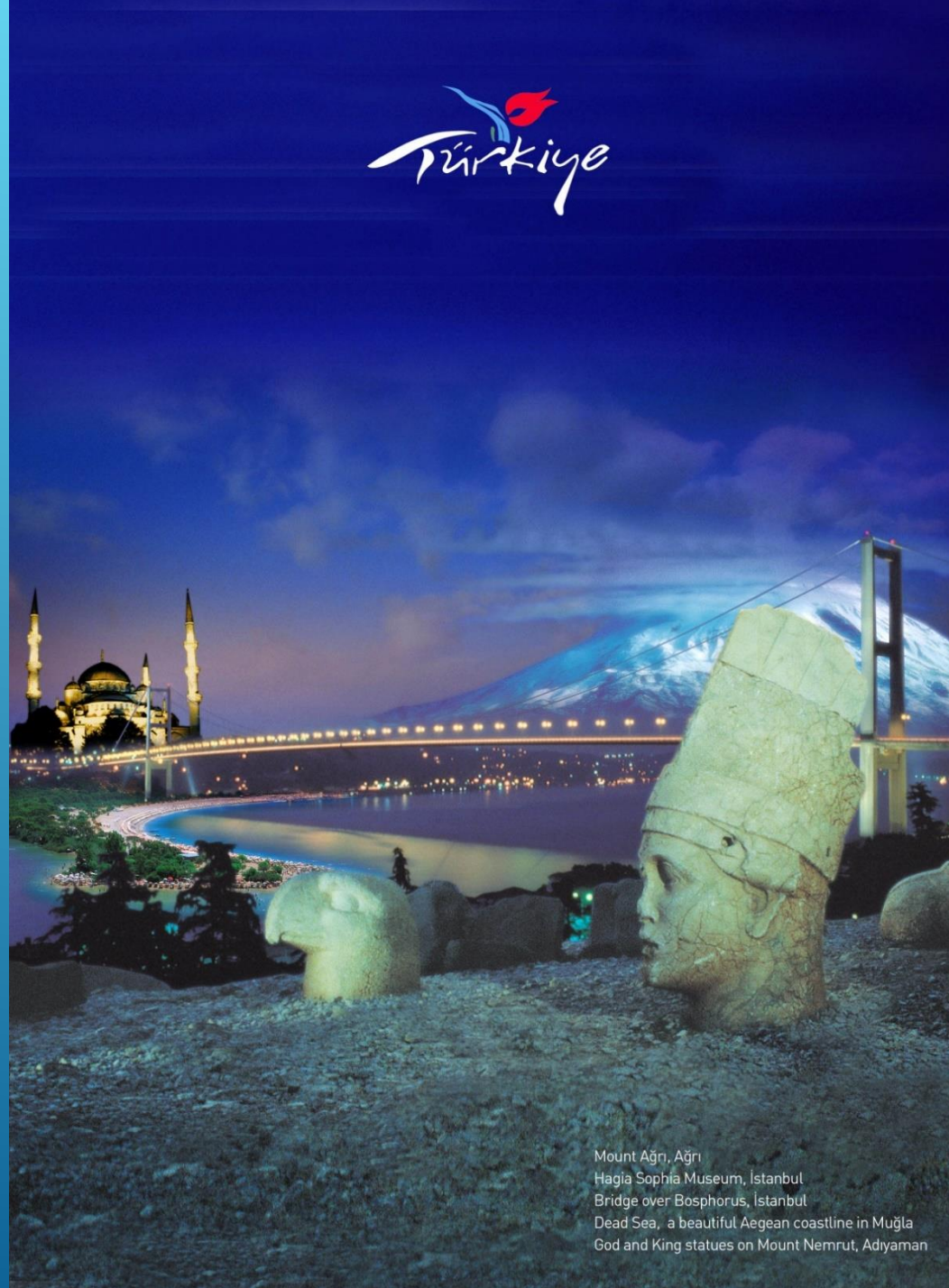


**Single piece
high volume
rotational moulded
diesel tanks
with Adblue section,
having
integrated baffles**

by Celal Beyssel
Bursa / Turkey
cbeyssel@floteks.com.tr



**HOUSTON
TEXAS**

**OCTOBER
2019**

www.floteks.com.tr
www.floplast.com.tr
www.flopark.com.tr

Mount Aḡn, Aḡrı
Hagia Sophia Museum, İstanbul
Bridge over Bosphorus, İstanbul
Dead Sea, a beautiful Aegean coastline in Muḡla
God and King statues on Mount Nemrut, Adiyaman

Today, I am going to talk about a new product and production method of Floteks, which I hope will open new horizons to the rotomolding industry.

