



Base Oils I: Fundamentals of the Base Oils Business

26-28 October 2020

10.30AM GMT // 2:30PM UAE

Module 1

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| 10.30 | Welcome and introduction to the course |
| 10:40 | Crude and Refining Overview <ul style="list-style-type: none">• World's largest base oil refining companies• Crude types, pricing, and valuation• Crude for base oils vs. fuels refining |
| 11:30 | Base Oil Manufacturing: Solvent Processing <ul style="list-style-type: none">• Base oil definitions and terminology• Historical manufacturing: solvent processing• Example: Arab Light 95 VI via solvent processing |
| 11.30 | Break |
| 12:00 | Base Oil Manufacturing: Hydroprocessing <ul style="list-style-type: none">• Hydroprocessing terms and general overview• Newer technology: hydroprocessing• Example: Arab Light 95 VI via hydroprocessing |
| 12:45 | Summary and conclusions |
| 13:00 | End of day one |



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Module 2

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| 10:30 | Base Oil API Groups & Qualities <ul style="list-style-type: none">• The API base oil groups: I, II, III, IV and V• Quality comparison of the different API Groups• Discussion: are the API Groups still relevant today? |
| 11:20 | Base Oil Manufacturing: Hybrid Processes <ul style="list-style-type: none">• Hybrid solvent processing + hydroprocessing• Hybrid fuels and base oil hydrocracking |
| 12:05 | Break |
| 12:35 | Key terms quiz |
| 12:45 | Discussion: Global and Regional Manufacturing Routes <ul style="list-style-type: none">• Base oil manufacturing differences by region• Key reasons for regional differences in manufacturing and supply quality• Going forward: why does regional crude quality matter? |
| 13:15 | Summary and conclusions |
| 13:30 | End of day two |



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Module 3

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| 10.30 | Lubricant additives <ul style="list-style-type: none">• Additive introduction• Major additive functions• Finished lubricant blending and packaging |
| 11.15 | Base Oil Demand (Finished Lubricants 101) <ul style="list-style-type: none">• Correlating base oils to finished lubricants• Transportation, industrial and process oil segments• Base oil quality trends within each sector |
| 12.10 | Base oils industry survey |
| 12:20 | Break |
| 12.40 | Future trends – disruptive scenarios <ul style="list-style-type: none">• Here come Electric Vehicles – a forecast• Gas-to-liquids (GTL) base oils |
| 13.25 | Course conclusion |
| 13.30 | End of the course |