

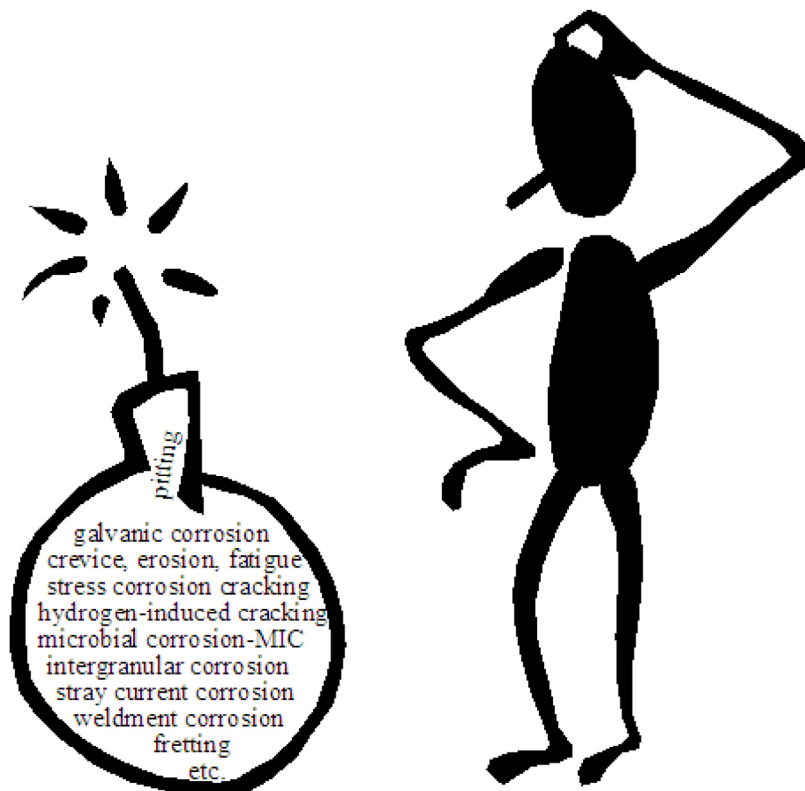


• Consulting • Training • Expert Witness • Failure Analysis • Design Review • Corrosion Test • Inspection • Coatings • Materials • CP • >>>

Corrosion Advisory Services

Typical Corrosion Advisory Services ♦ Service Quality Guarantee

WebCorr has **NACE certified Corrosion Specialist** providing professional corrosion advisory services, corrosion consulting, in-house training, online and distance learning corrosion courses, corrosion diagnosis, failure analysis and expert witness in litigation and arbitration cases related to corrosion, materials, metallurgy, paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing or diffusion coating.



- Professional corrosion advisory services on various corrosion related issues.
- Corrosion diagnosis, corrosion analysis, corrosion prevention and corrosion consulting services
- Selection of materials, metallic coatings and paints to meet your project requirements
- Third party independent review of designs, drawings and technical specifications to identify potential corrosion risks, the compatibility of materials, the forms of corrosion and their mitigation
- Third party independent reviews of technical specifications on materials, processes and coatings to identify any clauses that may lead to potential dispute, arbitration or litigation among the parties involved. Corrosion liability can be avoided through proper specifications.
- Third party independent review of contracts to identify potential corrosion liabilities and advises on how to deal with them.

- Forensic investigation, expert witness and support in litigation and arbitration matters related to corrosion, materials, metallurgy, paints & metallic coatings including thermal spray metallizing, galvanizing, anodizing, chromating, phosphating, electroplating, electroless plating, mechanical plating, and sheradizing or diffusion coating.

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Typical Corrosion Consulting Services

Examples: [\[1\]](#) [\[2\]](#) [\[3\]](#) [\[4\]](#) [\[5\]](#) [\[6\]](#)

1. Corrosion Advisory & Independent Review of Reports and Documents

Sent: Friday, May 14, 2004 4:43 PM

Subject: Seeking for Independent Review

We need your independent review on the topics shown below. Pls take a look at it and justify on how soon you can give us the review in writing. Also pls let us know what are the charges for this review. If you need further information to justify any thing, pls let me know. I'll also send you the thesis extract later on since i'm still preparing some extract of it. However, i've also attached a part of it in the word document.

A. We need your professional view on the following:

- (1). Deposition of scale is expected to occur after only about 200 to 400 hours of chiller operation.
- (2). Hence, based on 12 hours daily operation 365 days per year, we can work out that the BEST PRACTICE to do manual cleaning is 22 times/year.

B. For Anodic Corrosion Effect in condenser tubes. We need your professional view on the following (please refer to my powerpoint slides attached)

- (1). How serious is Anodic Corrosion effect on the normal operation of the condenser tubes?
- (2). For heat exchanger / condenser tubes maintenance, what do you think is the best method / strategy in preventing fouling and scaling?
- (3). Our company has developed an automated heat exchanger cleaning system for the prevention of fouling and scaling. You can check out our website at [\[removed\]](#) to have a basic understanding of the system.

We need your independent review of our system as compared to systems available in the market.

