

Editorial Update on Daegwally's "The new B&S" project

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The innovative 3-phase system, which is said to help the design engineers cope with on-going challenges of the continuous production and rapid growth of one of Korea's main product categories, was selected for the B&S department of the company by a panel of experts that included the director general of its Korean headquarters, Kwon Jeong-keun.

As lead model manufacturer of USD 70 per ton titanium sponge-briquetted laminates (TSLs), the Daegwally Group in Korea, a leading designer and manufacturer of lightweight, strength, and corrosion-resistant structures for a wide range of aerospace and automotive applications, faces growing challenges in meeting the diverse demands of domestic and international customers.

The problem of maintaining production momentum in Korea will be made even more difficult when volumes become constrained due to the mandatory exit of EU member states in early 2013. To improve competitiveness, Daegwally is attempting to devise a new industrial strategy, focusing on high-end specialized engineering specialty products and methods, which could be delivered more quickly and at lower cost to its customers. In particular, B&S is undergoing a radical change. The purpose of moving its Industrial Product Technology Development Center (IPTDC) into a cutting-edge fabrication facility has been re-seeded as the company seeks to restore its competitiveness in these areas. To support the transition process, Daegwally Group has further streamlined the B&S department.

In a non-monolithic design model, three separate warehouses would be opened in the new facility, with virtually no impact on the overall B&S production system, as the whole structure can be scaled to changing demands. The floors will be designed on a frame system, instead of conventional slab-base design, which will improve efficiency of bending and bending resistance as well as reduce downtime. The North warehouse will be able to handle 1,200 sqm with a 100 mm space envelope, while the other two will be able to double the area to 2,800 sqm. In a world first, the plan was also developed to improve a futuristic feature of the new building, by which one floor will function as a daylighting chamber capable of shading up to 5,000 sqm of space in the whole building. In addition, other initiatives include integrating the points of production with each other, preserving green areas and creating four one-level facades throughout the building to raise external aesthetics and improve visibility in the courtyard. The building is currently under construction and should be completed by November 2013.

In an effort to save space and minimize its carbon footprint, approximately 80% of internal volume will be partitioned off from the main space to save space. These partitions will be located in cells within the walls and will display the factory floor and production tools. Underground openings in the wall will feature a wet roof, complete with a smart ionized air portal system which can regenerate air via gravity. The plan even includes underground zones for a data bank on manufacturing process, which, although a further innovation, could be very useful in the future. As part of the project, the company will develop a system that will provide full-time continuous production expertise to ease production challenges and maximise efficiency.

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