating, experienced manufacturing, test facilities and a metallurgy laboratory are just some of ECM Technologies' in-house technical resources.

### INNOVATION, OUR DRIVING FORCE

Whenever ECM Technologies proposes a technical upgrade, the driving force behind this change are the benefits it brings to our customers.

Low Pressure Carburizing, high pressure gas quenching for high volume production... We are there to make our customers' heat treating improve...



### OUR VALUES

### Ol Innovation:

to give more value to heat treating.

### O2 Quality:

we owe it to each of our customers.

### OS Customers satisfaction:

this is the first indicator of our performance.

### ○ ← Solidarity:

this is the cement which unites our teams worldwide.

### Proximity:

to be close to our customers, wherever they are.

Since we aim at being the best at what we do, the working environment in our company is part of our driving force, together with our concern for the quality of our products and services. This makes ECM Technologies different.





### ICBP®

For more than 25 years, ECM has provided heat treating solutions to the largest companies with its low-pressure carburizing process: Infracarb® and its concept of modular installations of the ICBP Model.

Thanks to the high-temperature low pressure carbonitriding process and to the expansion of its ICBP® range - allowing to meet all types of needs - ECM Technologies strengthens its position as a world leader in this field.

- ICBP® Flex: modular installation for an incomparable flexibility
- ICBP® Jumbo: flexible heat treating facility with large work loads
- ICBP® Duo: furnace with 2 chambers for intermediate production needs
- ICBP® Nano: modular installation for in line high frequency production



### SPECIAL FURNACES

ECM Technologies has recognized skills regarding the engineering and manufacturing of thermal solutions for R&D laboratories as well as production plants dedicated to complex and highly normative industries.

ECM Technologies is able to insure the engineering and the total implementation of « Turnkey » lines necessitating heat processes in complex environments such as the nuclear industry.

Within this industry, key markets are the conditioning and management of nuclear wastes issued from the dismantlement of nuclear plants, but also to the furnaces implied into the different steps of the combustible's manufacturing process.





### VACUUM FURNACES

In 1964, ECM Technologies produced its first vacuum furnace.

Since then, our company has acquired an unique expertise which allows us to adapt to the specifications of many markets (aerospace, medical, ceramics, electronics, etc.) for applications of heat treating, brazing, sintering, as well as for thermal treatments post additive manufacturing.





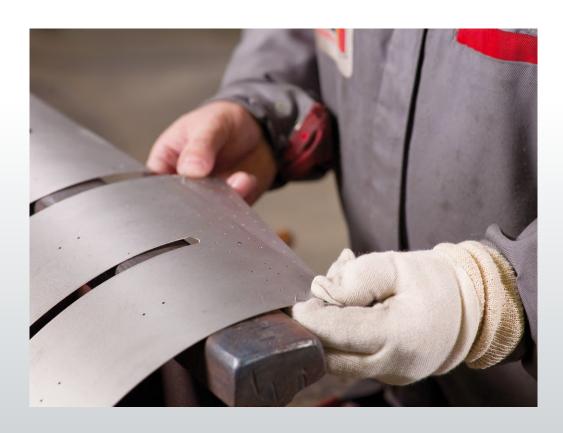
## MELTING FURNACES AND INDUCTION

Melting furnaces allow the elaboration and fusion of value added materials or the improvement of the materials' physical properties under vacuum or within controlled atmospheres.

In addition to this, our furnaces allow users to realize a fast annealing process thanks to heating dynamics. We are offering technologies such as cold crucible (cooled copper or stainless steel), hot crucible (graphite or others), and the use of susceptors or muffle radiating on the heated materials.

Our furnaces are designed to be convenient and flexible. In other words, they are conceived to facilitate the development of new materials, or to integrate various technical specifications issued from R&D programs.





## SERVICES

ECM Technologies is engaged in a program of constant improvement of the service brought to our customers.

"We are close to our customers' production, with the objective to bring them prompt service, 24/7."