My presentation consists of 3 sections.

First, I will show you shortly the credentials of my company Floteks to be able to develop something new.

Then, I will tell about the development of a new product for OEMs, also some testing methods.

Several thin, white, parallel diagonal lines are positioned on the right side of the slide, extending from the middle towards the bottom right corner.

80 % of Floteks' production is for the automotive OEMs.

Automotive Industry gives a rotomoulder endless choices to produce various articles ...

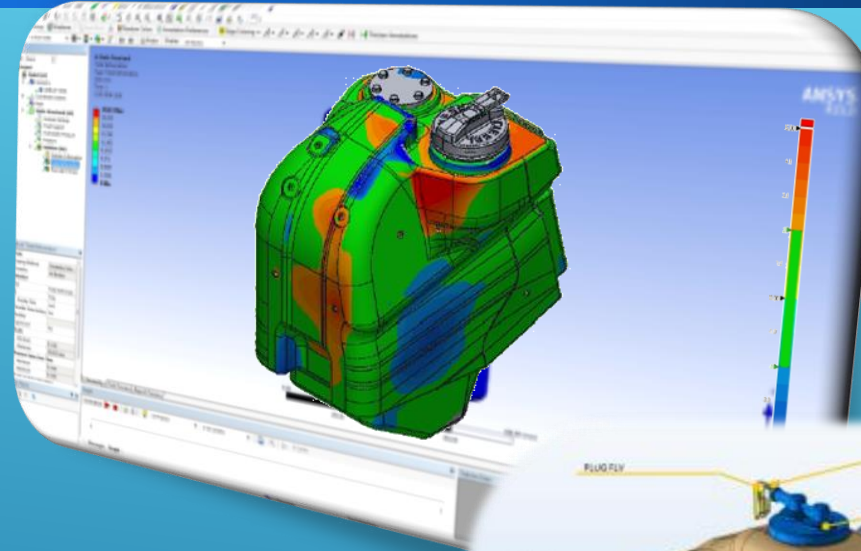


Of course, if he/she is willing to pay the cost...

