

PROGRAMME
Fuel Oil Quality & Fuel Oil Treatment

The course is arranged by
Alfa Laval Tumba AB and Det Norske Veritas Petroleum Services

Day 1

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| 08.30 – 08.45 | Registration | |
| 08.45 – 09.15 | Introduction | AL/ DNVPS |
| 09.15 – 10.15 | Residual Fuel Oils - Sources / compositions - Petroleum fuels - Refining principles / processes - Production of fuel oil / properties - Fuel trends and statistics - Blending and stability - Microbiology | DNVPS |
| 10.15 – 10.30 | Coffee | |
| 10.30 – 12.15 | Fuel specifications - Owners and Suppliers specifications - International fuel oil specifications - Accuracy of test methods - MARPOL Annex VI and EU Low S regulations | DNVPS |
| 12.15 – 13.00 | Lunch | |
| 13.00 – 13.45 | The necessity of fuel oil treatment on board - Handling of fuel oils onboard - Booster system | AL |
| 13.45 – 14.30 | System lay-out for fuel oil cleaning - Conventional separators, normal operation - Installation aspects | AL |
| | Theory of centrifugal operation - Basic about separators - Factors affecting separation efficiency - Why is 991 density and incompatibility a problem? | AL |
| 14.30 – 17.00 | Impact on the Operation - Significance of fuel parameters - Added substances not determined by standard analyses - Principal causes of fuel problems - Fuel Class - Safety Aspects | DNVPS |
| | Ignition and combustion properties | |
| 15.00 – 15.15 | Coffee | |
| 17.00 – 18.00 | Group work / coffee: "Interpretations of analysis results" - "Case 1" | DNVPS |
| 19.30 | Welcome dinner | |

Day 2

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| 08.00 – 08.50 | Securing evidence - Sampling procedures - Manual and automatic sampling - Validity of samples | DNVPS |
| 08.55 – 10.15 | Quantity and Quality disputes - Ordering of fuels | DNVPS |
| 10.15 – 11.00 | Group work / Coffee: "Ordering of fuels" - "Case 2" | DNVPS |
| 11.00 – 12.30 | Modern separators - Working principles - System lay-out - Installation aspects - Normal operation - Emergency operations on off spec fuels | AL |
| 12.30 – 13.15 | Lunch | |
| 13.15 – 13.45 | Separation Performance Standard | AL |
| 13.45 – 14.30 | Practical experience, case history | DNVPS |
| 14.30 – 15.30 | Group work / Coffee: - Ship operators' point of view - Ship's staff point of view | AL/DNVPS |
| 15.30 – 15.45 | Presentation/discussion ship operator group | AL/DNVPS |
| 15.45 – 16.00 | Presentation/discussion ship's staff group | AL/DNVPS |
| 16.00 – 16.15 | Summing up of discussions | AL/DNVPS |
| 16.15 – 16.30 | Closing remarks and evaluation | AL/DNVPS |
| 16.30 | Departure | |

Lecturers:

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| DNVPS | Det Norske Veritas Petroleum Services | TBA TBA |
| AL | Alfa Laval Tumba AB | Geir Lærum |

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