On November 12, 2004, the Taiwan papermaker Shanghai Chung Loong and Voith took one of the world’s fastest packaging paper machines into operation in Shanghai, China. Thanks to the excellent teamwork and, last but not least, due to the perfect tuning of the entire production process – ranging from the stock preparation system to the reel and including the slitter-winder – saleable paper was produced immediately after start-up. After no more than three days of production, 1,000 tons were produced per day!
The paper machine produces top-quality test liner and corrugating medium in a basis weight range of 90-240 g/m². The product range comprises light-weight grades based on recycled fibers, as well as kraft topliner made from virgin fiber. With a wire width of 7,000 mm, the machine was designed for a maximum daily production of 1,000 tons. Its design speed is 1,300 m/min, making it thus one of the world’s fastest packaging paper machines.

Based on the One Platform Concept, proven components will exclusively be used. A MasterJet II F headbox with lamella technology and symmetric flow guidance is used for the top ply, ensuring a high jet quality. The MasterJet II M2 headbox installed for middle and back layers is equipped with ModuleJet dilution technology and Profilmatic control, thus allowing optimum CD profiles. A DuoFormer Base, for the back and middle plies, and a TopFormer F with DuoFormer D/K for the top ply are installed to achieve high strength values, as well as excellent formation, while ensuring an economical use of raw materials.

The Tandem NipcoFlex press meets exceptionally high demands on quality and drainage capacity. The One Platform Concept is unique in meeting the demands on the final product even at high speeds and basis weights and with the furnish used. The closed web run ensures highest
runnability. The machine concept is completed by a SpeedSizer unit, an EcoCal calender and a pope reel. The parent rolls coming from the reel are processed on a VariFlex winder to produce perfectly wound finished rolls with exact edges. Furthermore the high-quality and approved Voith roll covers and coatings are installed.

A significant part of the stock preparation also came from Voith and went on stream smoothly. Installed in the OCC preparation are two UniPulpers each with a TwinPulp III system. The subsequent high density cleaning consists of a 2-stage Protector system. This is followed by 3-stage coarse screening. Voith Paper’s joint venture partner Meri was responsible for the reject handling operations where all rejects are removed from the stock preparation system and mechanically dewatered up to approximately 60%. Effluent from stock preparation is pre-cleaned via an Elephant filter and then sent to the effluent treatment plant. The approach flow systems for each ply have all been designed as Advanced Wet End Process (WEP) systems. By using the components ComMix instead of mixing and machine chests and HydroMix instead of white water towers, new standards have been set in stability of stock consistency. Full flow deaeration for the backliner and filler using VoithVac systems in each case has ensured optimum
Voith Fabrics supplied the DuoFormer Base with the Enterprise forming fabric to achieve maximum dewatering. To reach an optimum surface in the top layer, Neptune and Gemini Plus qualities with a high fiber support index were selected for the DuoFormer DK and the TopFormer F.

Voith Fabrics’ Omega 3 press fabric ran on all four positions of the Tandem NipcoFlex Press leading to increased drying efficiency with its gradient batt structure. Quantum II ran in the first three groups of the dryer section. For all further groups, the Enduro dryer fabric was selected to serve the different permeability and material requirements for increased runnability and fabric life.

The delivery of the entire process technology out of one hand as well as the two professional teams from Shanghai Chung Loong and Voith guaranteed the successful start-up of the production line.