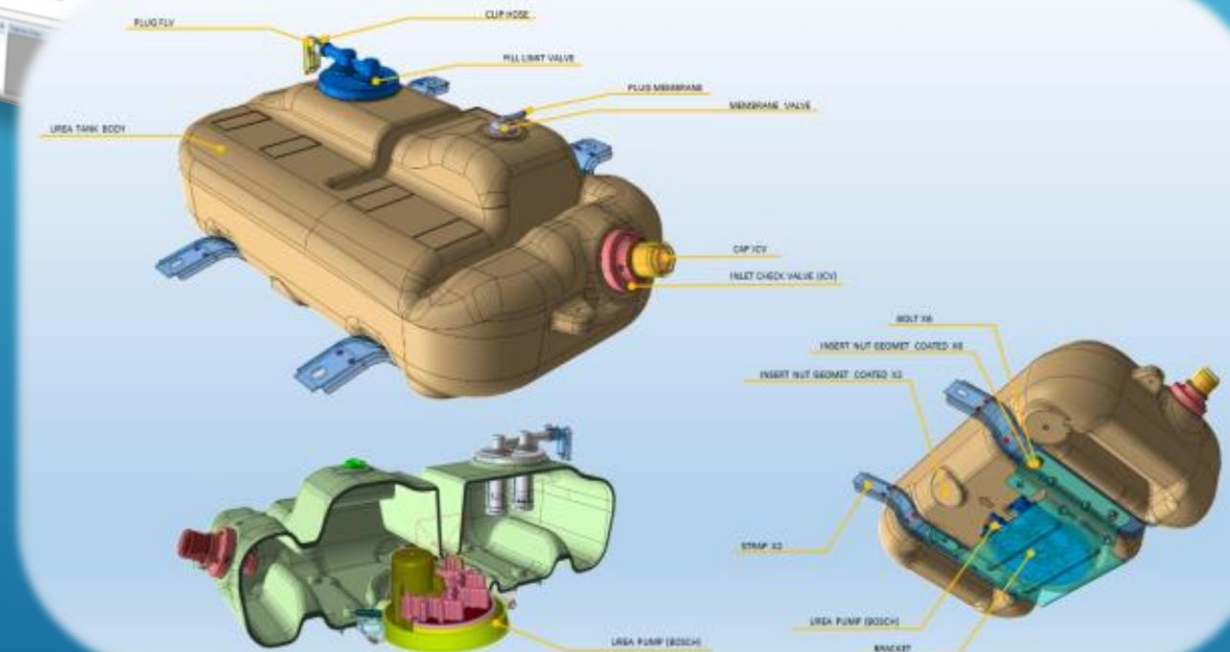
DESIGN DEPARTMENT



- **Product design**
- **Mold design**
- **Accessory knowledge**
- **Finite Element Analysis;**
- **Prototype development**



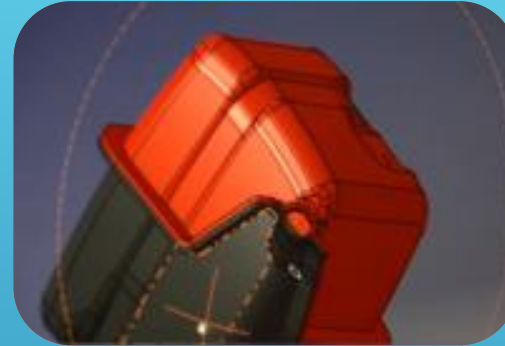
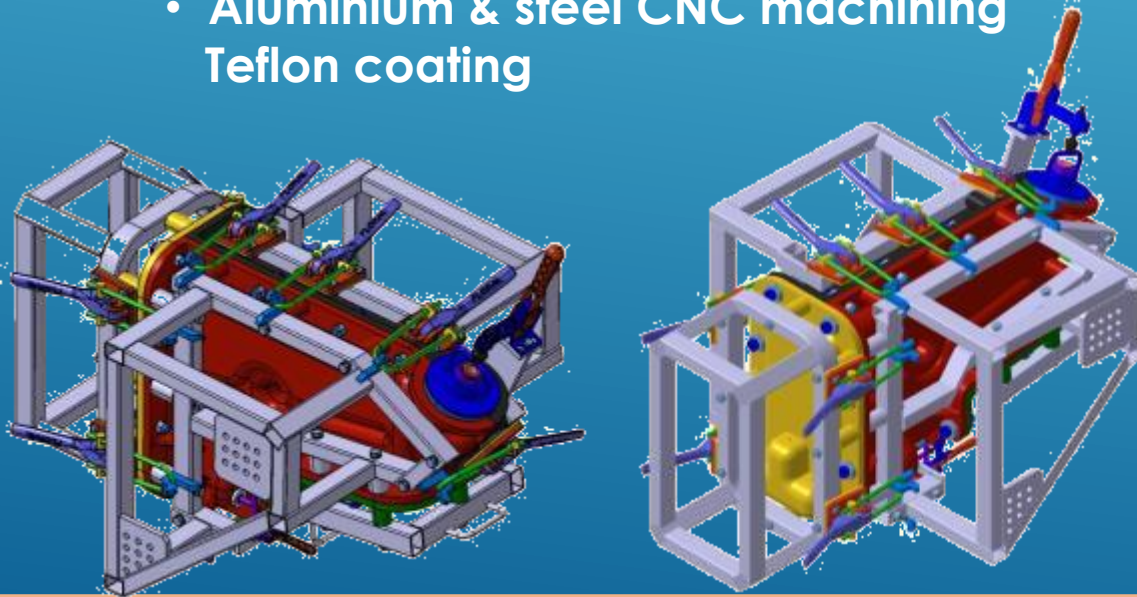
SOFTWARE



MOLD CONSTRUCTION



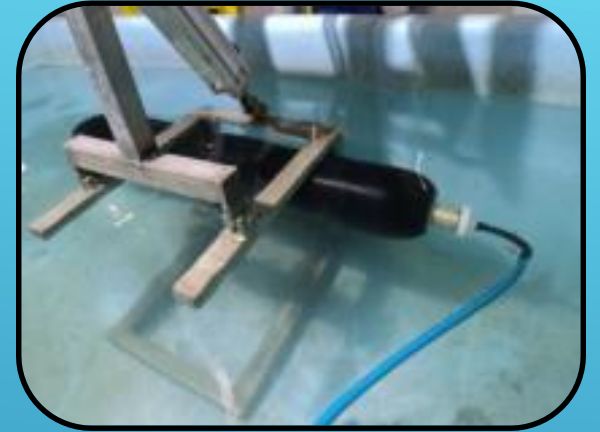
- Cast and machined aluminium molds
- Steel mold construction
- Mold maintenance, repair and alteration
- Designing jigs, various devices & attachments
- Aluminium & steel CNC machining
- Teflon coating



