



Retort Pouch Conference a Hit

by Stanley Sacharow *The Packaging Group*

More than 200 attendees crowded into the Radisson Hotel in Princeton, NJ, April 20–22 to hear the latest developments in retort pouch technology. Traveling from nations as diverse as Chile, Mauritius, Germany, and China, attendees heard 22 talks on all aspects of the retort pouch supply chain from converting to contract packaging of the food. All the major flex-pack converters and most of the multi-national food users were present, and the networking was truly outstanding.

Keynote speaker Brian F. Fisher, retired chief operating officer of Menu Foods, discussed potential problems associated with converting from rigid metal cans to the flexible retort pouch. “The retort pouch is not a machine-friendly package,” he noted, “High speeds result in a higher-cost package in many instances. Manufacturing has a responsibility to make the process faster, stressing the elimination of top-seal system contamination.”

Fisher added the entire pouch process needs increased sophistication prior to widespread usage.

Huston Keith, Keymark Assoc., broke down retort pouch potential volume into market segments. More than 4 billion soup pouches top the future market followed by 1.5 billion baby food and 5 billion prepared meals and entrees. Significant growth is expected in food service and selected niche markets—burritos, egg rolls, etc.

Amcor Flexibles Europe, an integral component of the huge Amcor packaging empire, discussed its global supply chain concept. It can supply retort stock economically from all its plants. Amcor retort products include opaque and microwaveable constructions.

Nancy Smith, marketing development manager at Rohm and Haas, presented a superb paper on “The Roles of Adhesives in the Retort Pouch.” She said, “Adhesives currently used in retort pouches are either solvent-based or solventless adhesives. Solventless adhesives are constrained in their use in retort packaging by the coating weights that can be achieved in the solventless laminating process. Typical coat weights achievable in solventless laminating are about 1.5 lb/ream (2.4g/m²), whereas for solvent-borne adhesives, coat weights of about 3 lb/ream (4.8

g/m²) can be achieved easily. Therefore, for some very extreme processing conditions, solventless adhesives may not be the adhesives of choice. Adhesives used in retort packaging are specially synthesized and formulated polyester or polyurethane adhesives. They are used with co-reactants that allow further polymerization of the pre-polymer adhesive components (build larger chain molecules from smaller components). The co-reactants are either isocyanate (containing pre-polymers or adducts that react with hydroxyl functionality in the adhesive) or hydroxyl functional materials that react with an isocyanate terminated adhesive. In both cases, the resultant polymer is a polyurethane polymer.”

Marcelo Valdivia, general manager of Alusa, a leading flex-pack converter in South America, discussed the overall future of retort packaging in that area, explaining, “Exports of seafood and agro-industrial products are increasing strongly. These exports could be packed using retort pouches. Products include tuna fish, salmon, artichokes, olives, and tomato paste.” Examples of retort pouches from Chile, Ecuador, Brazil, and Cost Rico were shown.

In a concluding presentation, Scott Williams of Allpax Products, a leading contract packer, discussed the handling of both unfilled and filled retort pouches. Williams said, “Pre- and post-retort handling of the pouches is often an area that is looked at last, when in reality it should be looked at first. Pouches are sent to the retort room from a filling/sealing system in many configurations (single file, two wide, or multiple lanes wide).

“The type of presentation to the retort room dictates the design of the pouch loader staging conveyors. The required presentation following the unloader will dictate the design of the unloader. Since pouches must be supported and restrained during the thermal process, it is a processing requirement that they be retorted in a rack system that provides that support. The rack system also must be designed to allow good flow of the retort heating medium whether it be steam or water.” PFFC

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Marcelo Valdivia
Alusa

Note: “Retort Pouch 2004” proceedings are available from: The Packaging Group, Box 345, Milltown, NJ 08850; ph: 732/636-0885; fax: 732/390-1402. e-mail: univpac@aol.com. Cost is \$359 US + \$25 post/\$100 courier charge.