sefiso

Sustainability

OCTOBER 2025

Presenter Richard Hooton

- Over 25 years of experience in the aviation industry
- Specialist in aviation fuel filtration and system performance
- Area Sales Manager working with global partners to uphold fuel quality standards
- Today’s talk: the role of filtration technologies to advance sustainability in aviation

Facts & Figures

- Flights per year:

  ~37.4 million*

- Jet Fuel Consumption per year:

  ~291 billion litres*

- Airplane Refuellings per year:

  ~30-38 million*

This excludes military, private, and cargo aircraft, which could add several million more.

THE AVIATION REFUELLING MARKET REPORT CONFIRMS THAT DEMAND IS GROWING DUE TO:

- Increased air travel
- Expansion of airline fleets
- General aviation needs

*Sources: IATA and U.S. Energy Information Administration data

Sustainability in the Aviation Industry

As of 2025, aviation accounts for approximately 2–3% of global CO_2 emissions, with commercial aviation responsible for about 12% of transportation emissions globally

Aviation's sustainability strategy is built around several key pillars:

- Sustainable Aviation Fuels (SAF): 10% SAF usage across all flights by 2030
- Technological Innovation: hydrogen propulsion, electric aircraft, and advanced filtration systems
- Operational Efficiency: cut fuel consumption by up to 15%

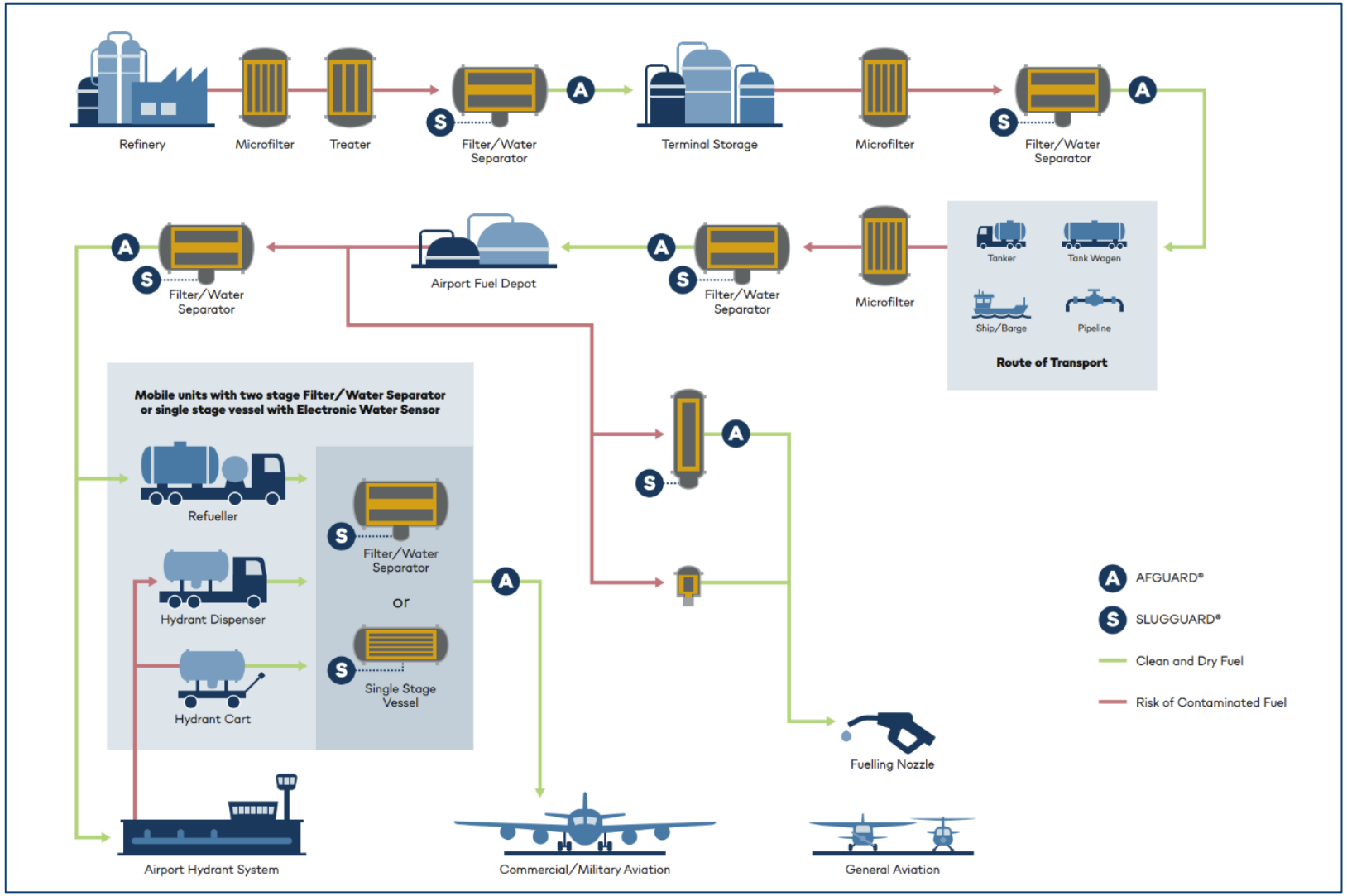
- The sector's resilience and commitment to net-zero by 2050 continue to inspire transformative change