- Training
- Preventive maintenance
- Sale of spare parts
- Retrofits of competitive equipment
- Remote maintenance
- Metallurgical testing

# ECM REFERENCES

#### AERONAUTIC

Air France

Airbus Industries

ASB (Aérospatial Batteries Bourges)

AVIC China

Chromalloy/Malichaud Atlantique

Dassault

Eurocopter

Factory 300, Factory 621, Factory 550 (China)

Groupe Safran

Luoyang LYC bearings (China)

Liebherr Aerospace

MECAFI

Nanchang Aircraft (China)

Shenyang Aircraft (China)

SKF Aeroengine (USA)

Turbomeca

#### AUTOMOTIVE - VEHICLES

Caterpillar

Daimler

Fiat

Fiat India Automobile Ltd (India)

Ford

General Motors (Germany, Turkey, France,

Romania, Mexico, Australia, Hungary...)

Hyundai

Nissan group

Opel

Peugeot Citroën PSA

Renault

Saab

Tata Ltd (India)

Toyota

Volkswagen (Germany, Argentina)

Jactco

### EQUIPMENT SUPPLIERS, MECHANICS

Asimco (China)

Avtec (India)

Bosch (Vietnam, Netherlands, Switzerland, Brazil, Czech republic, Italy, Germany)

Delphi (India, Spain, Romania)

Eaton (Poland, Brazil)

Getrag (Italia, USA, Germany...)

GKN (USA, Sweden, China)

Liaoning Xingfeng Enterprise (China)

Linamar Corporation (USA)

Luk (Germany)

Mahindra & Mahindra (India)

Poclain Hydraulics

Robert Bosch (Italy, Germany, Switzerland...)

SEW Usocome (China, France)

Shanghai Automobile Gear Works (China)

Valeo (France, Turkey, Brazil...)

#### HEAT TREATMENT WORKSHOP

Aubert et Duval

Bodycote (France, USA, Czech Republic, Poland, Mexico...)

Brocard (Switzerland)

DHT (Korea)

Electrothermique

HEF

MTV (USA)

Nitrex (USA)

PNK (Japan)

Reese Härterei (Germany)

SHU (Germany)

Studer (Switzerland)

Tempra Vuoto Piemonte (Italia)

Thermicentre

Thermilyon

TTN (Italy)

Waltercheild (Germany)

### IRON AND STEEL INDUSTRY, STEEL-WORKS

Ascometal

Pechiney

Sulzer

Ugine

Vallourec

#### ARSENALS

Arsenals in Taiwan, Egypt, India, Saudi Arabia, Singapore, Turkey, USA, Venezuela Giat Industries

#### MATERIALS

ABB

Alsthom

Carbone Industries, SGL Carbon

Carbone Lorraine

CNRS

Cetim

Delachaux

Egide

Freiberger Compound Materials

Friedriechsfeld

General Electric Medical system

Höganäs

IRT

Istec

MetaFensch

Philips

Sagem

Sandvic

Schneider

Siemens-KWU

Thomson/Thalès

UTBM

#### NUCLEAR

CEA

Areva

Andra

Atomenergomash

# ECM IMPLANTATIONS



#### ECM KAZAKHSTAN

LLP. 14/1-49D, Kunaev St. Esil District, 010000 Astana, KAZAKHSTAN Tel: +7 7172 990 440 Fax: +7 7172 990 449 www.ecm-furnaces.com

#### ECM GMBH

Carl-Legien-Straße 15, Gebäude A, 63073 Offenbach am Main - GERMANY Tel: +49 (0) 69 667788 065 info@ecmtech-gmbh.de www.ecm-furnaces.com

#### SEMCO TECHNOLOGIES

625 rue de la Croix Verte / Parc Euromédecine, 34 000 Montpellier, FRANCE Tel: +33 (0)4 67 61 09 90 Fax: +33 (0)4 67 52 69 63 www.semco-tech.com

#### ECM GreenLech

109 Rue Hilaire de Chardonnet, Technisud, 38100 Grenoble - FRANCE

Tél.: +33 (0)4 76 49 65 60 Fax: +33 (0)4 38 49 04 03 Email: info-pv@ecmtech.fr www.ecm-greentech.com

#### ECM USA INC.

9505-72nd Avenue, Suite 400 Pleasant Prairie, WI 53158, USA

Tel.: +1 262 605 4810 Fax: +1 262 605 4814 E-mail: info@ecm-usa.com

www.ecm-usa.com

#### ECM CHINA CO. LTD

HeQiao Building, RM B606, Building 30 8A Guanghua Rd. Chaoyang District,

Beijing 100026 CHINA

Tel.: + 86 10 85802642/3 ext.101

Fax: +86 10 85802645

E-mail: contact.b@ecm-china.net

www.ecm-china.net