



I am a mechanical engineering professional with experience in fuel & lubricant research, future mobility and commercial/business development. With 19 years of experience in the oil industry, I am currently a Science Associate for fuels quality and emissions, researching road, aviation and marine sustainable fuels, in the context of the associated engine technologies and European regulations.

I am conscientious, interested in technology, problem solving, design and optimisation, with a combination of scientific, technical marketing and business management skills.

I hold 3 passports, with nationalities in South Africa, Belgium & UK

Adrian James Velaers

Senior Mechanical Engineer



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Skills

- Fuel & Lubricant Application Specialist
- Exhaust Emissions Measurement
- Combustion Engine Specialist
- Fuel Quality
- Sustainable Fuels
- Product Development
- Engine Test Facility Engineering
- Aviation Fuel and Technology
- Research & Development
- Future Mobility
- Life Cycle Analysis
- Refinery Technology
- Synthetic Fuel Production
- Product Quality Management
- Business Strategy
- Innovation & Problem Solving
- Collaboration
- Technical Marketing
- Creative Presentation
- Public Speaking
- Communication & Language
- Leadership
- Project Management
- Budget Control
- Business Management
- Advanced Computer Literacy
- Data Analytics
- English – Highly Proficient
- Afrikaans - Fluent
- French – Basic Level



Education



2018

PGDip General Management

University of Pretoria
Gordon Institute of Business Science (GIBS)
Year 1 of MBA program, part time study
Graduated 11 April 2018



2006

Master of Science (MSc) (Mechanical Engineering)

University of Cape Town
Sasol Advanced Fuels Laboratory
Graduated 15 June 2006



2003

Bachelor of Science (BSc) (Mechanical Engineering)

University of Cape Town
Graduated with honours 11 December 2003



Experience



2024

Concawe

Science Associate – Fuels Quality & Emissions

After a long career at Sasol I relocated to Europe to embark on a new challenge. In this role I interact with technical experts from the member energy companies on research topics relating to aviation, marine and road transport fuels.

A strong focus on low carbon fuels and sustainability has given me a range of new competencies as the industry makes swift progress in these areas. I have a good understanding of EU regulation and the challenges that lie ahead to decarbonise the transport sector, while maintaining functionality and competitiveness for Europe.

Projects under my management have covered topics like heavy duty diesel emissions under Euro 7 conditions with low carbon fuels and also alternative fuels for the marine industry. I have also gained good experience with latest developments in sustainable aviation fuels and efforts to reduce non-CO₂ emissions from jet engines.



Patents

Velaers, A., Schaberg, P., Awarded Patent: **“Diesel engine injector fouling improvements with a highly paraffinic diesel”**, Patent Date: 14 July 2015. Patent No: US9080118B2

Velaers, A., Schaberg, P., Yates, A., Sasol Patent Application: **“Diesel Engine Efficiency Improvement”**, Filed 7 September 2010, PA_923360



Publications

1. Velaers, A., Schaberg, P., Yates, A., **“Investigation of the combustion characteristics of GTL diesel fuel in a constant volume combustion chamber”**, SAE Technical Paper 2007-01-0031
2. Velaers, A., de Goede, S., **"The properties and injector fouling performance of neat GTL and GTL/EN590 diesel blends in various diesel engines"**, SAE Technical Paper 2012-01-1692
3. De Goede, S., Velaers, A., Roets, P., Vermeulen, J., Wilken, C., **“The Properties and Injector Nozzle Fouling Performance of GTL and EN590 Diesel with RME and SME Biodiesel”**, SAE Technical Paper 2012-01-1136
4. Velaers, A., Woolard, C., de Goede, S., **"Injector fouling performance and solubility of GTL diesel dosed with zinc"**, SAE Technical Paper 2013-01-1697
5. Velaers, A., **“2-Stroke Oil in Diesel – A Technical Study”**, 11th International Tribology Conference - SAIT TRIBOLOGY 2015, SAIT2015-011
6. Velaers, A., De Goede, S., Barbour, R., Sword, B., Burton, D., Mokheseng, K., **“The Effect of Near-Zero Aromatic Fuels on Internal Diesel Injector Deposit Test Methods”**, SAE Technical Paper 2017-01-0807

2021 **Sasol Applied Research & Technology**
Senior Mechanical Engineer

After 6 years in technical services I elected to take a more direct technical research role in the engine test laboratory. Currently working on sustainable fuels and hydrogen combustion. I am also continuing my previous work in designing & researching lubricants and fuels used by Sasol customers.

2015 - 2021 **Sasol Energy**
Senior Technical Advisor

Responsible for technical services to the Sasol retail and commercial fuels and lubricants business. Directly involved in business development, commercialisation, strategy and product quality supply chain. I advised the business on all fuel and lubricant technical matters. Line manager of a team providing technical solutions to the business.

I was also directly responsible for technical marketing and approval of product technical communication. Directed fuel research and additive selection, also delivering technical presentations at conferences and events.

2015 **Sasol Technology – International Energy**
Mechanical Engineer

Embarked on a short term rotation to gain experience in business development. This involved part time work in International Energy Technical Services, focusing on a Mozambique GTL pre-feasibility study as a joint venture between Sasol and an Italian multi-national oil company. Also provided business development support to the Sasol GTL plant in Uzbekistan.

2006 - 2014 **Sasol Technology - Fuel Research**
Mechanical Engineer

After completing my MSc I began working for Sasol at the Sasol Advanced Fuels Laboratory in Cape Town. I was the laboratory technical manager for this time and conducted fuel & lubricant research work. I published and presented an SAE paper (2007-01-0031) on my work on combustion imaging. In 2007 I was appointed as a research engineer at Sasol and was directly involved in the building of the new Sasol Fuels Application Centre in Muizenberg, Cape Town. This involved a different level of experience to research work, with project management, engineering design and management of building contractors. A good knowledge of automotive testing systems was gained during this time.

After the successful commissioning of the new facility, I resumed research work specialising in light duty diesel engines and GTL diesel fuel. A number of international publications and patents were achieved and are listed alongside. Also worked extensively in supporting Sasol sponsored motorsport teams with racing fuel and lubricant design.. I was also involved in a range of other projects and activities, such as the first fully synthetic jet fuel flight.



Interests

Motorsport | Historic Racing |
Classic Cars | Formula 1

Travel | Water Sports | Snow
Skiing

Aviation | Future mobility |
Transport Energy Technology



References

References and academic transcripts
available upon request



2004

CFW
Mechanical Engineering Consultant

Following on from my successful final year thesis project, to design and build a venturi scrubber for CFW, I was employed under contract to consult on the design of such scrubbers being sold. CFW is a leading manufacturer of fans and air technologies.



2002

Tension Structures
CAD draughtsman

I completed a period of in-service training for Tension Structures, manufacturers of architectural tensile fabric roofs and atriums. I mastered the use of AutoCAD



2001

CAV – Cape Advanced Vehicles
Technician

I completed a period of in-service training for this local producer of high quality Ford GT40 and Shelby Cobra replicas for the export market. I was involved in the development of the CAV GT and made the hydraulic brake pipes for the cars. I continued this work part time until the company was sold in 2012.