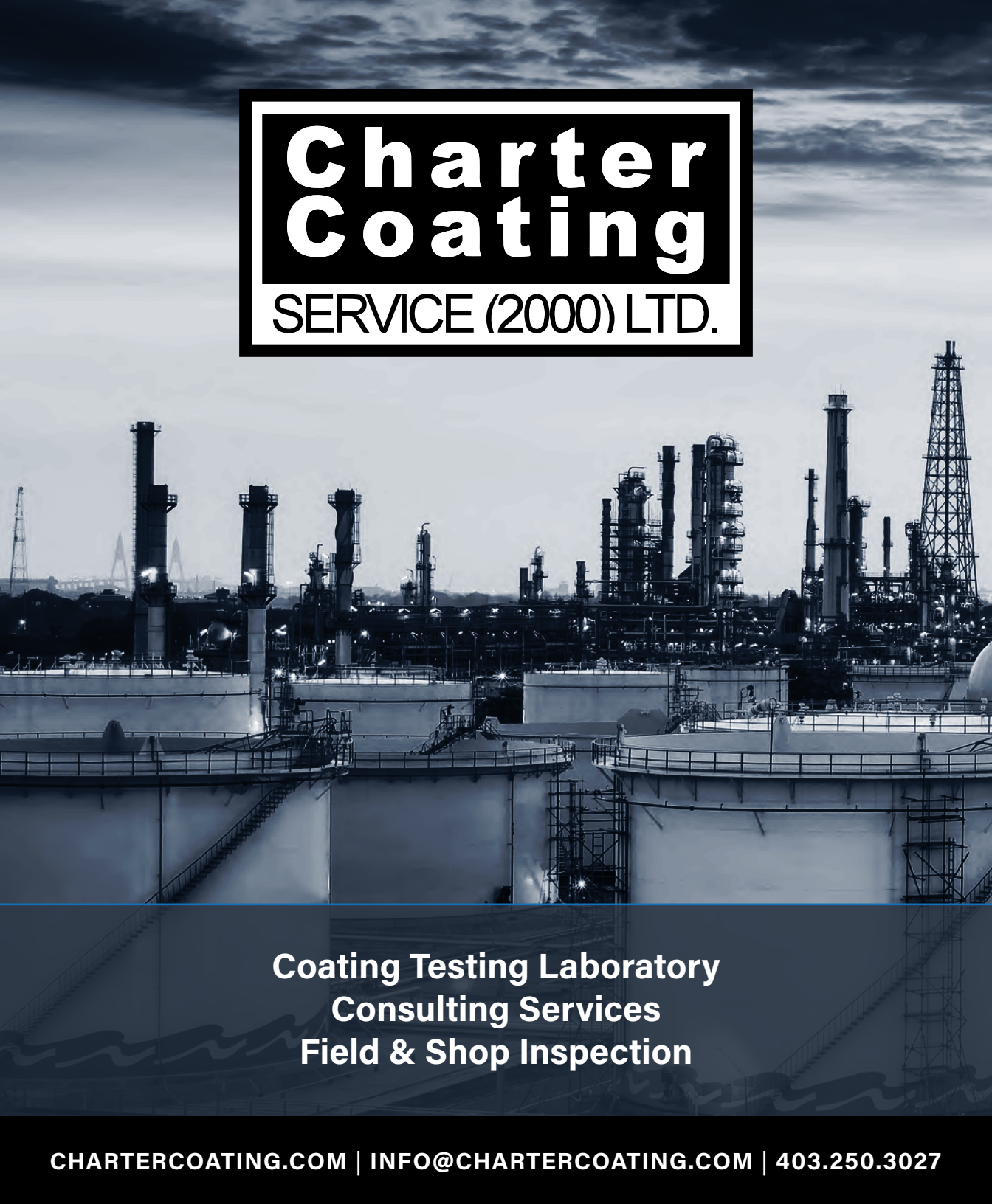

Charter Coating

SERVICE (2000) LTD.

Coating Testing Laboratory
Consulting Services
Field & Shop Inspection

CHARTERCOATING.COM | INFO@CHARTERCOATING.COM | 403.250.3027

ABOUT US

Charter Coating Service (2000) Ltd., founded in 1981, provides an independent source of technical and practical expertise for coatings, paints, and mastics.

