



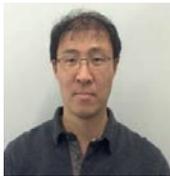
全球汽车轻量化材料交流会

GLOBAL AUTOMOTIVE LIGHTWEIGHT MATERIALS ASIA

2018

"Where the Lightweighting and Body In White Communities Meet in Asia"

31 July - 1 August, 2018 | Shanghai Marriott Hotel, Shanghai, China



Namhoon Goo
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Can you please tell us a bit about yourself and your current scope of work?

I work as a research engineer for alloy design of cold-rolled and Hot-rolled steel products in Hyundai-Steel of Korea. I have been devoted to the development of electrical steel, automotive, and high-strength structural steel products for the past 10 years. I have successfully developed many of Hyundai-Steel's automotive sheets and high-strength hot-rolled products.

Currently, I am leading the advanced research team and develop efficient steel design methodology based on Computational Materials Science and machine learning methodology.

What is the direction of steel technology to contribute to light vehicles?

Steel materials is still attractive for the light and green vehicles. It is because the relative low cost to obtain valuable strength for structural robustness. However, there is also definite limitation of steel materials. It is the high density, i.e. heavy weight of a car body part made of steel. The only way for the light weight design with steel is to make a steel alloy sheet thinner and more stronger. How far from the limitation we are? The limitation of steel is coming firstly in the thickness reduction. Even if we are making thinner and stronger steel sheets it is not expected that the sheet thickness is going under 0.7mm. Nowadays many steel makers are striving to develop much stronger steel

alloys, and the car OEMs is now design their vehicles mostly with 0.8~1.0mm steel panels. We seems to be close to the limitation. The future of the steel materials as car body materials is not optimistic

What materials and technologies do you see having the most potential in delivering cost efficient automotive lightweighting?

The solution is the multi-material approach. Considering the cost, volume, and manufacturing we need to an optimal solution for a vehicle. In this process, joining of different materials will be an important and final issue.

Without revealing the full details of your full presentation, with 50-100 words can you describe your presentation and how it will help your fellow colleagues?

In my presentation I will deal with the topics related optimal steel alloy design for the light car body. I also present successful cases for the new steel alloys and development strategy. The machine learning based alloy design will be presented.

At the **3rd Global Automotive Lightweight Materials Asia Summit** in July, Nam Hoon will be presenting a case study on Strategic Development Of 3rd Gen AHSS Steel For Automotive Use. For more information, visit:
www.galm-asia.com/eng/