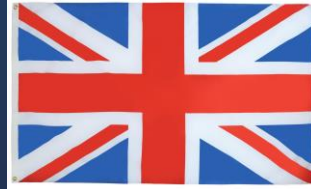


Aviation Fuel Handling and Training Symposium



Simposio de
Capacitación
para el
Manejo del
Combustible
de Aviación.



**Spanish Technical Translation
Services, for Aviation Fuel
Technologies & Regulations**



**Servicios especializados de
Traducción Técnica al Español, para
Tecnologías y Regulaciones del
Combustible de Aviación**

Jorge L. Muniz / **Lemico Liquid**

February 18-20,
2025/ Dallas -Texas

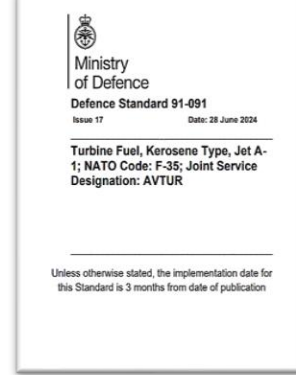
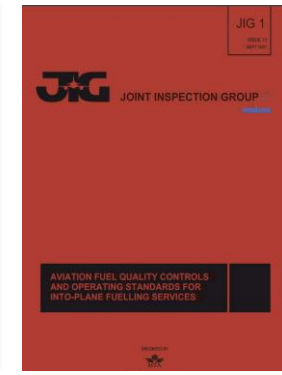
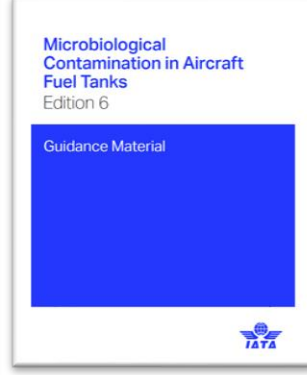


Work for

Lemico

Jorge Luis Muñiz Alcalá, Chemical /mechanical engineer specializing in aircraft aviation fuel and engines, graduated from the Civil Aviation Institute of Kiev. Holds a Master of Science degree of aviation fuels, lubricants, and special liquids. has completed courses and postgraduate studies on hydrant systems, filtration, and aviation fuel quality control at the National Institute of Aerospace Technology (INTA) in Spain. has also participated in other training and certification in the USA and Canada. began his journey in aviation fuel in 1988 and have since accumulated 37 years of uninterrupted experience.

LEMICO LIQUID Ltd., a company founded in 1958 under the name LTS. Over the years, LEMICO has built a strong reputation in the oil industry, with operations spanning multiple locations across the United States and Canada and south America . Specializing in aviation refueling equipment, LEMICO is recognized as a leader in its field and plays an active role in shaping industry standards, including representation in the IATA Microbiology Committee and the CSA B836 Group.



o English is the official language of aviation (according to ICAO), which makes most technical and regulatory documentation available in this language.

o Estimation of the percentage of documentation :80% - 90% of standards and technical manuals are in English.

o Main organizations that publish standards and regulations in English:

ASTM (American Society for Testing and Materials) **JIG** (Joint Inspection Group) **IATA** (International Air Transport Association) **EI** (Energy Institute) **API** (American Petroleum Institute) **FAA** (Federal Aviation Administration) **EASA** (European Union Aviation Safety Agency) **ICAO** (International Civil Aviation Organization)



El inglés es el idioma oficial de la aviación (según la OACI/ICAO), lo que hace que la mayoría de la documentación técnica y normativa esté en este idioma.

Estimación del porcentaje de documentación en inglés: 80% - 90% de los estándares y manuales técnicos están en inglés.

Organizaciones que publican normas y regulaciones en inglés:
ASTM (Sociedad Americana para Pruebas y Materiales.) **JIG** (Grupo Conjunto de Inspección.) **IATA** (Asociación Internacional de Transporte Aéreo.) **EI** (Instituto de la Energía.) **API** (Instituto Americano del Petróleo.) **FAA** (Administración Federal de Aviación.) **EASA** (Agencia de la Unión Europea para la Seguridad Aérea.) **ICAO/OACI**(Organización de Aviación Civil Internacional.)





