

## SAG Alutech Nederland

Company presentation

# Our location

# SAG

Progress in Aluminium

## **Address:**

Katwijk, Nederland

## **Our passion worldwide:**

Austria - Headquarters

Sweden

Nederland

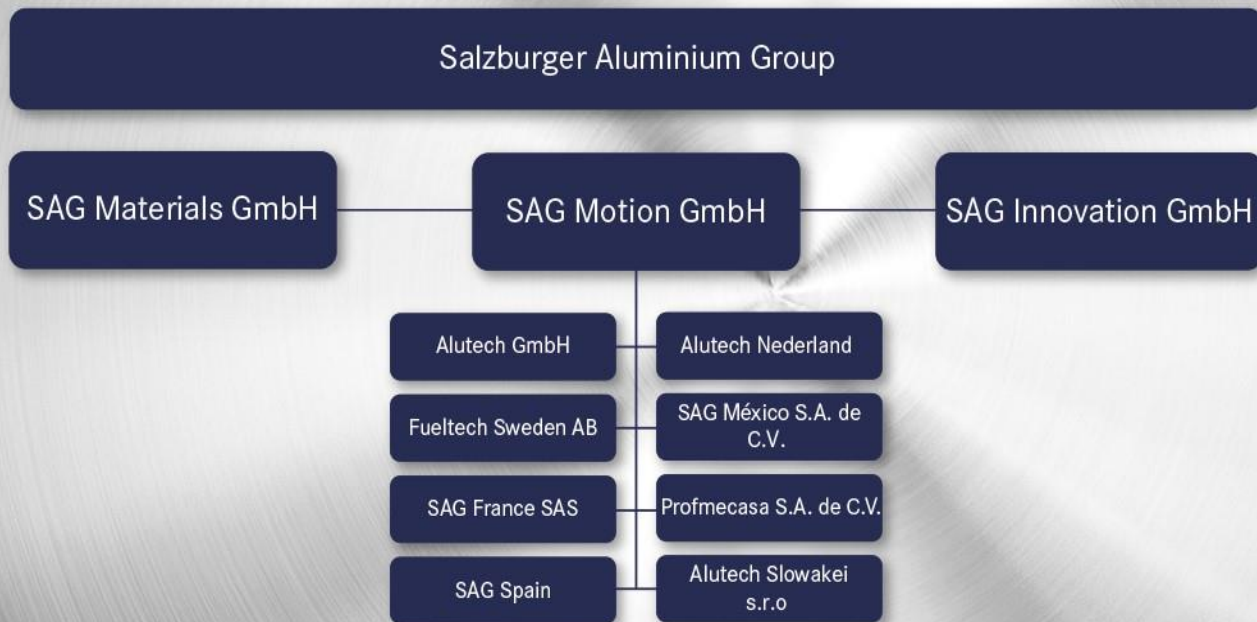
Slovakia

France

Spain

Mexico





# Alutech Nederland



Alutech Nederland B.V.  
Turnover 60 Mill. €  
240 Employees  
5 days, 3 shifts

## Yesterday

Start in 1916 (as van Reekum N.V.)  
Registered in 1927 (as Slotboom)  
general sheet metal production

## Today

European automotive tier-1 supplier of  
aluminum, steel and stainless steel fuel  
tanks to commercial vehicle industry  
(trucks & buses)

## Tomorrow

European automotive tier-1 supplier of  
aluminum, steel and stainless steel fuel  
tanks to commercial vehicle industry  
(trucks & buses)

Within the next 5 years Alutech Nederland B.V. wants to be the **leading** organization in producing and supplying energy storage systems. This will be achieved by innovation of technical and logistics processes and by actively developing related markets, products and applications. All in a socially responsible manner and with healthy growth.

Alutech Nederland B.V. wants to achieve this by means of a **flexible organization** with **highly trained and motivated employees** who are able to work in **multidisciplinary teams** with a **proactive attitude** towards customers, organization and suppliers.





- **Automated welding processes** dedicated for production of high volumes
- **Specials department** for small series, specials and prototypes
- **Typical steps** in the production process:
  - Deep drawing
  - Rolling
  - Welding
  - Powder coating
  - Assembling (optional)
- **Materials used:** aluminum, Aluminized steel
- **Logistics:** Bulk delivery's and sequence delivery's

# Certified Quality Standards

Commitment to quality improvement is an ongoing process for SAG - with measurable and common objectives. High quality standards count for us both in terms of the business strategy and personal responsibility.