Charter's mission is to provide the personnel and facilities able to conduct laboratory tests, inspections, and consulting for a broad range of coatings and paints with an emphasis on materials that mitigate corrosion.

QUALITY

Charter Coating Service (2000) Ltd. has been independently verified and has proudly achieved ISO/IEC 17025 certification, which specifies the requirements for the competence to carry out laboratory tests and calibrations.

Accreditation is a voluntary, third party-reviewed process, which thoroughly evaluates the laboratory's quality management system to ensure continued technical competence.

INDUSTRY SECTORS

Our main client base is from the Oil & Gas sector and we are engaged in projects that include:

- Production & Distribution
- Tanks
- Pipelines & Terminals
- Marine / Offshore

We have experience in providing an independent source of technical and practical expertise in other sectors including:

- Architectural Engineering
- Water Treatment
- Marine & Offshore
- Defense
- Automotive

OUR STAFF

The scientists and technicians of Charter Coating Service (2000) Ltd. are extensively trained and able to conduct laboratory tests, inspections, and consulting for a broad range of coatings and paints.

Our staff is NACE certified and has many years of field and laboratory experience in coating failure prevention and analysis

SERVICES

Charter has a three dimensional approach to problem solving: Laboratory Testing including Failure Analysis, Inspection and Consulting.

Laboratory Testing of new coating systems can forecast the performance of coating materials and systems. **Failure Analysis** is conducted primarily in the laboratory to determine the most likely direct causes of the failure.

Field Inspection by expert personnel converts the depth of laboratory investigations into practical and cost-effective on-site decisions.

UV LIGHT EXPOSURE

SALT FOG EXPOSURE

PRESSURIZED ATLAS CELLS

Consulting services include the preparation of practical, thorough, to-the-point coating specifications.

Charter Coating performs tests to help you gauge the performance of your products in the field as well as identify failure mechanisms.

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SCOPE OF ACCREDITATION TO ISO/ IEC 17025:2017

Mechanical

Flexibility
CSA Z245.20 Section 12.11
ISO 21809-1 Annex I
ISO 21809-2 Annex A.13
NACE TM0404 Section 12
NACE TM0304 Section 12
NACE SP0394 Appendix H, Procedure A
API 5L7 Appendix 13
API 5L9 Appendix I.1

Mandrel Bend
ASTM D522/ D522M
ISO 6860

Impact Resistance
CSA Z245.20 Section 12.12
ASTM G14
ASTM D2794
ISO 21809-1 Annex E
ISO 21809-2 Annex A14
ISO 21809-3 Annex D
NACE SP0394 Appendix I
API 5L7 Appendix 14
API 5L9 Appendix J

Gel Time of Epoxy Powder
CSA Z245.20 Section 12.2

Soak Adhesion
CSA Z245.20 Section 12.14
IS0 21809-1 Annex M
ISO 21809-2 Annex A.16
ISO 21809-3 Annex I
NACE SP0394 Appendix J
API 5L7 Appendix 16
API 5L9 Appendix J

Peel Adhesion (Hanging Mass)
CSA Z245.21 Section 12.5
ISO 21809-1 Annex C

Peel Adhesion (Constant Rate)
CSA Z245.21 Section 12.4
ISO 21809-3 Annex H
ISO 21809-1 Annex C
ISO 813 (Modified)

Interface Contamination
CSA Z245.20 Section 12.9
ISO 21809-2 Annex A.11
NACE SP0394 Appendix K
API 5L9 Appendix K

Gouge Resistance
CSA Z245.20 Section 12.15
CSA Z245.21 Section 12.7
NACE TM0215

Lap Shear Strength
ASTM D1002
ISO 21809-3 Annex J

Hardness
ASTM D2240
ASTM D3363

Taber Abrasion
ASTM D4060
ISO 9352

Adhesion by Knife
ASTM D6677
ASTM D3359
ISO 21809-2 Annex A.4
ISO 21809-3 Annex Q
API 5L2 Appendix D

Pull-off Adhesion
ASTM D4541 Method D
ASTM D7234
ISO 4624
API 5L7 Appendix 9

Indentation/Penetration Resistance
ASTM G17
ISO 21809-1 Annex F
ISO 21809-3 Annex E

