



NARGAN
ACADEMY



Corrosion Principles In Engineering Design

CONTACT US:



Nargan Academy



09336381443



info@academy.nargan.com



WHY CHOOSE THIS TRAINING COURSE?

By acquiring the knowledge of corrosion, we can observe points in the designs so as not to face the problem of corrosion, or In general, as an engineering consultant, recognize these phenomena and note the necessary warnings to the employer and executive during design and implementation. It should be mentioned that in this course which will be held for two 8-hours sessions, we will not enter into the specialized topics of corrosion, such as polarization curves, kinetics and thermodynamics of corrosion, because the topics can be boring for experts in other fields, and we try to present practical and industrial topics as much as possible.

COURSE SYLLABUS (16 HOURS)

- Material selection and corrosion
- Corrosion types and their related mechanisms
- Effective factors, mitigation methods
- Economical aspects of corrosion
- Corrosion mitigation

WHO IS THIS TRAINING COURSE FOR?

This course is for non-expert engineers in the field of corrosion.

This course will be useful for mechanical, chemical, civil, material, electrical engineers (electrical engineers who work in the field of cathodic protection).

WHAT ARE THE GOALS?

Familiarize engineers with the phenomenon of corrosion, mechanisms, aggravating factors and its control solutions.



Mohammad Reza Ghassabi

- More than 23 years of experiences in oil, gas, refinery and petrochemical industries
- Member of the National Association of Corrosion Engineers (NACE)
- Author of the book "Corrosion & Material Selection in O&G Industries"
- Author of the book "Corrosion Engineering in O&G Industries (Criteria for Determination of Corrosion Rate & Material Selection)"
- Author of the book "Engineering, Construction & Integrated Management of Oil & Gas Transmission Pipelines"
- Author of the book "Industrial Paints and Protective Coatings"
- Author of the book "Advanced Refinery Corrosion" (Under Review)
- Author of the book "Numbering Procedure of Materials in Industrial Standards" -Author of "Material Selection (Selection & Application of Materials in O&G Industries)" Training Booklet
- Author of "Optimum Design of Transmission Pipelines & Establishment of the PIMS system in Design" Training Booklet
- Author of "Design of Offshore Pipeline (Basic Engineering Studied)" Training Booklet
- Author of the "Paint Recognition (Selection & Application)" Training Booklet.

THE COURSE CONTENT

Day One

- Important factors in material selection and design
- Corrosion definition
- Electrochemical corrosion conditions
- Types of electrochemical cells
- Introduction to corrosion types and their related mechanisms, effective factors, mitigation methods
- Galvanic-pitting-crevice-leaching-intergranular-knife line attack-filament-microbiologically induced corrosion-sulfide corrosion
- Hydrogen attacks and the related mechanisms, effective factors, mitigation methods
- Blistering-embrittlement-stress oriented corrosion Oxidation

Day Two

- Mechanical corrosion and the related mechanisms, effective factors, mitigation methods
- Wear, erosion, cavitation
- Other types of corrosion and their related mechanisms, effective factors, mitigation methods
- Stress corrosion cracking, corrosion fatigue, reinforced concrete corrosion, oxidation or hot corrosion, stray current induced corrosion
- General methods of corrosion mitigation
- Economical aspects of corrosion