- Spanish is the second most spoken language in the world.
- It is estimated that **over 500 million people** speak Spanish worldwide.
- **20 Spanish-speaking countries** would be around **400-450 operational airports..**
- In the **United States and Canada** , are estimated around **41 million people** speak Spanish as their first language, and approximately **12 million** speak it as a second language.



- **20 países** de habla hispana que cuentan con alrededor de **400-450 aeropuertos operativos**.
- Se estima que **más de 500 millones de personas** en el mundo hablan español.
- En los **Estados Unidos Y Canada** , se estima que alrededor de **41 millones de personas** hablan español como su primer idioma, y aproximadamente **12 millones** lo hablan como segundo idioma. Esto hace que el total de hispanohablantes en los EE. UU. Y Canada sea de aproximadamente **53 millones de personas**.



Language can indeed be a significant barrier to achieving quality education in the industry, especially in technical fields like aviation fuel and its regulations.

Communication and information are essential for carrying out all operations of any process with the required safety and discipline. The aviation industry has become increasingly aware of this need, and some leading fuel-related organizations and manufacturer, such as the **Energy Institute (EI)**, the **Joint Inspection Group (JIG)**, **IATA**, and **TCS**, among others, have started publishing their directives, technical manuals and regulations in Spanish. However, this is still not enough.

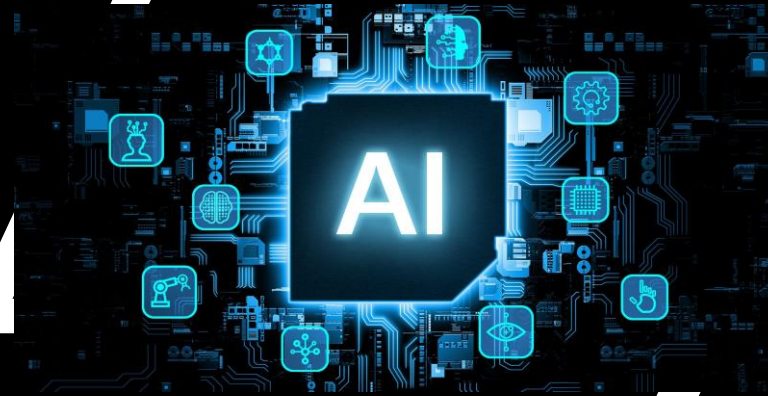


El idioma puede ser una barrera significativa en la educación dentro de la industria, especialmente cuando se trata de campos tan técnicos como el combustible de aviación y sus regulaciones.

La comunicación y la información son esenciales para realizar todas las operaciones de cualquier proceso con la seguridad y disciplina requerida. El mundo aeronáutico ha cobrado conciencia de esta necesidad y algunas entidades rectoras de la especialidad de combustible, como el Instituto de Energía de Londres conocido por EI y el Grupo de Operación conocido por JIG la IATA entre otros, han comenzado a publicar sus directivas y reglamentos en español. No obstante, no es suficiente aun



ChatGPT



- **Using artificial intelligence technology for translation is helpful, but it is not 100% reliable.**
- **Require specialized technical translation.**
- **Spanish is a complex and diverse language, with variations in vocabulary depending on the region where it is spoken. While this linguistic richness is a valuable cultural aspect. For example, there is Spanish from Spain, Caribbean Spanish, and Mexican Spanish.**



The logo for Google Gemini, featuring the word 'Gemini' in a blue and purple gradient font with a small purple star above the 'i'.

Why do aviation fuel technology and regulations require specialized technical translation?

