Location: Home
Tutor: Harm Gilsing
Chairman: Vito

Secretary: Mats
Whiteboard writer: Joey

Minutes Meeting 2/03 – 4GB10 group 7

Opening:

- Everyone is present, except Alexandra which was a little bit late
- No amendments
- SSA's handed in by everyone on time
- Minutes fine and agenda

Announcements:

- Tutor: info about the final assignment will be announced this week
- Tutor: fill in the tutor evaluation for this week, prepare the peer reviews for Friday
- Have one overview on Friday about the peer review

Presentation Mihai's:

Dolf:

- Presentation fine, presentation is missing a storyline, we have the research questions and we try to answer using this, not too much detail about some technical skills
- Better images instead of just SSA
- Lot of text

Mats:

- Word document about improvements

Alexandra:

- Good presentation
- Agree with Dolf, bullet points instead of lot of text

Thomas:

- [TASK] Make the word document available for everybody
- make a table for slide 7

Tutor:

- Presenting skills good level
- Max 7 minutes for presentation
- A bit less focus on the biofuel, not too much detail about it
- Maybe remove slide 4 ???
- Explanation on theoretical model and assumptions made
- Slide 14th mention the fuel used

Dolf:

- Explain the theoretical model
- How we use the voltage to get the pressure and volume

The presentation is on Canvas Conferences, it is up to use if we listen to it

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Discussion:

Vito and Dolf experiment:

- Error in the method we use, sometimes there is extra time due to not stopping the recording before turning of the engine

Model Mats:

- A small mistake was made columns and data collected are different pv diagram
- With no fuel, the higher pressure is the TBC (assumption), some research still needs to be done.
- Q: is ok using a filter
- A: it is not necessary to use, the graph is nicer to look at, do not use with calculations
- Q:In canvas it is mention not the take the higher pressure as a TBC
- A: when taking it on an engine without fuel it is okay to take it because there is no extra pressure created from the fuel
- Use code written right now and compare the data for different fuels

Alexandra SSA:

- Q: did you derived some equations for yourself
- A: the equations were found on the internet, the citations were not added
- Use the special heat for the calculation but do not know how legitimate are they because the pressure and temperature are not know
- The value obtained offer a good estimation
- The specific heat value are in the NASA dataset
- Q: Can we make a next SSA with combined fuel consumption
- Not really related but we can use them in the report
- Think how to implement it in the report
- Q Tutor: Do you take a constant value for the heat?
- A: Better to use the NASA tables in order to calculate the efficiency
- Thomas and Dolf use that, they calculated, they know how to do it.

Lars:

- Lars, ask questions on what to do earlier than 9h45 in the evening
- Make an arrangement in the symbols for voltage and volume (they are similar) should be changed in the symbol list
- Keep the symbol the same, but mention which s which
- Maybe mention u as voltage ???
- Equation 5 missed one bracket
- Use bullet points or write text for the description of variables: Better to explain it as a text, some should be explaining some not; explain the variables after the first time you use it (*tutor)

New SSAs:

- pv diagram experimental data ***Dolf***

- find double tooth ***Dolf***

- implement NASA tables in the efficiency + write the report: ***Lars & Joey***

- finish presentation: ***Mihai & Alexandra***

- implement the loses on the real file (use the CV values, used for mixture, use at the simple theoretical model for how to calculate CV for a mixture, calculate the gas constant): ***Alexandra*** **:**

```
Cv =750;
Rg = 300;
NSteps=NCa/dCa;
for i=2:NSteps
Ca(i)=Ca(i-1)+dCa;
V(i)=Vcyl(Ca(i), Vc, Vd); % New volume for current crank-angle
m(i)=m(i-1); % Mass is constant, valves are closed
dV=V(i)-V(i-1); % Volume change
[~,dQcom(i)] = HeatReleased(Ca(i), AF, mfurate, Yfuel, Yair, Mi, Runiv, Elements, Tref);
dT=(-dQcom(i)*dCa-p(i-1)*dV)/Cv/m(i-1); % 1st Law dU=dQ-pdV (closed system)
% adiabatic closed system with constant
```

- finish chapters in the report :

  a) experiment chapter : ***Mats***

  b) analysis of the report: ***Thomas***

  c) Read report: ***Vito***

- gather all peer reviews rubrics for the tutor and the team members: ***Vito***

Let know Alexandra and Vito for any help with the SSA

Remarks:

- Keep in mind which PV are best to use
- Skip presentation next week

Feedback:

Feedback:

- Not active in the beginning but active in the chat, you want to do a lot of things
- Tutor: you really want to understand how things works, include the report work in the SSA

Dolf:

- Knew a lot about the experiment, on top of things, nice SSA
- Active in the meeting, try to not forget things you plan to do
- Weird units (wrong) in the pressure
- If a plot is show please mention the load and the fuel

Joey:

- Structured meeting
- Keep well to the timeline
- Summarize what we want to do in the end

- The SSA was good, in general the SSA are of a good quality
- Tutor: nice agenda, some report works, nice that you included work from previous SSA in the report
- Do you want to include a measurement error check on the report
- Try to elaborate the formula 3 in the report as a report and

Mats:

- Nice working with you
- Good comments and questions
- Tutor: not a lot of feedback wroten, the SSA

Mihai:

- The presentation made was completely fine but the Sunday deadline was not met
- Tutor: remark not active during the meeting because of

Alexandra:

- Tutor Board looks nice
- The discuss started was really goo
- The SSA looked good

Lars:

- Try to be more active
- Asking earlier what to do for the SSA earlier
- Tutor: ask earlier for work, nice point about filtering the data, try to think what effects it has on your data

Thomas:

- Good SSA, nice that you have a PV diagram
- Nice things mentioned in discussion
- Tutor: I do know hear you so often but when you do it is often on point and coming with good contribution.