

# PROGRAMME

## Fuel Oil Quality & Fuel Oil Treatment

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

### Day 1

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

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:

DNVPS	Det Norske Veritas Petroleum Services	Dag Olav Halle John Stirling
AL	Alfa Laval Tumba AB	Geir Lærum

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