- **High Technical Complexity:** Aviation fuel involves **advanced technologies**, specialized processes, and technical regulations that require specific and precise vocabulary.
- **International Regulations: Standards and regulations** (such as those from **IATA, EI, ASTM, A4A, JIG**) are constantly evolving and applied across **different countries**. It's critical that technical information is accurately translated to ensure uniform understanding of procedures and adherence to safety standards.
- **Precision and Safety: Translation and interpretation errors can have serious consequences on operational safety, as handling aviation fuel involves delicate procedures, from storage to delivery to aircraft.**
- **Global Market:** Spanish-speaking countries represent a significant **global network** in aviation, so high-quality technical translation facilitates **communication** between industry stakeholders, preventing misunderstandings that could affect operational efficiency.



¿Por qué la tecnología del combustible de aviación y las regulaciones necesitan traducción técnica especializada?

- 1. Alta complejidad técnica:** El combustible de aviación involucra **tecnologías avanzadas**, procesos especializados y regulaciones técnicas que requieren un vocabulario específico y preciso.
- 2. Regulaciones internacionales:** Las **normas y regulaciones** (como las de la IATA, EI, ASTM) cambian constantemente y son aplicadas en **diferentes países**. Es crucial que la información técnica esté correctamente traducida para garantizar que las prácticas y procedimientos sean entendidos de manera uniforme y se mantengan los estándares de seguridad.
- 3. Precisión y seguridad:** Los errores en la traducción pueden tener **consecuencias graves** en la seguridad operacional, ya que el manejo del combustible de aviación involucra procedimientos delicados, desde su **almacenamiento** hasta su **distribución** en las aeronaves.
- 4. Mercado global:** Los países de habla hispana representan una gran **red internacional** para la aviación, por lo que una traducción técnica de calidad facilita la **comunicación** entre los actores de la industria, evitando malentendidos que podrían afectar la eficiencia operativa.



The availability of technical documents and standards in Spanish in the aviation industry is the foundation of quality education, which is essential to ensuring **Safety, Efficiency, inclusion, regulatory compliance, and industry development** in the global community.

La disponibilidad de documentos técnicos y normas en español en la industria de la aviación es la base de una buena educación la cual es fundamental para garantizar la seguridad, la eficiencia, la inclusión, el cumplimiento normativo y el desarrollo de la industria en la comunidad mundial

Translating regulations, standards, and technical documentation accurately is a challenging and expensive task, especially when it comes to industries like aviation fuel. The expertise needed for precise translations is high, and it's much more efficient for organizations and manufacturers to invest in providing reliable translations. This approach ensures that fuel industry Spanish speaking workers, even those at smaller or more remote airports, can fully understand and adhere to safety standards and operational guidelines without the added challenge of language barriers. It's a practical solution to maintain consistency and compliance across global operations.

Bridging the Language Gap: Our Contribution to Education and Translation Solutions for the Industry

Superando la Barrera del Idioma:
Nuestra Contribución Para la educación en las Soluciones de Traducción para la Industria

75 GamGrams

75 (Publicaciones ,GamGrams)

(191 Pag.)



The translation of Gammon's valuable GamGrams into Spanish



La versión en español de los valiosos boletines "GamGrams "de Gammon

Easy-to-understand articles providing guidance on aviation fuel operations. Written in plain and clear language, making them accessible to a broad audience beyond engineering graduates.

Artículos breves diseñados para asistir en el manejo de las operaciones con combustible de aviación. redactados en un lenguaje claro, y no están elaborados exclusivamente para ser entendidos solo por ingenieros graduados.

GamGrams

"Spanish version".

[GamGrams - Gammon Technical Products](https://gammontech.com/education/gamgrams/)

<https://gammontech.com/education/gamgrams/>

Bridging the Language Gap: Our Contribution to Education and Translation Solutions for the Industry

Superando la Barrera del Idioma:
Nuestra Contribución Para la educación en las Soluciones de Traducción para la Industria

2 Charters (2 Capítulos) ,
2 Annex (2 Anexos)
(161 Pag.)

8 Charters (8 Capítulos) ,
6 Annex (6 anexos)
(315 Pag.)

5 Charters (5 Capítulos) ,
14 Annex (14 Anexos)
(465 Pag.)

We have worked on three documents that compile fundamental technical information and operational procedures, sourced from the review of approximately 80 manuals , technical documents ad technical presentation in English