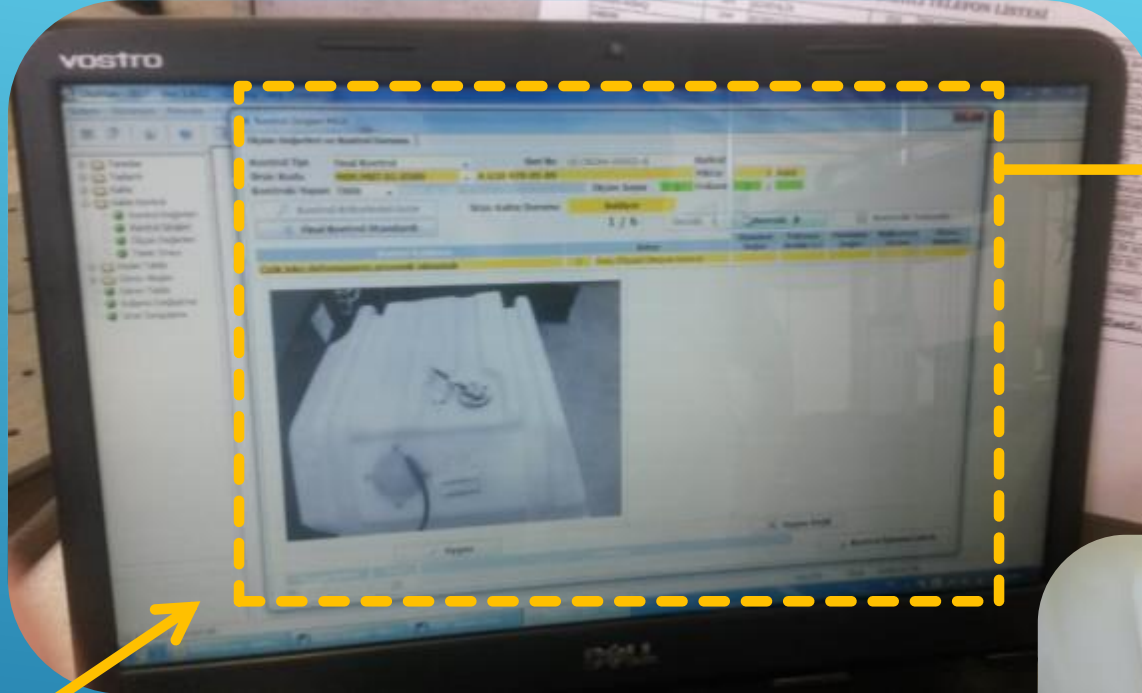
A good
Rotomolding
machine...



ASSEMBLY AND QC STATIONS, USING ALSO A ROBOT...



Traceability and Quality Control



Current
Final Control
Standard



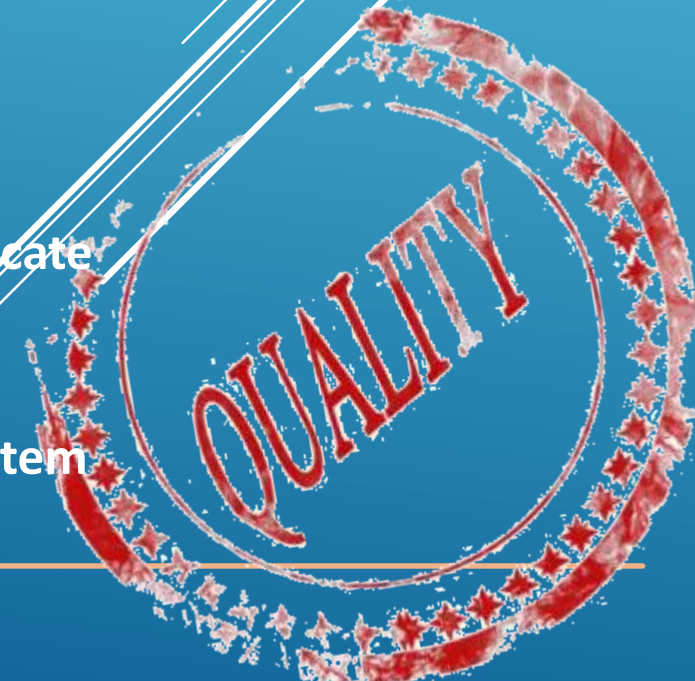
**R&D department,
to innovate new products and raw materials and test them.**



