

2019 DOWNSTREAM TRAINING PROGRAMS



Including:

- ✓ *Pressure Vessel and Piping*
- ✓ *Mechanical*
- ✓ *Process*
- ✓ *Pipeline*
- ✓ *Instrumentation, Control and Electrical*
- ✓ *Management*
- ✓ *Maintenance and Operations*
- ✓ *Petroleum Business*

Message from the CEO



MAT Group Ltd. has offered exceptional training programs to assist and enhance technical knowledge and specialized skills set in the oil and gas industry for over a decade. We invite you to take advantage of our 2019 training calendar, to improve and continue to build your company's value and expertise.

Focus of our training guide is on industry needs and existing challenges, and includes the most comprehensive workforce development programs in the oil and gas industry.

MAT Group looks forward to assist with challenges in the industry as a leader of Workforce Development solutions. Our consulting team can help you build and implement effective projects, while our specialized training programs improve your team's knowledge to better gain your goals. Please visit our website www.matgroup.org for additional information and contact us training@matgroup.org to discuss inquiries.

Sincerely Yours,

Ali Amidi
CEO, MAT Group Ltd.

A. Amidi

COVER IMAGE:



South Pars Gas Field Development, Phases 6,7&8 Refinery, Assaluyeh, Iran

Table of Contents

Why MAT Group

MAT Group values its business relationships and constantly strives to improve specialized innovative and essential training and consultations to assist oil and gas experts in these challenging economic times.

Our goal is to constantly offer the highest professional and educational standard of world-class training. MAT Group employees and agents pay attention to every small detail so that our clients training expectations and needs are continually surpassed.

We are able to help companies develop their workforce for future business challenges achieve business goals, enhance effectiveness, achieve compliance, mitigate risk, and improve operations. Since 2007 MAT Group has been focused on consistent, high quality learning and development for the oil and gas industry. We have grown from a hand full of instructors and workbook developers, to a global company with comprehensive learning solutions and workforce development expertise, able to address all segments of the industry-from exploration and production, to processing, pipelines, refining and petrochemicals. Our solutions cover all personnel levels, from geosciences and engineering to operations and craftspeople.

Consulting Solutions:

- ✓ Active Industry Partner
- ✓ Design Technical Courses Based on Your Needs
- ✓ Senior Level Management Training Programs
- ✓ Competence Training Programs
- ✓ Succession Planning
- ✓ Due Diligence Studies
- ✓ Physical Asset Integrity



Table of Contents

PRESSURE VESSELS AND PIPING

- 01) ASME Code, Section VIII, Division 1, Design and Fabrication of PV
- 02) ASME Code, Section VIII, Division 2, Design and Fabrication of PV
- 03) ASME Code, B31.3 Process Piping Design
- 04) Detail Engineering and Piping Layout
- 05) Material Selection & Corrosion Control in Refinery Industries
- 06) Industrial Valves: Design, Sizing, Inspection and Maintenance
- 07) Fitness for Services and Flaw Evaluation of Pressure Equipment, API 579
- 08) Inspection, Repair & Alteration of Pressure Equipment
- 09) Plant Equipment Requirement
- 10) Failure Prevention, Repair & Life Extension of Piping, Vessels, and Tanks
- 11) Non-Destruction Examination - Applying ASME Code Requirements
- 12) Piping Stress Analyses
- 13) Risk Based Inspection, API 580/581
- 14) Pressure Relieving Systems Based on API 520/521
- 15) Damage Mechanisms Based on API RP 571
- 16) Storage Tank Design, Construction & Maintenance
- 17) ASME Section IX, Welding Brazing and Qualifications
- 18) API 653 Aboveground Storage Tank Inspector Examination Preparation
- 19) Power Boilers: Design, Construction, Operation, Inspection and Maintenance
- 20) Design and Selection of Heat Exchangers

MECHANICAL

- 21) Process Plant Reliability and Maintenance Strategies
- 22) Turbomachinery Monitoring and Problem Analysis
- 23) Centrifugal Pumps: Design and Selection
- 24) Centrifugal Compressors: Design and Selection
- 25) Centrifugal Pumps: Operation and Maintenance
- 26) Centrifugal Compressors: Operation and Maintenance
- 27) Reciprocating Compressors: Design and Selection
- 28) Reciprocating Pumps: Design and Selection
- 29) Reciprocating Compressors: Operation and Maintenance
- 30) Reciprocating Pumps: Operation and Maintenance
- 31) Gas Turbine: Operation and Maintenance
- 32) Gas Turbine: Design and Selection
- 33) Mechanical Working of Rotating Equipment

