



SAIRAC

The South African Institute of Refrigeration and Air Conditioning

www.sairac.co.za

Dear SAIRAC members

You are invited to our Cape Town Centre Technical Talk on Tuesday, 13th May 2025.

TOPIC: Corrosion in Heat Exchangers: Failure Analysis and Testing Methods
presented by Marcelle de Waal



Marcelle is an experienced and qualified engineer, with over six years of applied consulting experience in materials testing, root cause failure analysis and consulting engineering. Marcelle is a Senior Consulting Engineer at One Eighty Materials Engineering Solutions (Pty) Ltd, where he conducts forensic failure investigations and delivers objective independent technical assessments. Marcelle's expertise supports both civil and commercial sectors, with particular emphasis on materials degradation, corrosion mechanisms and engineering failures across a variety of industrial systems.

SYNOPSIS of what the talk is about:

- Overview of heat exchanger designs and corresponding materials of construction
- The influence of water quality on corrosion behavior
- Conditions required for corrosion initiation and propagation
- Methodologies used in root cause failure investigations of heat exchangers
- Key indicators for identifying potential corrosion-related failure risks
- Strategies for preventing corrosion and extending service life
- Selected case studies illustrating real-world failures and engineering responses
- Services and capabilities of One Eighty Materials Engineering Solutions (Pty) Ltd.

Venue: Parow Golf Club – Frans Conradie Road - Parow

Date & Time: 13 May 2025 @ 18h00 for 18h30

Snacks will be provided, and Cash Bar facility will be available

Please send **RSVP** to:

capetownsecretary@sairac.co.za / 062 085 4054 on/by **12 May 2025** before **12h00**

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