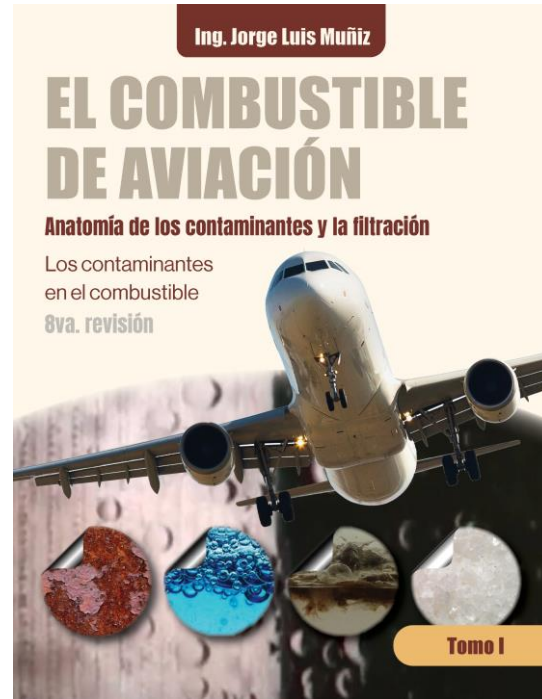
These documents are not standards, technical specifications, or manuals. They are a source of detailed and easy-to-use technical and operational information on the topics covered in each title, for consultation and study..

Estos documentos no son estándares, especificaciones técnicas ni manuales. Son una fuente de información técnica y operacional detallada y fácil de usar sobre los temas que se abordan en cada título para ser consultados y estudiados

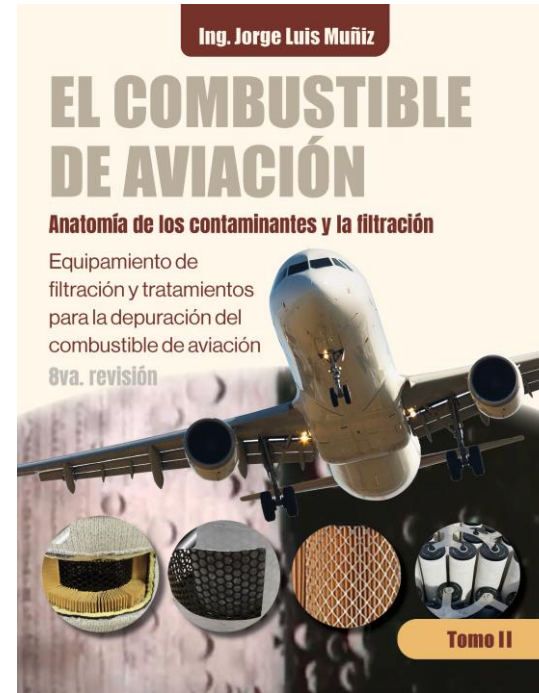
^o I borrowed the title *GramGram 4* from Jim because I liked that way of naming it to cover the entire topic.“



Aviation Fuel
Anatomy of **Regulation and Pressure Control** in fuel Supply Systems



Aviation Fuel
Anatomy^o of Contaminants and Filtration - Volume I: **Contaminants in Fuel**



Aviation Fuel:
Anatomy of Contaminants and Filtration – Volume II: **Filtration Equipment and Fuel Cleaning Processes**

I would like to finish my presentation by expressing my sincere gratitude to Lemico liquid the company I'm working for

to Jim Gammon for his support and for giving me the opportunity to be here. This recognition is crucial for my professional growth and the success of my goals.

I would also like to thank Bill Moody (EATON), Tom Boriack(Cla-Val), Stan Zelek(Gammon) and John Leonard (facet filtration) for their technical support and contributions.

We are committed to supporting the industry in addressing this complex and demanding task. I am truly grateful for the opportunity to contribute to education in the aviation fuel industry for Spanish-speaking countries.

QUESTIONS ?