CERTIFICATIONS AND APPROVALS



- ISO TS 16949:2009 Quality Management System Automotive
- TS EN ISO 9001:2008 Quality Management System
- TS EN ISO 14001:2004 Environmental Management System
- TS EN ISO 13598-2: 2009 Plastics piping systems, cable management systems and Menhols
- TÜV - ECE 324 diesel tank tests
- TÜV - ECE R34 diesel tank tests
- TÜV - EN 1176 Playground Safety Certificate
- OHSAS 18001 Occupational Health & Safety Management System



► Experienced personell...



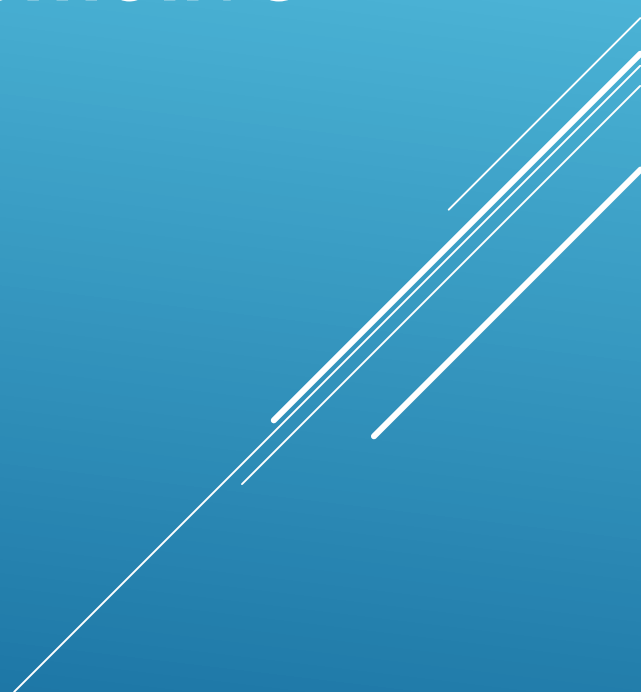
All these steps need a lot of investment

That's why only
2-5 % of the
rotomoulders
worldwide can
deliver to the
automotive
industry.



We have started rotomolding for the automotive industry in 1983.

Some of our products...



Diesel Tanks...



TRUCK AND TRACTOR AIR DUCTS AND SNORKELS



EXPANSION TANKS



Cabin Roofs...





Lockers and boxes...