*Sources: International Council on Clean Transportation (ICCT) and McKinsey, IATA, World Economic Forum, ICAO

01

New Coalescing Technologies

Filtration in the Jet Fuel Journey



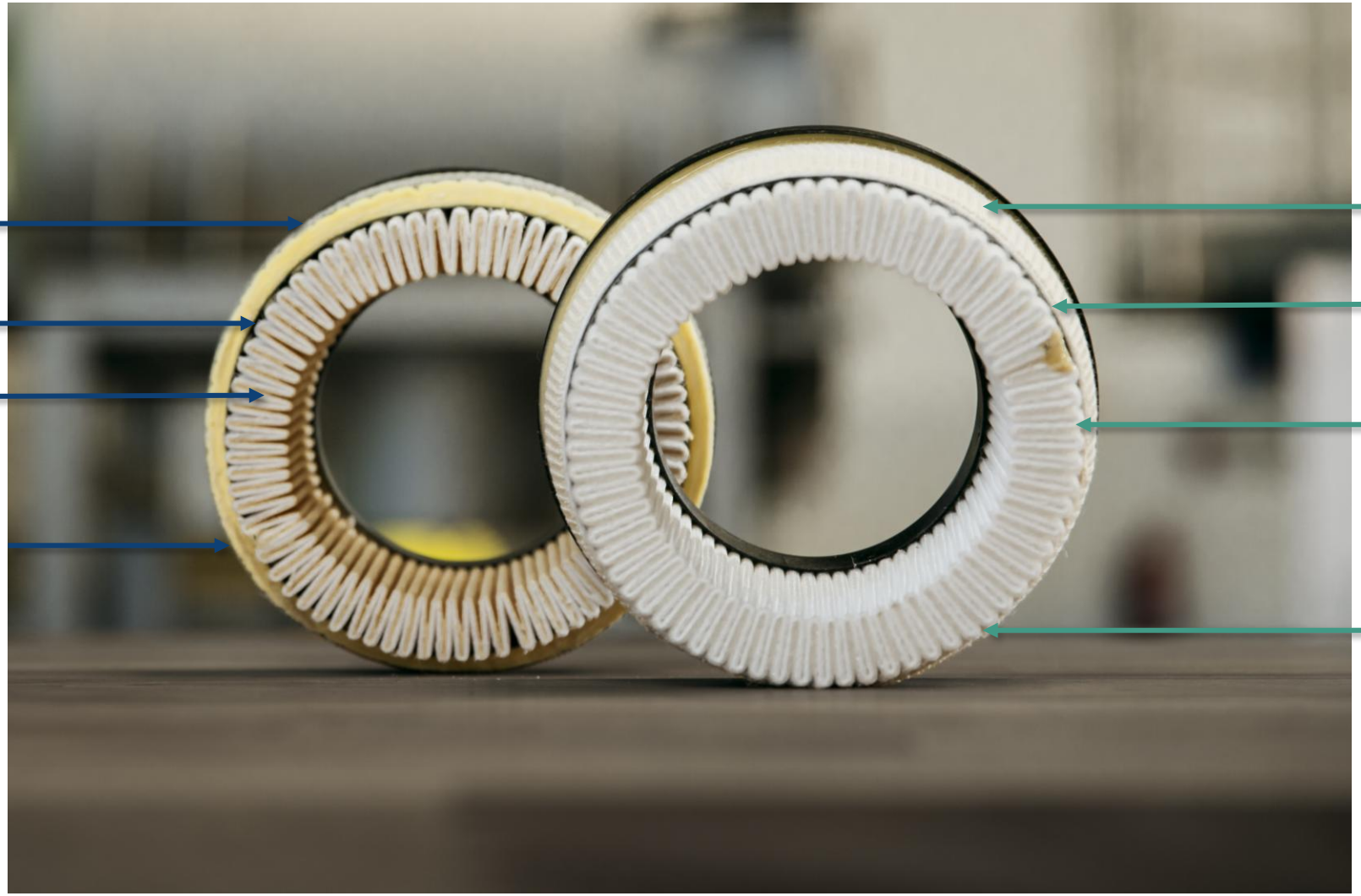
Requirements

WHY DEVELOP NEW COALESCER TECHNOLOGIES?

- Looking ahead
  - More imported fuels
  - More SAF for example
  - Coalescer elements will be in operation for longer periods (with EWS)