OPERATIONS & MAINTENANCE

- 34) Condition Monitoring and Vibration Analysis
- 35) Continuous Reliability Improvement of Rotating Equipment
- 36) Effective Maintenance Planning, Estimating and Scheduling
- 37) Equipment Failure Analysis and Prevention
- 38) Applied Maintenance Management
- 39) Process Machinery, Pre-Commissioning, Commissioning and Start UP
- 40) Effective Operations Leadership

PROCESS FACILITIES & GAS PROCESSING

- 41) Applied Water Technology in Oil and Gas Production
- 42) CO₂ Surface Facilities
- 43) Oil Production and Processing Facilities
- 44) Onshore Gas Gathering Systems: Design and Operations
- 45) Produced Water Testing
- 46) Oil Surface: Design and Operation
- 47) Gas Surface: Design and Operation
- 48) Process Utility System
- 49) Process Design for Process Plant Equipment
- 50) Gas Conditioning and Processing
- 51) Process Safety Engineering
- 52) Gas Treating and Sulfur Recovery

- 53) Relief and Flare Systems
- 54) Gas Flow Measurement
- 55) Separation Equipment: Selection & Sizing
- 56) Introducing of Process Engineering
- 57) Applied Process Control
- 58) Amine Gas Sweetening & Sulphur Recovery
- 59) Hydrotreating & Hydrocracking Process Technology
- 60) Process Plant Troubleshooting

PIPELINE

- 61) Liquid Pipeline Pumping System
- 62) Pipeline Design and Construction
- 63) Pipeline Defect Assessment
- 64) Pipeline Integrity Management Systems
- 65) Subsea Pipeline Engineering Master Class
- 66) Pipeline Project Management
- 67) Pipeline Corrosion and Material Selection
- 68) Pipeline System Optimization
- 69) ASME B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
- 70) B31.8 Gas Transmission & Distribution Piping Systems

INSTRUMENTATION, CONTROLS & ELECTRICAL

- 71) Distributed Control Systems Technology
- 72) Electrical Engineering Fundamentals for Facilities Engineers
- 73) Advanced Process Control Technology
- 74) Instrumentation and Controls Fundamentals for Facilities Engineers
- 75) PLC and SCADA Technologies
- 76) Commissioning of Electrical Equipment
- 77) Electrical Faults: Causes, Analysis, Detection & Remedies

MANAGEMENT

- 78) Mater Class in Petrochemicals
- 79) Leadership and Interpersonal Skills for Managers
- 80) Asset Integrity Management
- 81) Mini MBA Petrochemicals
- 82) Essential Management Skills
- 83) Motivational Leadership and Building Successful Team
- 84) Senior Management Skills
- 85) Project Management in the Upstream oil and gas Industry
- 86) Risk Management for Upstream Capital Projects
- 87) Construction Management

PETROLEUM BUSINESS

- 88) Refinery Economics
- 89) Petroleum Finance and Accounting
- 90) Advanced Petroleum Economics with Optimization
- 91) Oil and Gas Contract: Negotiations Skills
- 92) International Petroleum Contracts: The legal and Contractual Regime
- 93) Effective Contract Strategies, Contract Negotiation and Contract Management
- 94) Oil and Gas Sector: Business Environment and Finance
- 95) "Joint Ventures Between" Local" and "Foreign" Partners - An International Perspective"



YOUR LOCATION. YOUR TEAM. OUR EXPERT.

Invite MAT Group Training To Your Company

Do you have a group of individuals that need the same training at the same time? Just send an e-mail to: training@matgroup.org

MAT Group Ltd.
International Training and Consulting Provider

In-house courses allow participants to receive comprehensive training and individualized attention from top international instructors. Excellent solution to training needs with limited budgets. Using our resources, we can develop customized training programs in accordance with your needs while incorporating your company's data into the curriculum. These courses are catered to your internal employees and held anywhere you need training. Contact us training@matgroup.org to book your training program.

In-house training solutions for your organisation

✓ Cost effective ✓ Tailored ✓ Convenient



2018 DOWNSTREAM TRAINING PROGRAMS

Training Services:

MAT Group Training division was established to provide a comprehensive range of upstream and downstream training programs for the petroleum industry, utilizing international experts. We design and present customized training programs according to our customer needs.

Our 3 & 5 day practical workshop courses deliver specific and compact training programs that result in effective transfer and retention of skill, knowledge and know-how.