**IATF 16949 : 2016**



**ISO 9001**



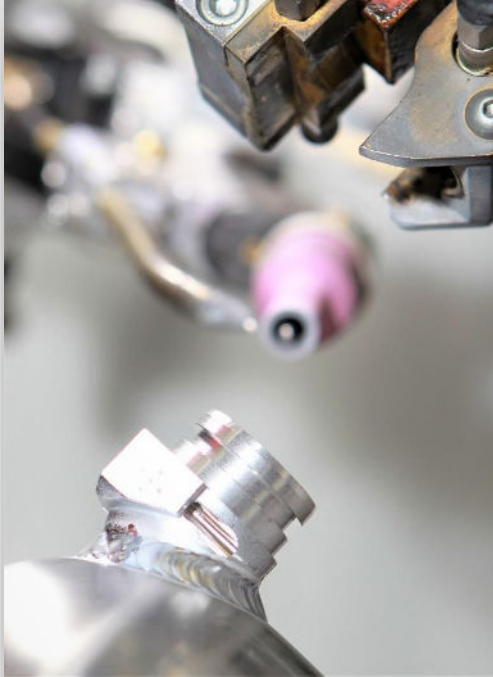
**ISO 14001 : 2015**



**OHSAS 18001**

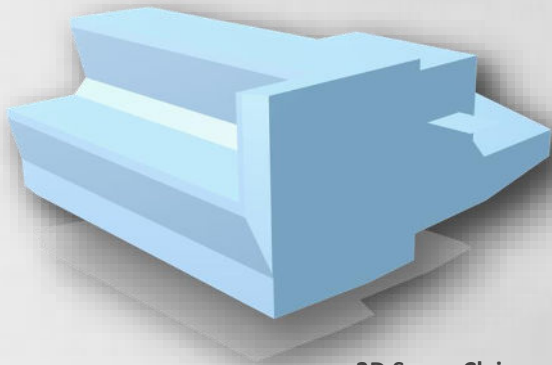


# Capabilities



- Concept Design
- 3D Modelling CREO / Catia
- Sheet metal design
- FEM Analysis
- Document Management
- Project Management
- Prototyping
- Group expertise





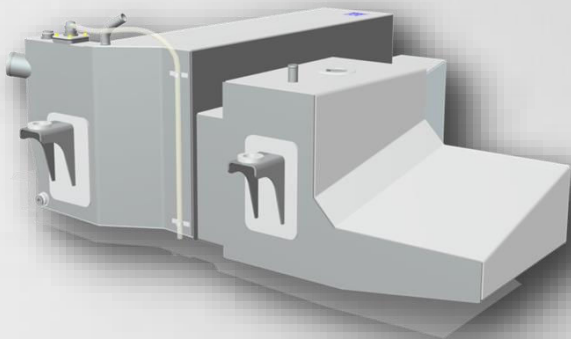
3D Space Claim

Together with the customer a list of demands can be made. This means that all demands and wishes will be written down in a document with mutual agreement.

When the demands of a new product are clear, (concept) design can be started. With PTC Creo Parametric 3D constructions can be designed in (close) corporation with the customer.

When starting with the design, first a Space Claim is set up.

The Space Claim is part of a Parametric design and is used as reference for the design of single parts. This is a so called 'Top-Down' design.

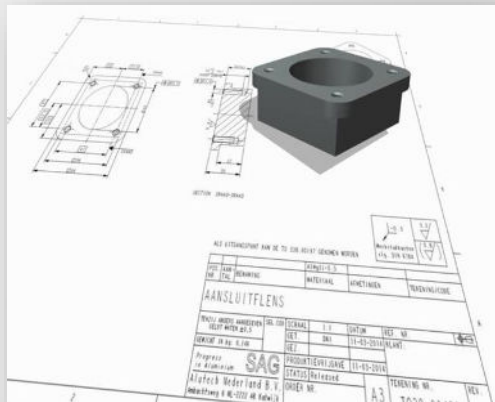


When the Space Claim has been set the individual parts can be designed. With the use of the so called 'Top-Down' design this can be done easily.

All data from the space claim can be used to design the parts. Parts of the space claim will be copied to the individual parts and will be used to define its geometry.

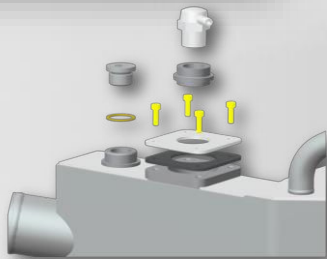
Eventually, all the parts are made and the design is completed with all its mounting parts etc.

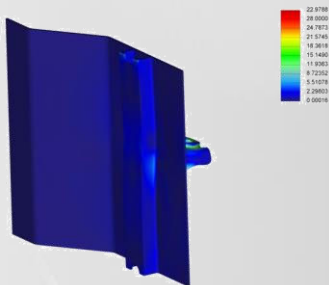
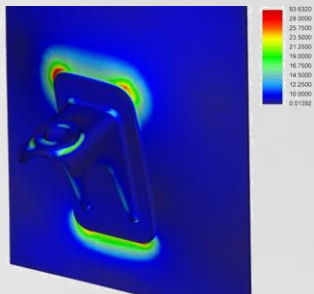
# 3D Modeling



When the design is finished and approved by the customer, drawings of the individual parts can be made. On the drawing the dimensions, tolerances and finishing is defined. With the drawings the parts can be manufactured.

If the design is very complex, special assembly lay-outs can be made to support production and assembly. Step-by-step exploded views defined in these lay-outs can help during the assembly of the final product.



