

RUCKS has delivered its 11th CCM System (Continuous Compression Moulding)

Innovation in Focus: Economic Lightweight Construction and Advanced Technology Go Hand in Hand

The automotive industry is undergoing constant transformation as environmentally friendly and efficient mobility gains importance. In this context, economic lightweight construction has emerged as a crucial factor in realizing new automotive concepts in the 21st century. Fiber Reinforced Plastics, which have the potential to reduce the weight of vehicles play a central role. One of the challenges includes the high manufacturing costs of organo sheets, limiting the use of these materials. This is where RUCKS' latest CCM System Generation, KV 334, comes into play, marking its first delivery to a Japanese customer.

RUCKS' CCM System: An Innovative Solution for High Cost Efficiency

The latest CCM System generation, with a production width of 1300mm, offers the significant advantage of achieving high specific pressures well above 3N/mm² and temperatures of up to 450°C while keeping investment costs relatively moderate. Double belt presses with similar technical parameters are often 4-5 times more expensive to acquire. With technical specifications such as a maximum pressing area of 2100 x 1300 mm, a nominal pressing force of 7000 kN and a maximum temperature of up to 420°C, the delivered CCM System provides a cost-effective and flexible solution for the Japanese customer to manufacture organo sheets in both small and large batch sizes. In the fully automated process, the material is automatically unwound, heated, pressed, and cooled again. The result is a perfectly consolidated laminate with widths of 1300 mm and theoretical lengths of up to 200 meters. In most cases, the endless organo sheet is cut after 2-3 meters to meet the requirements of various applications.

Versatile Material Processing

RUCKS' CCM System KV 334 is suitable for a variety of materials. Thermoplastics such as PP, PA, PES, PPS, PEEK, and PEI can be consolidated into high-performance composite materials in combination with reinforcement fibers such as glass fiber, carbon fiber, aramid fiber, and natural fiber.

Highest Level of Safety

A safety concept tailored to the needs of the Japanese customer guarantees the highest level of ergonomics and risk avoidance. This includes a transfer sheet handling system that automatically transfers the process-related transfer sheet into the transfer sheet unwinding station, eliminating the need for an indoor crane, which is typical in such setups. To further reduce the risk of injuries during setup, the system features a transfer sheet rewind function at the end of the production cycle. This automatic rewinding of the upper and lower transfer sheets, using 4 synchronized servo motors and edge monitoring, has also reduced setup time by approximately 50%.

Customized Adaptation for Highest Quality Assurance

RUCKS' CCM System not only offers technical excellence but also custom software solutions tailored to the needs of the Japanese customer. With adaptability to various applications and seamless integration into the customer's manufacturing management system, the highest level of quality assurance is ensured.

Innovation on the Horizon

The delivery of the CCM System KV 334 to Japan marks a significant milestone for RUCKS as the company continues to work on advancing this technology. In recent years, RUCKS has successfully delivered 11 CCM Systems, primarily with production widths of 1300mm. The future looks promising as the company aims to achieve production widths of 1500mm and continually pushes the boundaries of what is technically achievable.

RUCKS remains committed to its tradition while advancing in the field of custom manufacturing technologies. The CCM System is proof that tradition and innovation can go hand in hand.