We have offered programs focused on the following objectives:

- Preparing junior engineers for industrial projects
- Specialized engineering codes & standards courses (ASME, API, BS, DIN)
- In-house specialized specific engineering courses
- International industry technology specific courses

We work hard to offer world-class cutting edge superior training services in order to satisfy our clients' needs. Due to this perseverance and dedication it has been possible for us to establish and develop long lasting business relationships with our clients in training and consulting services.

How to register:

- Online through our website www.matgroup.org
- Faxing your registration to MAT Group office (+9821 88552734)
- Emailing a completed registration form to training@matgroup.org

Course policy:

- We strongly recommend early enrollment (especially to take advantage of early-bird registration discounts). Confirmation of enrollment will be sent upon receipt of payment.
- Normal course hours are 8:30 to 17 which include coffee breaks and lunch. No photography or recording of course sessions are permitted.

Payment, cancellation and refund policies:

Course fees are due and payable in USD (or other agreed upon currency) upon receipt of invoice. The course fee includes tuition, course material, lunch and daily refreshment

All payments must be received prior to course commencement. Payments are accepted in the form of bank check or bank transfer. Cancellation requests by applicants should be in writing and received 30 days before the commencement of course, for the course fee to be refunded minus registration/administration cost of 200 USD.

Cancellations must be made in writing. No refunds will be made for cancellations received less than 30 days before the start of the course. Enrollment is not automatically cancelled if participant does not show up. A substitute participant may be nominated upon approval of MAT Group. MAT Group reserves the right to withdraw or postpone a course if the number of participants is not sufficient, up to three weeks prior to the course starting date. If a course is cancelled by MAT, you will receive notice by email or fax. A full refund of paid registration fees will be given or can be transferred to another MAT public course within 12 months (date of registration) of equal cost. Please keep our registration and cancellation policies in mind when arranging your travel as MAT Group does not accept liability for any costs incurred for cancellation or change of travel or hotel reservations.

2019 DOWNSTREAM TRAINING PROGRAMS

Accommodation and course venue:

Courses are held at top quality hotels with excellent meeting and training facilities. MAT Group does not usually arrange hotel accommodation for participants; however we may reserve a block of rooms in the scheduled hotels to offer discounted rates for our program participants. Detailed hotel discount information will be provided upon enrollment and final confirmation.

Public Short Courses:

The 2019 – 2020 public courses will mostly be presented in Dubai, Turkey and Iran. We have selected practical industry topics utilizing internationally renowned instructors to share the most recent developments in petroleum science and technology with their extensive experience and expertise.

You will benefit from:

- Small class sizes, enhanced instructor participant communication and dynamic hands-on approaches in practical workshops
- Learn and exchange knowledge with peers within the oil, gas and petroleum community
- Take advantage of industry specific practical cutting edge and present-day technology and know-how

In-house Training:

Requested specific courses and most public courses are also available in-house. Our experienced instructors customize a course exactly to specific training requirements.

Benefits:

- Save travel time and expenses
- Choose expert instructors catered according to specific courses
- Contents are tailored to meet company requirements
- Company specific data and scenarios can be incorporated in exercises

Long Term Training programs:

Resources are available to develop long term training and technology transfer programs on petroleum-related subjects. Programs are tailored to individual clients needs. By taking account company requirements, objectives, background, expertise and experience, we will design an optimal balance between classroom, workshop and on-the job training program.

Our Instructors:

We work with subject matter professional experts in order to deliver the highest quality trainings. Our seasoned experienced instructors and consultants are active in related committees, professional societies and many teach in reputable world known universities. The biography and teaching resumes of our instructors will be submitted upon our costumers' request.