- Sustainability requirements in EI 1581 7th
  - Sustainability criteria to be used for material selection
  - The design life of all materials used for element construction
  - Maximise time-based in-service lifetime
  - Minimise energy consumption during production

New vs old coalescing technology



Technology

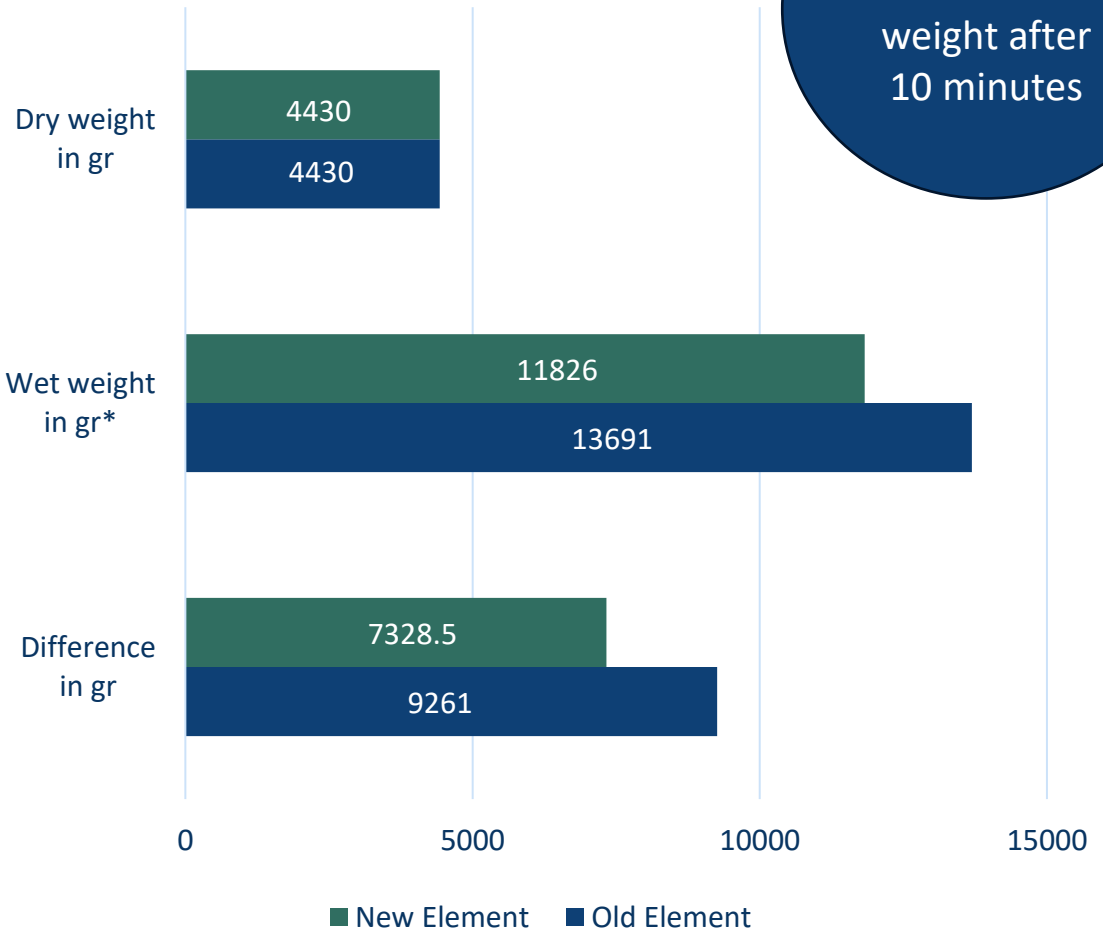
- New 6“ patented coalescing technology
  - Lower wet weight
  - Improved manual handling