If you need further information to justify, please let us know.

C. The normal life of industrial chiller is quoted to be around 15-20 years as referenced to the following materials [\[removed\]](#). How reasonable is this statement in the context of local and overseas environments?

Thanks. Best Regards,

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2. Corrosion Diagnosis & Corrosion Advisory on Green Water Problem

Sent: Wednesday, August 2, 1995 10:01 AM
Subject: [name removed] Medical Centre

Mr. [name removed] has asked us to give reasons and if possible solutions for a green water problem at the above Medical Centre.

- (1) Copper Tubes are used throughout the hospitals
- (2) Only 5 outlets show green water
- (3) Water is supplied from a fully covered fibre glass tank.
- (4) P.U.B. tests are enclosed, and the Cu looks high (is it really high?) but bacterial count is nil.

Can you give us a quick response to satisfy Mr. [name removed] and [hospital name removed]?
Call me if you need any more detail.

Regards,
[name removed]

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3. Review of Designs & Drawings

Date: Wed, 8 Sep 2004 18:09:06 +0200
Subject: Design Consultancy Enquiry

Dear Sirs,

we are interested in contracting your services for an independent design consultancy review for two industrial shell and tube heat exchangers (AET type). These shell and tube heat exchangers are being supplied by our Company, [name removed] (Engineering Contractor Company), and the final Client is [company name removed].

In order to give you a brief idea, the materials in question are:

- Tubesheets: Carbon Steel titanium clad from the tube side process and bundle cage in SS 316 L (SS 316 L baffles, tie rods ,spacers, sealing strips and bundle runners instead of carbon steel).
- Tubes: Ti
- Baffle plates: SS316 L
- Process shell side fluid: Hydrogen (Wet Sour/HIC Service)
- Tube side fluid: Sea Water
- Shell Material: KCS HIC Resistant (Full details such as datasheets, specifications and drawings will be provided later).

The consultancy would consist of a design review of this equipment with particular regard to material choice for tubes, baffles and tubesheets with respect to the possibility of galvanic corrosion and/or hydrogen embrittlement cracking between tubes, baffles and tubesheet materials owing to the design conditions and process fluids. We would appreciate it if you could provide us with a quotation and/or indicate your standard rates for this type of consultancy including the delivery date for your final technical report.

We look forward to hearing from you.

Best Regards,

[name removed] Project Engineer [company name removed], Heat Transfer Division
Madrid (Spain)

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4. Corrosion Diagnosis and Corrosion Advisory on the Causes of Corrosion

Sent: Saturday, October 02, 2004 11:59 AM

Subject: Causes of Corrosion

Dear Sir,

RE: Seeking your professional advice

I am [name removed] from M/s [name removed] Pte Ltd. I recently attended your course (dated 14th & 15th Sept 04). I can be contacted at the following numbers - Office: [removed] ; Mobile:[removed]. I would appreciate that if you could let me have your valuable advice on the causes of corrosion A.S.A.P as this coming Monday (4-10-04), I will be attending the meeting by 11am. Your kind assistance and co-operation is much appreciated. (Kindly refer to the attached letter and photographs).

Thank You.

Yours faithfully,
[name removed]

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5. Corrosion Advisory on Cr 6+ Chromate Coatings

Sent: Monday, May 09, 2005 12:45 AM

Subject: qns on CR VI

I am currently involved in a project to test for chromium VI content in screws. The test method that my company using is by diphenylcarbazine colourimetric analyses test kit. When solution containing Cr VI reacts with diphenylcarbazine, solution changes to different pink colour depending on the concentration of Cr VI. I had done several tests to find out how much time is needed for all Cr 6+ in the screw to be dissolved. This is what has been done: 3 screws were placed into 400 cc of distilled water and bring to boil for 3,5, 8,10 mins. Solution is left to cool for 1 hr and tested with the test kit. With the same number of screws and boiling time and about the same plating thickness, the intensity of the colour is different and readings were inconsistent.

Do You have any advice on the preparation of the testing solution?

Will Cr 6+ ions vaporize when the water boils?

Will heat changes CR 6+ to Cr 3+ even if solution is between pH 5~ 9?

Thank you for your help.

Regards
[name removed]

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6. Corrosion Diagnosis

Date: Mon, 21 Aug 2006 03:12:51 -0700 (PDT)

Subject: Icon control panel corrosion

Photos of the corrosion are attached.

The corroded block is Nickle plated mild steel with stainless steel plugs and fittings attached. All tubing and the reservoir are Stainless Steel. The 3,000 psi MWP, pump body is Steel with Stainless Steel bolts and mounting frame.

All paint is supposed to be, two-pak Epoxy with zinc base coat. The Blue paint flaked off very easy indicating poor surface preparation. The white Accumulators appeared to be well painted.

The installation is an Off-Shore drilling rig which may use caustic chemicals. Although this area is not directly exposed to the fluid it may be subject to; splash, spray or wash-down of the drilling fluids.

The unit itself is mounted approximately 20 meters above the Sea with an ambient breeze of about 10 km.

I look forward to your diagnosis and hope to meet you,

Best Regards

[name removed]

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