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Katolec Corporation
EMS Business Unit

Notice-Rocket Engine Combustion Experiment

A rocket engine combustion experiment was conducted at Mitsubishi Heavy Industries Tashiro Experiment Station in Odate City, Akita Prefecture on February 19, 2020.

The URL of the video that recorded the scene is attached below.

The combustion experiment was conducted with the rocket engine placed horizontally.

It has supply and dispose of liquid hydrogen and liquid nitrogen at -253 ° C to maintain the fuel supply capability of the piping from the fuel tank to the engine. The thing that looks like white smoke before spraying is that it has evaporated. The engine injection is directed toward a reflective concrete block (Oblique angle about 45 degrees.), and the concrete melts in a flame at about 3000 ° C, producing yellow particles. Two oil drums of fuel were consumed in 1 second, and combustion lasted about 50 seconds. The metallic sound you hear when the flame goes out is the sound of closing the valve of the pipe that sends the fuel.

We has received an order from Mitsubishi Heavy Industries for the control board of H3 rocket engines.

The H3 is the next major rocket under development by JAXA (Japan Aerospace Exploration Agency), Mitsubishi Heavy Industries, and others. Testing machine No. 1 is scheduled to be launched from the Tanegashima Space Center in 2020. The material, design, and concept, etc. of the H3 have been reviewed to achieve significant cost reductions compared with conventional models.

We introduced a mechanism to control the amount of fuel injected into the engine for the first time. Therefore, the valve is electrically controlled to open and close. We handles the control board from the artwork and manufactures it. Our craftsmanship demonstrated in the "rocket quality" will continue to support JAXA's H3 rocket, which has realized flexibility, high reliability, and competitive prices.

■Movie URL： https://youtu.be/rfjRADgTYnQ

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