AICHI STEEL

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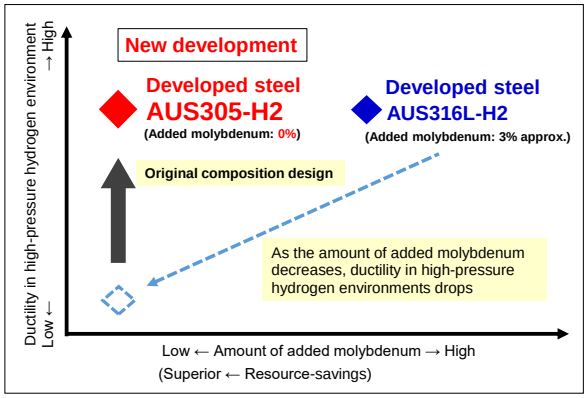
News Release

December 10, 2020
Aichi Steel Corporation

Newly Developed Resource-Saving, High-Strength Stainless Steel for High-Pressure Hydrogen Applications Used for New Fuel Cell Automobile "MIRAI"

Aichi Steel Corporation (President: Takahiro Fujioka) today announced that it has started supplying AUS305-H2 stainless steel, a newly developed resource-saving, high-strength stainless steel for use with high-pressure hydrogen, as a material for high-pressure hydrogen system components, such as hydrogen receptacles, in new MIRAI fuel cell automobiles sold by Toyota Motor Corporation from December 2020.

AUS305-H2, a JIS standard steel equivalent to SUS305, is a resource-saving, high-strength stainless steel, for use with high-pressure hydrogen, that does not use molybdenum, an expensive rare metal. With Aichi Steel's original composition design technology, even without molybdenum, AUS305-H2 has the same excellent strength and resistance to hydrogen embrittlement as the AUS316L-H2 stainless steel used in the first generation MIRAI. The addition of free-cutting elements also improves machinability during customer processes. In this way, the company has created a resource-saving, low-cost material through which it will contribute to increased popularization of fuel cell automobiles and the hydrogen station infrastructure they use.



Going forward, Aichi Steel will further enhance its material development capabilities to support the early realization of a hydrogen society and the electrification of automobiles. At the same time, it will continue contributing to the realization of a sustainable society through the provision of products with low environmental impact.

AUS305-H2, a resource-saving, high-strength stainless steel for use with high-pressure hydrogen

Example of use: Hydrogen receptacle on vehicles

New MIRAI
Photos: Toyota Motor Corporation