- Quicker drainage
  - Increased operational efficiency
  - Reducing downtime
  - Quicker turn-around
  - Improved productivity

Weight difference old and new coalescing technology

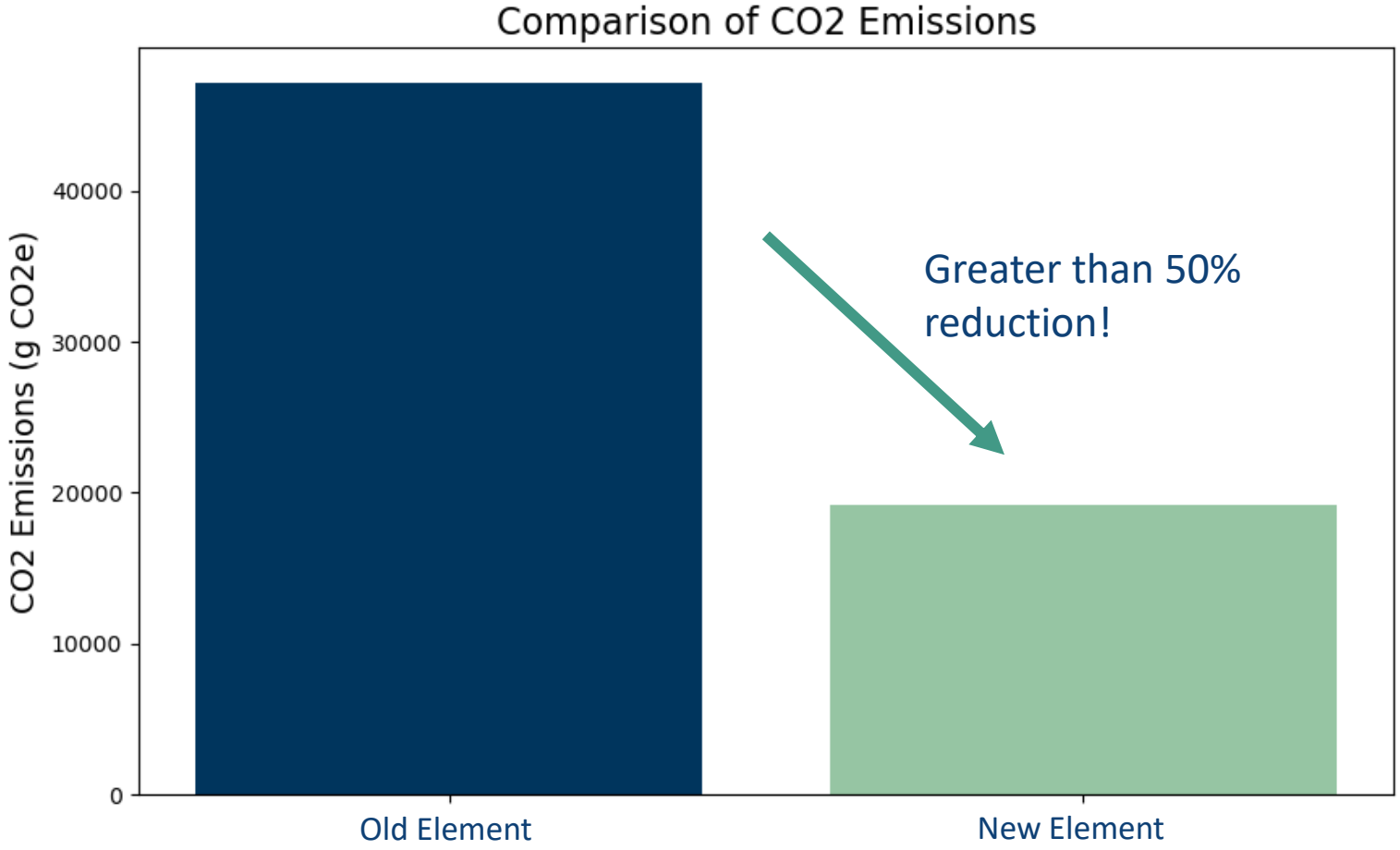
- Lower wet weight improves manual handling
- Almost 2kg lighter when drained for 10 minutes
- Increases operational efficiency, quicker turn-around times and improved productivity