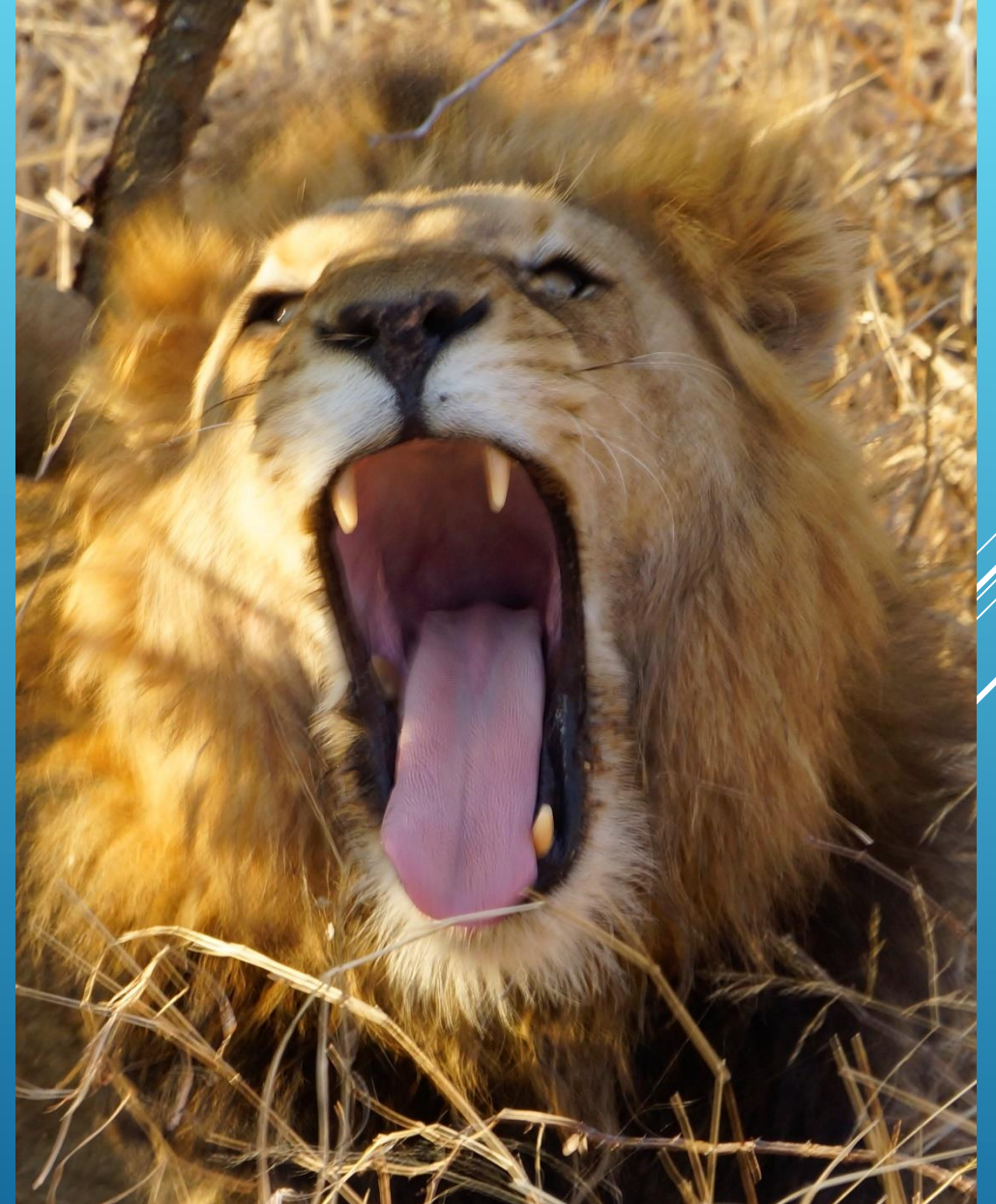
Some may
think
rotomolding
for the
OEM's is like
being in a
rose
garden....

Take a
closer
look at
the rose:
the thorns
may hurt
...



**Most of the time,
OEM customers are too big
for the rotomolding company...**

**They are never loyal,
they are always hungry ...**



**SO, FOR A ROTOMOLDER,
TO INNOVATE CONTINUOUSLY IS
THE ONLY WAY TO BE
AHEAD OF THE COMPETITION....**

Our newest product for the truck industry...

**A single piece rotomolded tank with baffles and
separation Wall, for the Adblue section...**

Several white lines of varying lengths and orientations are positioned on the right side of the slide, extending from the middle to the bottom right corner.

We have seen that the truck industry uses alu tanks mostly, if the tank volume is bigger than 200 - 250 liters.

The reasons were; Alu was

- **Light**
- **Shiny**
- **Easy to weld baffles for bigger volumes**
- **Passes sloshing tests**
- **Strong enough**

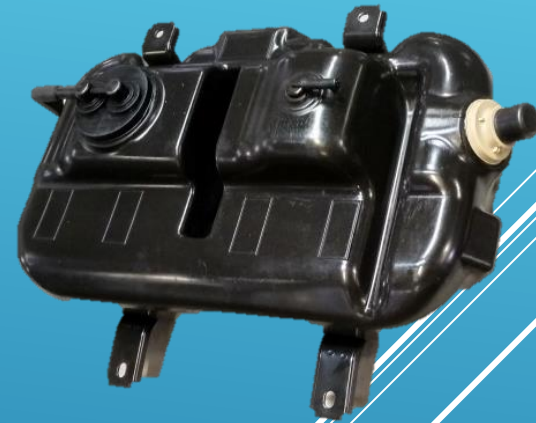
So, Plastic tanks for Heavy Commercial Vehicles were not used widely..

