



Department of Mechanical Engineering

MUH 104 - An Introduction to Mechanical Engineering

Caltech Honor Code And Volkswagen Emission Scandal

by

Gökay, KART

21832009

I confirm that I have followed the Academic Integrity Rules.

A handwritten signature in blue ink, appearing to be 'Gökay', written on a light-colored background.

9, May, 2021

Caltech Honor Code

“No member of the Caltech community shall take unfair advantage of any other member of the Caltech community.”

Caltech Honor Code

The Caltech Honor Code vision made by Caltech University should be a behavior that every university should instill in its students. This university has never taken the Code of Ethics lightly. They set up a student-only Supervisory Board (BOC) and a Behavior Review Committee (CRC) made up of faculty members. Having a board with only students is a very correct approach to achieving true ethical values. The Dean's Office, however, expects students to comply with the Honor Code. These boards ensured that the work was taken seriously by the students as well. The university has a handbook for this law. You can access "Caltech Honor Code Handbook" from **Link.1**. The university website declares this code "It's a simple idea with far-reaching implications."

With this Honor Code, a successful student gets graded (scoring) more easily. The reason for the word "comfortable" in this sentence stems from the prevalence of an understanding that students' rights are not violated. Unusual trust is shown to students, so a community of trust is created. For example, a student can freely share an idea in his undergraduate project with his friends around him and is sure that his idea will not be stolen.

If you are faced with a situation such as cheating in an exam or stolen idea in the term project, the boards come into play. In such cases, the Steering Group first chooses which board to consult. When the situation we mentioned occurs, the steering committee transmits this event to the BOC. First, the BOC listens to the defendants and witnesses, then examines the evidence. Finally, in this part of the process, voting is made on the recommendations to be made to the dean, and the process is punished by the dean. For such cases, the process proceeds and ends as mentioned.

Link.1(Caltech Honor Code Handbook PDF):

https://deans.caltech.edu/documents/6846/Honor_CH_2020.pdf

Volkswagen Emission Scandal

All gasoline and diesel vehicles around the world emit exhaust and release nitrogen oxides harmful to nature. By keeping these harmful nitrogen oxides released from vehicles at a certain limit, governments prevent asthma and other respiratory diseases on a global scale.

“The World Health Organization officially cited this chemical as one of the causes of cancer in 2012.” [1]

“According to EU standards, a vehicle can emit a maximum of 80 mg of nitrogen per kilometer.” [1]

“According to USA standards, a vehicle can emit a maximum of 50 mg of nitrogen per kilometer.” [1]

Each country gives approval by making an exhaust gas emission test for vehicles that are put on sale in their country that year, according to their own standards. It is later understood that the Volkswagen company has passed these tests by making common fraud since 2009. The Volkswagen Emission Scandal was revealed by the US International Environmental Protection Agency between 2014 and 2015. According to the report published by the agency in May 2014, Volkswagen company's diesel vehicles announced that the Nitrogen-Oxide emission values were 40 times higher than the normal level. Agency explained that Volkswagen manipulated the emission tests. This statement shows that the company knew this situation and kept it from the public. The company later admitted this crime. Volkswagen had previously been fined for a similar common fraud in 1973, and the situation shows that the company policy has been operating in the same bad mind for more than 40 years. Although it is not a mistake that directly causes human loss, it is a fraud, and the engineers who are aware of this software have definitely not followed engineering ethics.

When the vehicles were tested with the software added to the engine by Volkswagen engineers, this situation was noticed by the software and the emission values were reduced. During the test, it was able to pass the test successfully, as it complied with US standards. The scandal grew when the vehicles that passed the test in previous years were investigated. Since

a joint engine was produced for companies such as Audi, Seat, Man, Skoda and Porsche under the Volkswagen group name, it was included in the researches on the mentioned vehicles. According to researches, it has been revealed that between 2009 and 2015, fraudulent measurement parts (software) were used in more than 11 million Volkswagen TDI diesel engine cars.

This scandal had to be punished by the governments, and it just happened. In the following years, fines and arrest warrants were issued. During this period, the German government fined 1 billion Euros, which became the heaviest fine given by the German government to a company. The US government imposed heavier penalties than anticipated for various political and political reasons. Volkswagen company, on the other hand, accepted all penalties in order to regain the trust and prestige lost by the public. The company experienced a financial loss of more than 29 billion dollar according to the lawsuits and agreements in the following years. If we look at the arrest cases, James Liang, who worked as an engineer at Volkswagen, was first sentenced to prison. Later, Volkswagen senior executive Oliver Schmidt was arrested. Finally, this scandal spilled over to the Audi side and Audi CEO Rupert Stadler was arrested. Winterkorn was the chairman of the Volkswagen Group's board of directors and was the most authoritative person. He resigned in September 2015 after the scandal broke out. During this period, Martin Winterkorn was charged by German and US prosecutors with serious fraud charges.

Looking at this whole incident, it was understood that there was no victim of an undesirable situation. In other words, even company executives and engineers have committed this crime. This is extremely wrong in terms of morality, ethics and laws. Failing to inform the vehicle owners who buy these vehicles correctly is an ethical crime to sell faulty goods. And even to make life difficult for an asthma patient who is not guilty by polluting the air at an excessive level is a moral blame. The repercussions of this event have resulted in some countries banning the use of diesel vehicles in the following years, and many countries state that they will be banned gradually.

References

Journal paper

[1] Taha Oğuzhan ÖZCÜRE, 2018, “Volkswagen Emission Crisis And The Role Of Public Relations And Ethical Values During Crisis Management”, pp. 384.