2019 DOWNSTREAM TRAINING PROGRAMS

STATIC EQUIPMENT & PIPING

No.	Course Topics	Duration	Venue	Date
1	ASME Code, Section VIII, Division 1, Design and Fabrication of Pressure Vessels	3 Day	Tehran	T.B.A
2	ASME Code, Section VIII, Division 2, Design and Fabrication of Pressure Vessels	3 Day	Tehran	T.B.A
3	ASME Code,B31.3 Process Piping Design	4 Day	Tehran	T.B.A
4	Detail Engineering and Piping Layout	4 Day	Tehran	T.B.A
5	Industrial Valves: Design, Sizing, Inspection and Maintenance	5 Day	Tehran	T.B.A
6	Fitness for Services and Flaw Evaluation of Pressure Equipment, API579	5 Day	Tehran	T.B.A
7	Inspection, Repair &Alteration of Pressure Equipment	2 Day	Tehran	T.B.A
8	Plant Equipment Requirement	4 Day	Tehran	T.B.A
9	Failure Prevention, Repair & life Extension of Piping, Vessels, and Tanks	3 Day	Tehran	T.B.A
10	Non-Destruction Examination-Applying ASME Code Requirements	3 Day	Tehran	T.B.A
11	Piping Stress Analyses	3 Day	Tehran	T.B.A
12	Material Selection and Corrosion Control in Refining Industries	5 Day	Tehran	T.B.A
13	Risk Based Inspection, API 580/581	4 Day	Tehran	T.B.A
14	Pressure Relieving Systems Based on API 520/521	3 Day	Kish Island	T.B.A
15	Damage Mechanisms Based on API RP 571	4Day	Mahmudabad	30 June-03 July
16	Storage Tank Design, Construction & Maintenance	5 Day	Tehran	T.B.A
17	ASME Section IX, Welding Brazing and Qualifications	4 day	Kish Island	T.B.A
18	API 653 Aboveground Storage Tank Inspector Examination Preparation	3 Day	Kish Island	T.B.A
19	Power Boilers: Design, Construction, Operation, Inspection and Maintenance	5 Day	Tehran	T.B.A
20	Design and Selection of Heat Exchangers	2 Day	Tehran	T.B.A

2019 DOWNSTREAM TRAINING PROGRAMS

MECHANICAL, OPERATION & MAINTENANCE

CODE	Course Topics	Duration	Venue	Date
21	Process Plant Reliability and Maintenance Strategies	3 Day	Tehran	T.B.A
22	Turbomachinery Monitoring and Problem Analysis	3 Day	Tehran	T.B.A
23	Centrifugal Pumps: Design and Selection	3 Day	Kish Island	T.B.A
24	Centrifugal Pumps: Operation and Maintenance	3 Day	Kish Island	T.B.A
25	Centrifugal Compressors: Design and Selection	3 Day	Kish Island	T.B.A
26	Centrifugal Compressors: Operation and Maintenance	3 Day	Kish Island	T.B.A
27	Reciprocating Compressors: Design and Selection	3 Day	Kish Island	T.B.A
28	Compressors: Operation and Maintenance	3 Day	Kish Island	11-13 June
29	Reciprocating Pumps: Design and Selection	3 Day	Kish Island	T.B.A
30	Reciprocating Pumps: Operation and Maintenance	3 Day	Kish Island	T.B.A
31	Gas Turbine: Operation and Maintenance	3 Day	Kish Island	T.B.A
32	Gas Turbine: Operation and Maintenance	3 Day	Kish Island	T.B.A
33	Mechanical Working of Rotating Equipment	5 Day	Kish Island	T.B.A
34	Condition Monitory and Vibration Analysis	5 Day	Kish Island	T.B.A
35	Continuous Reliability Improvement of Rotating Equipment	3 Day	Kish Island	T.B.A
36	Effective Maintenance Planning, Estimating and Scheduling	3 Day	Kish Island	T.B.A
37	Equipment Failure Analysis and Prevention	4 day	Kish Island	15-18 June
38	Applied Maintenance Management	3 Day	Kish Island	T.B.A
39	Process Machinery, Pre -Commissioning, Commissioning and Start UP	3 Day	Kish Island	08-10 June
40	Effective Operation Leadership	4 Day	Kish Island	T.B.A

2019 DOWNSTREAM TRAINING PROGRAMS

PROCESS

No.	Course Topics	Duration	Venue	Date
41	Applied Water Technology in Oil and Gas Production	5 Day	Tehran	T.B.A
42	CO2 Surface Facilities	3 Day	Tehran	T.B.A
43	Oil Production and Processing Facilities	5 Day	Tehran	T.B.A
44	Onshore Gas Gathering Systems: Design and Operations	5 Day	Tehran	T.B.A
45	Produced Water Testing	5 Day	Tehran	T.B.A
46	Oil Surface: Design and Operation	5 Day	Tehran	T.B.A
47	Gas Surface: Design and Operation	5 Day	Tehran	T.B.A
48	Process Utility System	5 Day	Tehran	T.B.A
49	Process Design for Process Plant Equipment	5 Day	Tehran	T.B.A
50	Gas Conditioning and Processing	5 Day	Tehran	T.B.A
51	Process Safety Engineering	5Day	Tehran	T.B.A
52	Gas Treating and Sulfur Recovery	5 Day	Tehran	T.B.A
53	Relief and Flare Systems	5 Day	Tehran	T.B.A
54	Gas Flow Measurement	5 Day	Kish Island	T.B.A
55	Separation Equipment: Selecting &Sizing	5 Day	Kish Island	T.B.A
56	Introducing of Process Engineering	3 Day	Tehran	T.B.A
57	Applied Process Control	5 day	Kish Island	T.B.A
58	Amine Gas Sweetening & Sulphur Recovery	5 Day	Kish Island	T.B.A
59	Hydrotreating & Hydrocracking Process Technology	5 Day	Tehran	T.B.A
60	Process Plant Troubleshooting	4 Day	Kish Island	T.B.A