However, a new gamechanging problem arose:

Every truck nowadays must use an adblue tank next to the diesel tank, to comply with environmental laws.

Adblue is an aggressive chemical and can only be stored in stainless steel or polyethylene tanks.

This gives the rotomolder a good opportunity to sell rotomolded adblue tanks



This is the state of the art in Europe how a diesel and adblue tank next to each other are placed.

Two different 4 heavy brackets...



We had an idea in Floteks:

- **Let's combine these two tanks,**
- **Make a single step production,**
- **Have a product without welding lines...**
- **Produce one plastic tank with only 2- 3 straps saving 15 - 17 kg per strap.**
- **Paint the product to an aluminium color.**
- **Reduce the aluminium + adblue tank price by at least 20 %.**

This would easily persuade the customer to replace the aluminium diesel tank + plastic Adblue tank with a rotomolded single combined adblue and diesel tank plastic tank.



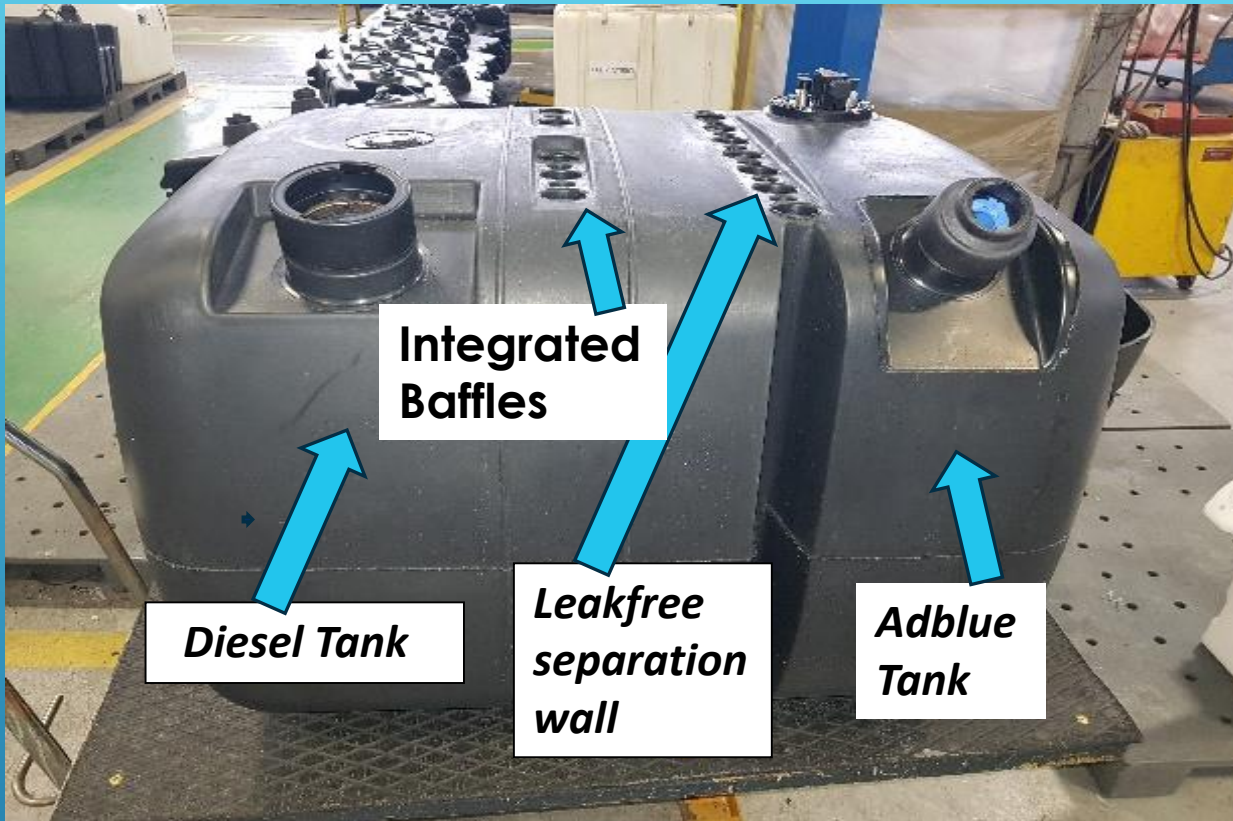
**250 liter rotomolded
polyethylene
diesel tank with
50 liter
Adblue section**

**5 % lighter than
aluminium tank**

Aluminium Color...