New Element: 20% less weight after 10 minutes

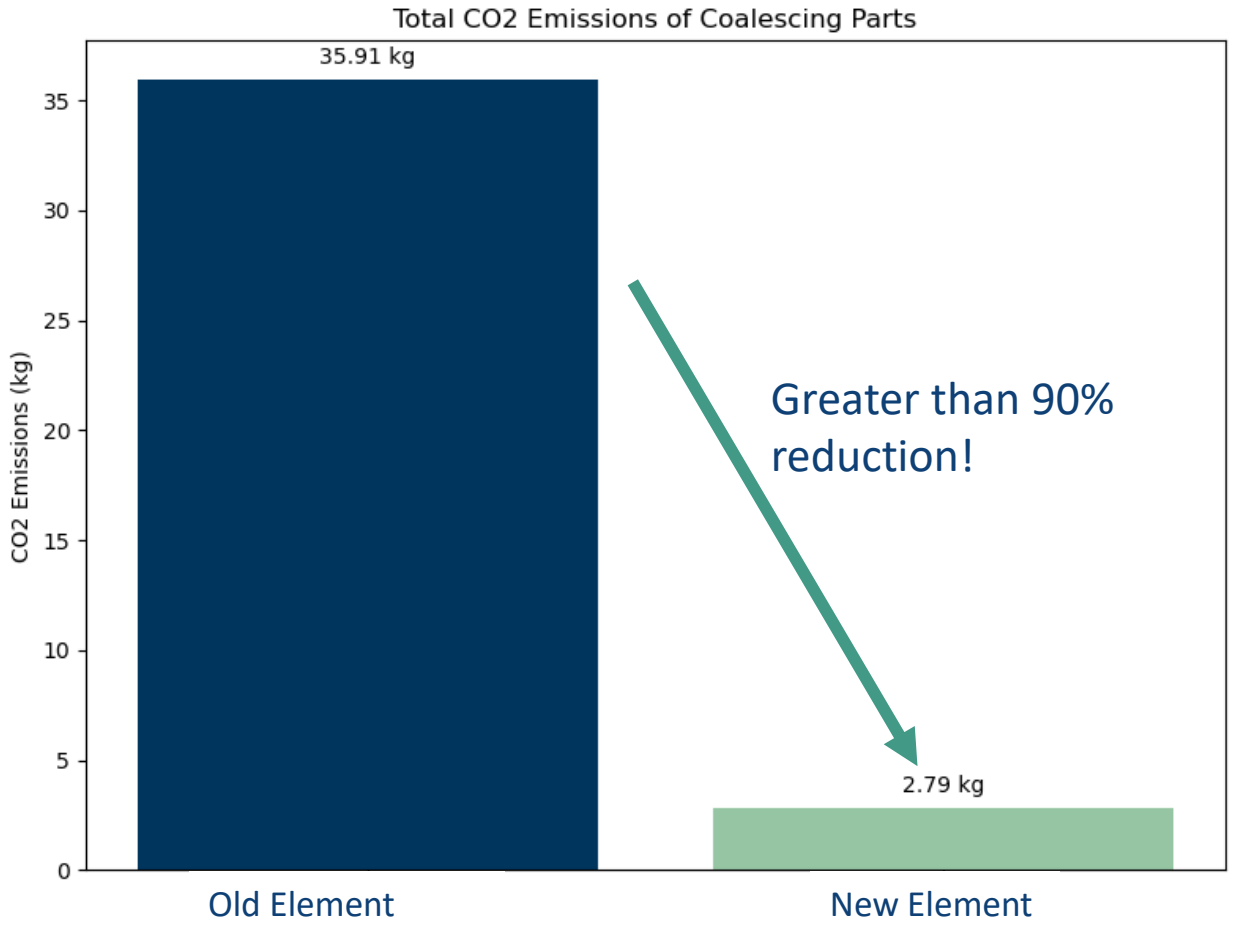


* After 6 hours

Comparison of materials in old and new elements



Comparison of Coalescing Media in old and new elements



02

Electronic Water Sensors (EWS)

AFGUARD® Electronic Water Sensor

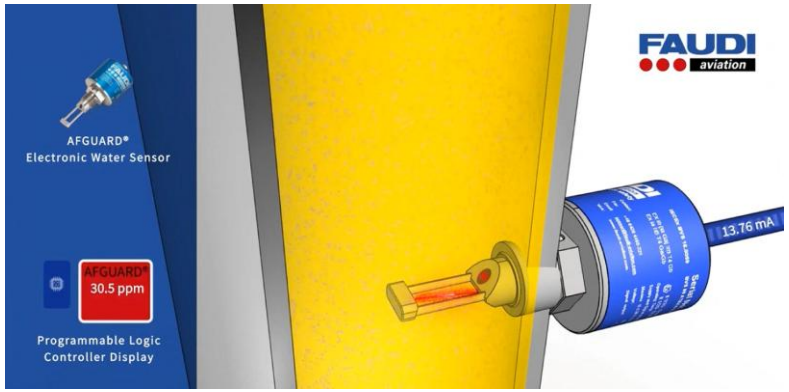
- AFGUARD® Electronic Water Sensor (EWS) is unique in aviation fuel condition monitoring
- AFGUARD® pioneers quality control, safety, and sustainability
- Engineered and manufactured in Germany, the sensor ensures every litre of fuel delivered to the aircraft is monitored
- Prevents free water from reaching the aircraft by triggering a deadman shut down when it detects contamination concentrations beyond the mandated threshold

Extended Filter Lifetimes & Sustainability Benefits with EWS

Filter Type	Changeout Interval (without EWS)	Changeout Interval (with EWS)
WBF	1 year	—
Filter Coalescers	3 years	7 years
Dirt Defence Filters	—	7 years

Electronic Water Sensors - Sustainability

- Proposals to base changeout on EWS data and media life
- Chemical Water Detectors vs Sensors
  - Reduction in CWD capsule hazardous waste disposal
  - Reduction in manual handling of aviation kerosene samples



What are the benefits of more sustainable products?

ENVIRONMENTAL IMPACT:

- Lower greenhouse gas emissions contribute to achieving climate protection goals.
- Supports corporate sustainability commitments.

MARKET & CUSTOMER VALUE:

- Aligns with increasing customer demand for eco-friendly solutions.
- Enhances brand reputation and transparency through credible reporting.

OPERATIONAL ADVANTAGES:

- Potential for long-term cost savings through material efficiency.

Questions?

Stop by booth 450 in Hall B6 if you have any questions!

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