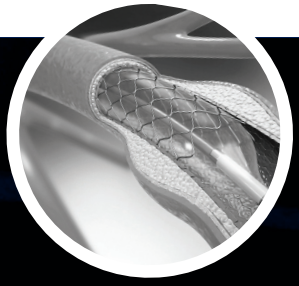
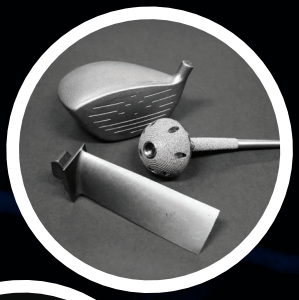
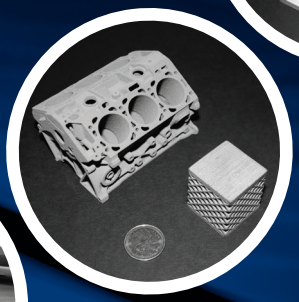
Quebec Metallurgy Center

CMQ

Centre de métallurgie du Québec







Research and Development

Applied metallurgy

Characterization laboratory

Non-destructive testing (NDT) training and examination center

Specialized training

CÉGEP TROIS-RIVIÈRES

Serving the industry since 1985

ABOUT THE CMQ

Mission

Support the metallurgical industry competitiveness through research and technological development in a collaborative approach with private and public partners while promoting technical college education and knowledge transfer in companies.

CMQ in action

- Team of **55 people**
- Over **45 000 square feet**
- Nearly **$25 M** in industrial research infrastructures
- More than **200 manufacturers** served every year
- Several specialized **training**

– 1985

Foundation of the Quebec Metallurgy Center

– 1988

Creation of the first francophone center for non-destructive testing practical and theoretical examinations in Canada

– 2008

Acquisition of a building in the Hautes-Forges industrial park, Trois-Rivières

Creation of the Advanced Alloys Technology Center

– 2011

Certification of the first mechanical tests according to ISO 17025 : 2005

– 2012

NSERC Industrial Research Chair for Colleges in aluminum processing awarded

– 2013

Creation of a dedicated Additive Manufacturing section

Recognition as a Technology Access Center, Member of Tech Access Canada (TAC)

– 2015

Integration of training and exam services in non-destructive testing (NDT)

– 2019

Creation of a Quebec excellence center in powder metallurgy

NSERC Industrial Research Chair for Colleges on the development of metal powders awarded

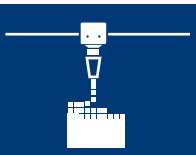
APPLIED RESEARCH AND DEVELOPMENT

INNOVATE
DEVELOP
SHARE

Al

Aluminium processing

Advanced alloys



Additive manufacturing

Powder metallurgy

Corrosion and Metal protection

Welding

Modelling

Non-destructive testing

Metal forming

INDUSTRIAL RESEARCH CHAIRS FOR COLLEGES

NSERC CRSNG

2012

Aluminium processing

Development and optimization of aluminum alloys and processing technologies including foundry, forming, welding, additive manufacturing and surface treatments.

Main partners

Rio Tinto Aluminium, **Fonderie Paber,** Fonderie Powercast, **Canimex,** CIF Métal, **Technologie du magnésium et de l'aluminium (TMA),** Withfield Welding and, recently, **Centre québécois de recherche et de développement de l'aluminium (CQRDA).**

Private projects collaborations

Fonderie Lemoltech, **Imacro,** Dienamex, **Proco,** Sotrem Maltech, **Fiat Chrysler Automotive Canada,** MacDonald, **Dewilther and Associates,** Nemak, **Bombardier Recreational Products** and many others.

Research Collaborations

Université Laval, **Université du Québec à Chicoutimi (UQAC)** and REGAL.

2019

Powder metallurgy

Development of metal powders for advanced manufacturing processes and applications.

Main partners

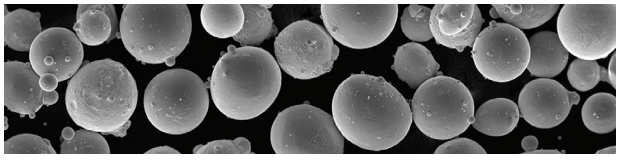
Tekna, **Hydro-Québec,** P4Bus Systems, **General Dynamics,** 5N Plus, **Precision ADM,** RIDD, **Polycontrols,** Expanse Microtechnologies, **SphèreCo.**

Private projects collaborations

Industrials partners of the Research Chair and new partners are welcome to establish new R&D projects.

Research Collaborations

Université Laval, **École Polytechnique de Montréal** and Centre de recherche industrielle du Québec (CRIQ).