Only two straps

**Cheaper than
aluminium + plastic
combination**

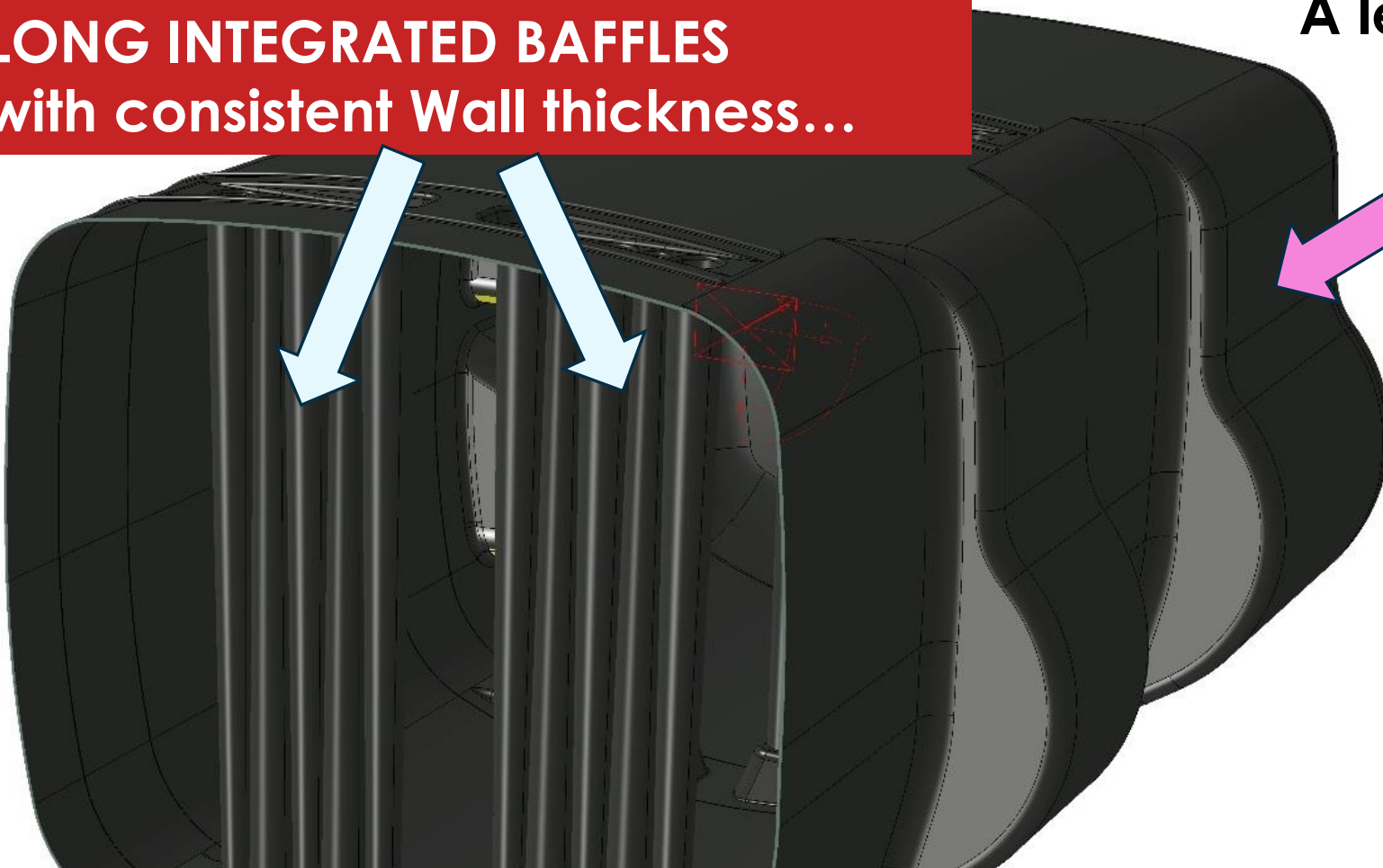


***Single piece rotomolded combined
Adblue + Diesel Tank for Trucks...***

A gamechanging development for the OEMs

**LONG INTEGRATED BAFFLES
with consistent Wall thickness...**

A leakfree adblue section...



SINGLE PIECE product....COMPTANK

A FILM FOR 2 MINUTES...



THANK YOU