

## Minutes 4<sup>th</sup> March

Everybody is present

No comments on the agenda

Minutes were too late. So next meeting Mats will bring a pie. The meeting after that Jurjen will bring some pie.

No announcements

### SSA discussion

- Min-max values of results
  - Only the error of the pressure has been taken into account
  - The volume also has an error, but this was discussed previously and wasn't logical
  - Nothing will be changed in the diagrams, but an explanation will be given
- Complex model
  - Intake stroke has been added
    - Mass of the air intake is 1.5 times bigger as in the simple model
  - $P_{\text{fuel}}$  doesn't correspond with the density measured
  - Making sure that the same values of the variables are used in the simple model, complex model and the measurements
  - With a complete cycle an unexplainable line is plotted
  - Blow by is too difficult to do correct. An assumption can be made of the percentage of air escaping
  - An assumption can be made about the friction
- Density of fuels
  - A scale can be used
  - Gasoline used during experiment is regular gasoline (E5)
- Introduction of report
  - It is written for somebody who doesn't work at the company. But the report has to be written for the company
- Fuel cost and exhaust fumes
  - Trading costs are used. Assumed that gasoline-ethanol mixture has the same amount of excise as gasoline
  - The calculation of the exhaust fumes for the mixture are ready to use for when the mixture is known
    - They want to know the emission in kg/J. This has to be added
  - Gasoline has more particulate matter than the mixture
  - Hydrocarbon added with ethanol mixture, does this effect the emission?
- Go/No-go presentation
  - The presentation has changed to suit the needs of the audience
  - Picture has to be added on the first slide
  - The maximum volume of the cylinder of the experiment doesn't correspond to the ones in the models
  - The name of the theory used in the model can be mention. The use of equations only when it supports the story

## New SSA

- Explanation of the complex model for the report (**Thijs**)
- Explanation of the simple model for the report (**Jurjen**)
- Explanation of the min-max value of the volume (**Wouter**)
- Finishing the Go/No-go presentation (**Jaap**)
  - Correcting the graphs (**Wouter**)
- Advantages/disadvantages ethanol mixture, corrosion (**Mats, Sam**)
- Continuing on the complex model (**Tim, Esther**)
- Correcting the introduction for the report (**Mats**)
- Comparison of the simple model and the experiment for report (**Maarten**)

## Evaluatie

### Groep

- Mats heeft goed voorgezeten
- Wouter stelde kritische vragen over het complexe model
- Jaap heeft goed ingelezen en kon dus met kritische opmerkingen komen

### Tutor

- In het verslag is het beter om het woord 'formula' te verwijderen. Iets als 'equation' is beter
- Wouter:
  - Veel meer input, ga zo door
- Sam:
  - ZSO redelijk
  - Tijdens vergadering stiller. Jaap had het idee dat hij Sam soms onderbrak
- Mats:
  - Goede voorzitter, goed overzicht en strakke tijdsplanning
  - Wouter (of andere mensen die iets wouden zeggen maar er niet doorheen kwamen) het woord gegeven
  - Discussie op het goede moment afgebroken
- Jaap:
  - Zoals altijd veel en goede input
- Esther:
  - ZSO redelijk, alleen voor vier mensen was het aan de magere kant
  - Tijdens vergadering goede input
  - Duidelijke bordschrijver
- Jurjen:
  - Kwam wat traag opgang tijdens de vergadering
- Thijs:
  - Stil tijdens de vergadering. Reden: gisteravond
  - Verplichting naar elkaar om bij te blijven tijdens de vergadering
- Tim:
  - Altijd kritisch en goede input
- Maarten:
  - Wat stiller
  - Bij het verdelen van de ZSO meer aan het woord