Water Vapour Transmission
ASTM D1653
ASTM E96 / ASTM E96M

Water Absorption
ASTM D570
ISO 62

Tensile Strength, Elongation
ASTM D638
AST M D2370
ISO 527-3

Environmental Simulation

Cathodic Disbondment
CSA Z245.20 Section 12.8
CSA Z245.21 Section 12.3
ASTM G8
ASTM G42
ASTM G95
ASTM D 6676 / D6676M
ISO 21809-1 Annex H
ISO 21809-2 Anx. A.9, A.10, A.15
ISO 21809-3 Annex G
NACE SP0394 Appendix F
API 5L7 Appendix 11
API 5L9 Appendix G
ISO 15711
NACE TM0115
NACE TM0404 Section 11
NACE TM0304 Section 11

Water Resistance (20 to 95) °C
ASTM D870

Chemical Resistance
API 5L7 Appendix 12
API 5L9 Appendix H
NACE TM0174 Procedure B
ASTM D543 Procedure I

Chemical Resistance (20 to 200) °C
ASTM C6943
NACE TM0174 Procedure A

Chemical Resistance (20 to 200) °C, <2000 psi
NACE TM174 Procedure A

Electrochemical Impedance Spectroscopy
ISO 16773-2

Autoclave (20 to 350) °C, < 8,500 psi
NACE TM0185
API 5L7 Appendix 10

Salt Spray
ASTM B117
ASTM G85
ISO 9227
ISO 11997-1

UV Exposure
ASTM D4587
ASTM G154
ISO 16474-3
ASTM G151

Salt Spray and UV
ASTM D5894
ISO 11997-2

Xenon Exposure
ASTM G155

Evaluation of Blistering
ASTM D714
ISO 4628-2

Evaluation of Chalking
ASTM D4214
ISO 4628-6

Evaluation of Checking
ASTM D660

Evaluation of Cracking
ASTM D661
ISO 4628-4

Evaluation of Rusting
ASTM D610
ISO 4628-3

Evaluation of Flaking
ASTM D772
ISO 4628-5

Heat Ageing
CSA Z245.21 Section 12.6
ISO 21809-3 Annexes M &N

Glass Transition Temperature (Tg) and/or Heat Fusion (ΔH)
ASTM D3418
ASTM E1356
CSA Z245.20 Section 12.7
ISO 21809-1 Annex D
ISO 21809-2 Annex 8
ISO 21508-3 Annex P
ISO 11357-2
ISO 11357-3
NACE SP0394 Appendix D
API 5L7 Appendix 5
API 5L9 Appendix C

Infrared Spectra Analysis
ASTM E1252 Section 7.9
TWI-504-18

Porosity of Coating
CSA Z245.20 Section 12.10
ISO 21809-2 Annex A.12
API 5L7 Appendix 15
API 5L9 Appendix K

Non-Destructive

Film Thickness
ASTM D7091
ISO 21809-1 Annex A
ISO 21809-3 Annex B

Specular Gloss
ASTM D523

Electrical

Holiday
NACE SP 0188
ASTM G62
ASTM D5162
ISO 21809-1 Annex B
ISO 21809-3 Annex C

ANAB

TEST METHODS

Charter Coating has exceptional knowledge of published industry standard protocols and specifications. Our laboratory follows ISO, CSA, NACE, ASTM, AWWA, DIN, API and CGSB, as well as, TC Energy, Enbridge, Chevron, ARAMCO and PDO Coating Specifications to evaluate and predict coating performance and avoid costly field failures.

Our ISO 17025 certified test methods include, but are not limited to:

- Autoclave Testing (sweet/sour)
- Standard and Pressurized Atlas Cell
- Cathodic Disbondment
- Salt Spray Exposure
- UV/Condensation Exposure
- Xenon Arc Light Exposure
- Pull-off and Peel Adhesion
- Flexibility
- Impact Resistance
- Gouge Resistance
- Taber Abrasion
- Water Absorption and Resistance
- Water Vapor Permeation
- Chemical Resistance
- Electrochemical Impedance Spectroscopy (EIS)
- Differential Scanning Calorimetry (DSC)
- Fourier Transform Infrared (FTIR)

CLIENTS

Our commitment to high quality and technical competence has resulted in sustainable relationships with many international clients including resource exploration companies, coating developers, service companies and coating applicators.

CONTACT US

#6, 4604-13 Street N.E.
Calgary, Alberta, Canada T2E 6P1

info@chartercoating.com

403.250.3027

403.250.1254

Amal Al-Borno, Ph.D. – President & CEO

CHARTERCOATING.COM