Environment ISO 9001 and 17025

UNIQUE EXPERTISE

Non-destructive testing

NDT Recognized Training Organization (RTO)

NDT Authorized Exam Center (AEC)

Canadian bilingual NDT Centre

- Inspector certification in non-destructive testing (NDT) for written and practical exams
- Canadian certification – CAN/CGSB 48.9712-2014

  Eddy Current Testing (ET)
  Radiographic Testing (RT)
  Penetrant Testing (PT)
  Magnetic Testing (MT)
  Ultrasonic Testing (UT)
  XRF Analyzer Operator
  Certified Exposure Device Operators (CEDO)
  Level 1, 2 or 3
- Others training

  Eddy Current Array (ECA)
  Phased Array Ultrasonic Testing (PAUT)

Applied metallurgy

- Fractography
- Corrosion
- Consulting

Characterization laboratory

R & D Support

- Modelling
- Chemical and electrochemical testing
- Metallographic testing
- Mechanical and tribology characterization
- Non-destructive testing

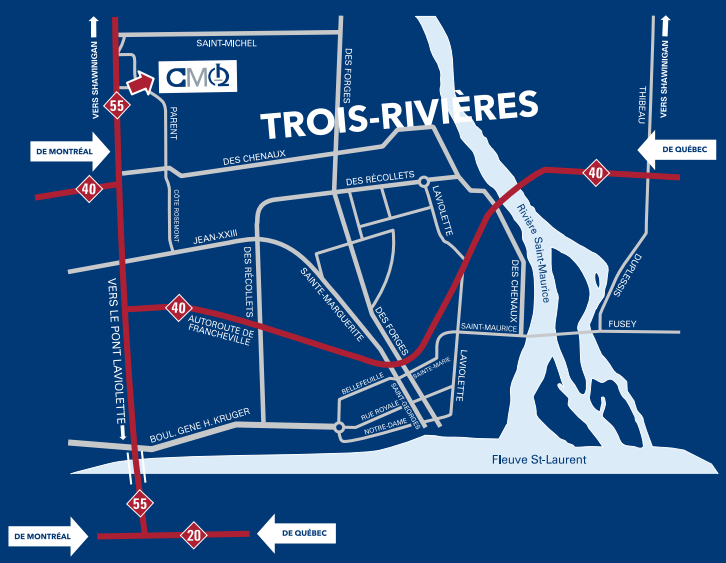
Specialized Equipment

- Gaz and plasma **atomizers**
- **Additive manufacturing** by directed energy deposition (DED), binder jetting and ultrasonic welding
- **Plasma arc melting furnace**
- Belt **sintering** furnace
- **Induction** melting furnaces and induction skull melting furnace (ISM)
- Vacuum **heat treating** furnace and hot **isostatic press** (HIP)
- Scanning **electron microscope** (SEM)
- **Rolling and forging** presses
- Plasma and HVOF **thermal spraying**
- No-bake sand casting, investment casting and permanent **mold casting processes**
- Low pressure and high pressure die **casting** presses
- **Welding :** GTAW, GMAW, PAW, SAW and GMAW-CMT
- **Modelling softwares :** foundry and metal forming

POUR UNE SOLUTION INNOVANTE

FOR AN INNOVATIVE SOLUTION

Crédit photo : Gilles Martel | Octobre 2019



Nous joindre
Contact us

Siège social
Head office

3095, rue Westinghouse
Parc industriel des Hautes-Forges
Trois-Rivières (Québec) G9A 5E1
Canada

819 376-8707

cmqtr.qc.ca

Bureau de Montréal
Montreal Office

1201, boul. Crémazie Est
Bureau 1210
Montréal (Québec) H2M 06A
Canada

514 668-0217

Partenaires publics • Public support

Québec
Fonds de recherche sur la nature et les technologies Québec
CRSNG NSERC
Développement économique Canada
INNOVATION.CA
CANADA FOUNDATION FOR INNOVATION | FONDATION CANADIENNE POUR L'INNOVATION

Principaux organismes liés à la recherche • Main related Research Organizations

SYNCMRONEX Le réseau des CCTT
CRIQ PARTENAIRE D'INNOVATION
REGAL REGROUPEMENT ALUMINIUM CENTRE DE RECHERCHE SUR L'ALUMINIUM ALUMINIUM RESEARCH CENTRE
PRIMA PÔLE RECHERCHE INNOVATION MATÉRIAUX AVANCÉS
QUÉBECINNOVE
Tech-Accès Canada
CQRDA Centre québécois de recherche et de développement de l'aluminium DES IDÉES EN TRANSFORMATION
CRIAQ
CRITM
alu Québec Grappe de l'aluminium