Back to Basics — Moulding

Introduction to Moulding

Chocolate moulding yields perfectly formed, perfectly finished pieces in an endless array of shapes.

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Unlike sugar confectionery, which traces its beginnings back to the Egyptians candying fruit, sesame seeds and nuts in honey some 3,500 years ago, chocolate moulding has a very lean history. Cocoa was brought back to Europe by Cortes, along with vanilla, during the 16th century. Chocolate or cocoa was consumed only as a drink until the mid-1800s. It was a very rich, cloying drink with the 54 percent of cocoa butter typical in the ground nib. Additionally, any attempts to make a product for eating yielded a dry, crumbly confection due to the low fat content after mixing with sugar.

To improve on the drinking quality of cocoa, Van Houten developed a hydraulic pressing method to remove some of the fat from the cocoa, making a much more palatable drink.

This led to a cocoa butter surplus, which was experimentally added to a mixture of chocolate liquor and sugar, resulting in a product with better mouthfeel and moulding properties.

This product, when tempered, exhibited contraction and gloss, making the process of moulding possible. Fry and Sons of Bristol, England, moulded a solid bar named “Chocolate Delieieux `a Manger” in 1847 and sold it commercially, followed by a Cadbury product in 1849.

Moulded articles share some characteristics:
• Detail on the products can be exquisite.
• A large range of textures on the same article, from matte to high gloss, can be achieved.
• There is an exact size duplication of product, important for weight control and packaging efforts.
• Liquid centers are a possibility.
• Hollow products may be made.

TYPES OF MOULDING

The five types of moulding that will be covered here are solid moulding, classic shell, cooled punch, one-shot and hollow moulding.

Solid Moulding

For solid moulding, such as all-chocolate candy bars, the tempered chocolate is deposited into a mould; the mould is vibrated to settle the chocolate and release any air bubbles; then the product is cooled and the piece demoulded (Figures 1 and 2).

Classic Shell

For the classic shell process the tempered chocolate is deposited in a mould, filling the cavity. The mould is vibrated to settle the chocolate and release any air bubbles; then the product is cooled and shaken, leaving a coating of chocolate or a...