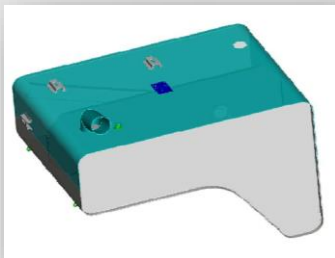


In some cases the requirements of a construction could introduce high loads on the construction or on some of the parts. With the loads and the constraints a FEM analysis can be performed on both the complete construction or on individual parts. With FEM analysis the expected failure can be minimized.

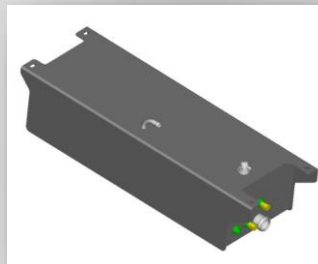
When the (Von Mises) stress exceeds the limits, the construction can be optimized by adding or leaving material in strategic places. Or in some cases it has to be changed to another material.

# Special products

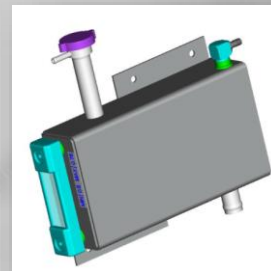
**Bus wheel arch tank**



**Diesel tank mounted in chassis**



**OEM Truck coolant tank**



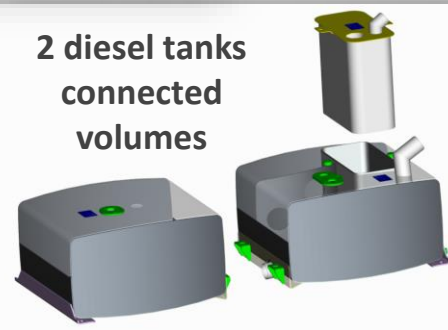
**level sensor mounted**



**Low-entry bus diesel tank (mounted partly under entry)**



**2 diesel tanks connected volumes**



# Prototypes



To validate a design we have several options in house. We have a 3D printer to validate some small parts on form and fit function.

When the parts are to big to print or a actual prototype is required we have several options to accommodate that. We have a large variety of machines to cut and bend sheet metal parts as we have conventional machinery for making milled or turned parts. Because of the current work experience in the workshop we also have fast experience in welding thin walled sheet metal parts.



# Production processes

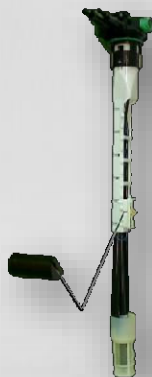


- Test of filling speed of the tank
- Sealings for Starhole and filler neck
- % H<sub>2</sub> to test with
- Test speed of sniffing system
- Re-use of gas mixture
- Determine exact tact time
- Determine flushing time

# Possible solutions against fuel theft



Mechanical  
lock



Original float sensor



Blackbox or CANbus  
interface

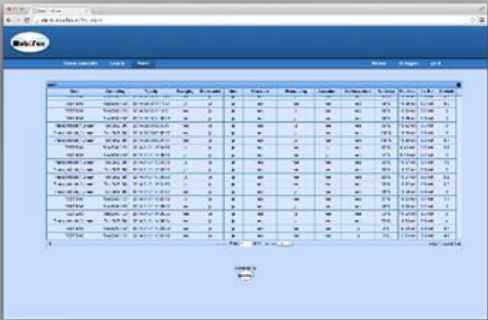
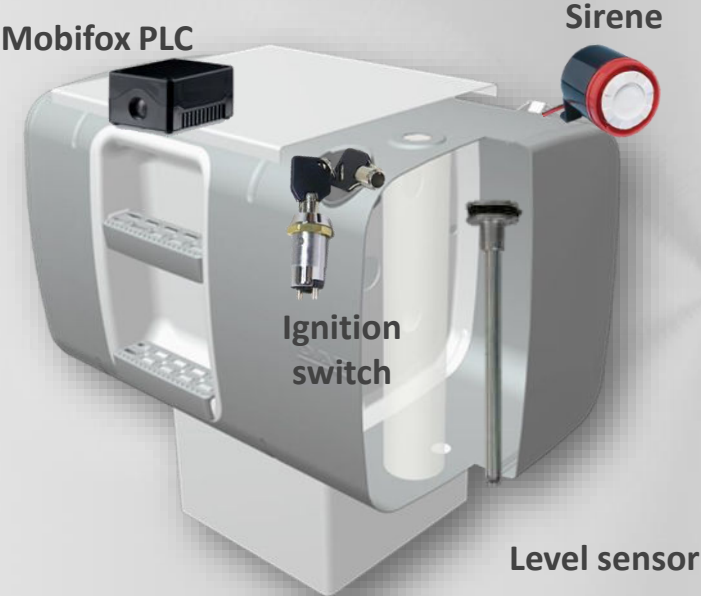


Motion  
detector



External  
sensor

# Demonstration 1: Fuel Theft Alarm



SAG Group – Progress is our passion



**Let's stay in touch!**

visit us at [www.sag.at](http://www.sag.at)