2019 DOWNSTREAM TRAINING PROGRAMS

PIPELINE

No.	Course Topics	Duration	Venue	Date
61	Liquid Pipeline Pumping System	5 Day	Tehran	T.B.A
62	Pipeline Design and Construction	3 Day	Tehran	T.B.A
63	Pipeline Defect Assessment	5 Day	Tehran	T.B.A
64	Pipeline Integrity Management Systems	5 Day	Tehran	T.B.A
65	Subsea Pipeline Engineering Master Class	5 Day	Tehran	T.B.A
66	Pipeline Project Management	5 Day	Tehran	T.B.A
67	Pipeline Corrosion and Material Selection	5 Day	Tehran	T.B.A
68	Pipeline System Optimization	5 Day	Tehran	T.B.A
69	ASME B31.4 Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids	5 Day	Tehran	T.B.A
70	B31.8 Gas Transmission & Distribution Piping Systems	5 Day	Tehran	T.B.A

INSTRUMENTATION, CONTROL & ELECTRICAL

No.	Course Topics	Duration	Venue	Date
71	Distributed Control Systems Technology	5 Day	Kish Island	T.B.A
72	Electrical Engineering Fundamentals for Facilities Engineers	3 Day	Tehran	T.B.A
73	Advanced Process Control Technology	5 Day	Kish Island	T.B.A
74	Instrumentation and Controls Fundamentals for Facilities Engineers	5 Day	Tehran	T.B.A
75	PLC and SCADA Technologies	5 Day	Tehran	T.B.A
76	Commissioning of Electrical Equipment	5 Day	Tehran	T.B.A
77	Electrical Faults: Causes, Analysis, Detection & Remedies	5 Day	Tehran	T.B.A

2019 DOWNSTREAM TRAINING PROGRAMS

MANAGEMENT

No.	Course Topics	Duration	Venue	Date
78	Master Class in Petrochemicals	3 Day	Tehran	T.B.A
79	Leadership and Interpersonal Skills for Managers	3 Day	Tehran	T.B.A
80	Asset Integrity Management	5 Day	Tehran	T.B.A
81	Mini MBA Petrochemicals	2 Day	Tehran	T.B.A
82	Essential Management Skills	5 Day	Tehran	T.B.A
83	Motivational Leadership and Building Successful Team	5 Day	Tehran	T.B.A
84	Senior Management Skills	5 Day	Tehran	T.B.A
85	Project Management in the Upstream oil and gas Industry	5 Day	Tehran	T.B.A
86	Risk Management for Upstream Capital Projects	5 Day	Tehran	T.B.A
87	Construction Management	5 Day	Tehran	T.B.A

PETROLEUM BUSINESS

No.	Course Topics	Duration	Venue	Date
88	Refinery Economics	5 Day	Kish Island	T.B.A
89	Petroleum Finance and Accounting	3 Day	Tehran	T.B.A
90	Advanced Petroleum Economics with Optimization	5 Day	Kish Island	T.B.A
91	Oil and Gas Contract: Negotiations Skills	5 Day	Tehran	T.B.A
92	International Petroleum Contracts: The legal and Contractual Regime	5 Day	Tehran	T.B.A
93	Effective Contract Strategies, Contract Negotiation and Contract Management	5 Day	Tehran	T.B.A
94	Oil and Gas Sector: Business Environment and Finance	5 Day	Tehran	T.B.A
95	"Joint Ventures Between" Local" and "Foreign" Partners-An International Perspective"	۲ Day	Tehran	T.B.A

OUR INTERNATIONAL TRAINING NETWORK



**BOOST YOUR SKILLS & KNOWLEDGE
BY
MAT GROUP'S TRAINING PROGRAMS**