



Contributing to significant quality improvements in coating applications with new coating plate material

Vulcan “X-Coat”

Asahi Kogyo Co., Ltd.

For printed items such as packages that require a high level of design, coatings that display gloss and luster play an important role. The newest product in the Vulcan series is “X-Coat,” released in 2017, a fabric-less coating plate using rubber materials. While increasing the beautiful quality of printed materials using Vulcan X-Coat, Asahi Kogyo Co., Ltd. (Headquarters: Fujinomiya, Shizuoka) has eliminated production loss and greatly improved the yield rate. We visited the headquarters factory of this company, and spoke with the factory manager, Mr. Shinji Wakabayashi, as well as the chief of the printing section, Mr. Hisao Sano.



Business development centered around the production of high-grade packaging

Asahi Kogyo was founded in 1948. As a member of the Tokyo Paper Group, a major manufacturer of special types of paper and on the verge of its 70th anniversary, this company has done everything from proposing and developing processed paper to packaging production. Using the strengths of the group, they specialize in special types of paper and printing on special shapes, and their business rests on 3 pillars: high-grade packaging, clear cases, and blister mount paper. In addition to the cosmetics packaging that makes up 60-70% of their products, they also produce many other types of packaging, such as for food and miscellaneous goods, while meeting customers' expectations for reliable quality of printed materials with a high level of decorativeness.



In August of 2018, Asahi introduced a new major machine, the RMGT10 (Ryobi MHI). Sales, development, and production departments cooperated on this major facility update project which took about 2.5 years from selecting a manufacturer, through testing the machine, to planning its placement in the factory. “Up till now we did UV coating using a DAIYA3D2 + UV (Mitsubishi), but if the coater has RMGT10 built in, it can even do in-line coating. We aimed for a large increase in production efficiency with this new system,” says factory manager Mr. Wakabayashi.



Experiencing the quality advantages of the Vulcan X-Coat finish

For many years, Asahi used a coater printing material that was produced by another company. Mr. Sano, the chief of the printing section, says, “Since there was no other printing material in the same price range, it wasn’t possible for me to compare, but I felt there were issues with the uneven thickness of the coating varnish and the differences in adhesive strength when cutting.”

It was Spring of 2018 when a sales person from Gadelius introduced the Vulcan X-Coat. Up till then, resin sheets had been the standard surface for coater printing material, but a major characteristic of Vulcan X-Coat is the use of NBR rubber as a material, which is similar in flexibility to a blanket. This was a product that attracted increasing attention from various printing companies, who wondered what would happen when varnish was put on a different material. Asahi Kogyo started testing samples earlier than other companies for a new product in the Vulcan Series, which has an established reputation for its blankets.

“When we tried using it, we found that there was a clear difference in gloss and luster compared with other companies. Of course, if you use varnish it will add gloss, but coating with Vulcan X-Coat was extremely smooth compared to the narrow bumps left in the surface up till then. I wondered how the finish could be so different just using a different printing material,” says Mr. Sano with some surprise.

Superiority of surface strength and resistance to adhesion of dirt

In using Vulcan X-Coat, Asahi has carefully considered the difficulty of peeling and the appropriateness of CAD. The coater printing material is cut according to the diagram drawn in CAD, and unnecessary parts are peeled off by hand, but the adhesive between surface and bottom layer is insufficient and places that should be left behind are accidentally peeled off. “In that regard, Vulcan X-Coat is firmly attached, and can be cut correctly, leaving behind the necessary parts. There is a trick to peeling since the adhesive strength is so high, but the cut surfaces are clean, and there is no issue with varnish seeping in through the cut edges and reducing durability like there is with conventional products,” says Mr. Sano.



In addition, the company found another great benefit is that the high level of smoothness makes it difficult for dust and dirt to adhere. Since dirt in the varnish can't be detected in the inspection, it can easily cause a defect. Up till now, dirt was frequently found during in-house inspections, and printing would have to be done again, which was a burden for the factory. Since the company handles many special types of paper, the loss of paper was also a great loss from a cost perspective, and the time lost while the operator had to stop the machine and remove the dirt also reduced productivity. After changing to Vulcan X-Coat, reprinting due to the adherence of dirt has mostly disappeared, says Mr. Wakabayashi with great satisfaction.

“After the RMGT10 test operation was finished, and started to be used in regular production, the significance of using Vulcan X-Coat was great. After we introduced the 8-color + coating machine, I thought that I wanted to maximize the utilization of that ability, because a material that reduces production loss is very important,” says Mr. Wakabayashi.



A range of proposals that spread the good results of the compatibility with repelling varnish

With Vulcan X-Coat's stable adhesive strength, Asahi Kogyo expects to be able to make more complex and delicate cuts. Since this company handles many types of high-grade packaging, its ability to handle UV coating for a variety of designs is one of its great strengths. On the factory floor, they have discovered the compatibility between Vulcan X-Coat and repelling varnish, and Mr. Sano and the others think that if they can produce even more delicate designs using embossing, they will be able to propose a wider range of solutions to their customers. "Originally, UV coating was a more eco-friendly technology than the previous method of applying PP film, since the paper could be recycled. If we can create intricate designs with gloss and luster using only a printing press, it will be greatly cost-effective for our customers, and I feel that there are yet more possibilities to be found in UV coating," says Mr. Wakabayashi with a smile.

Supported by inbound demand in recent years, the market for Japanese products continues to expand. Against that backdrop, Asahi Kogyo's production volume continues to grow every year. As this company continues to powerfully respond to the needs of client manufacturers, Gadelius continues to support them by providing high quality materials.

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