

Technical Review Special Edition: Aerospace Technology

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Welcome to this special edition of our technical review featuring aircraft and space projects.

The aerospace business of Mitsubishi Heavy Industries, Ltd. (MHI) is individually deployed by the Integrated Defense & Space Systems, Commercial Aviation Systems, and Mitsubishi Heavy Industries Aero Engines, Ltd. (MHIAEL), each specializing in defense and space, commercial aircraft, and aircraft engines, respectively. Because of its broad technological applicability, the aerospace business is expected in future years to produce a ripple effect on other business fields. However, the defense and space business principally depends on the government budget, and the scale of the business has remained flat. In the businesses of commercial aircraft and aircraft engines, the fundamental challenges we face among others are intense price competition in the global market and materialization of innovative technologies, in addition to coping with the severe impact of the ongoing COVID-19 pandemic and the delayed recovery.

With the recognition of these issues, we have continued to manage the defense business in a stable manner by providing world-class products, while proceeding with entry into peripheral fields and new businesses utilizing the expertise we have accumulated. In the space business, the development of a new flagship launch vehicle, H3, is in progress with the aim of realizing a highly reliable launch transport service at low cost, while actively taking part in other businesses than the rocket business. Regarding the commercial aircraft and aircraft engine businesses, we have taken on the challenge to shorten the period of time required for technological development and reduce the costs incurred, as well as working to participate in the next development programs by further enhancing the productivity and cost competitiveness for higher profitability in the aerostructures Tier 1 and aircraft engine businesses. In the CRJ business acquired from Bombardier, the optimization of resources and PMI^{*1} are under way.

This special edition presents the projects that we have undertaken or are currently undertaking to expand the aerospace business, in terms of the research/development achievements, latest status and future goals.

Reported in relation to the defense and space business are a wide range of topics including new materials technologies for reduced aircraft weight/costs, and the progress on development of the H3 launch vehicle and other aerospace products.

For the commercial aircraft and engine businesses, the technologies to improve QCD^{*2} for further strengthening the competitiveness such as the development of a production system utilizing IoT or industrial robotics are featured while hoping for the awaited recovery in the market from the impact of the COVID-19 pandemic.

It would be our pleasure if this edition could help you have a better understanding about our activities. We deeply appreciate your continued support and guidance in our future quests.

*1 PMI: Post Merger Integration

*2 QCD: Quality Cost Delivery