

# Case Study: French Fries

## Food Grade Expansion Joints (Styles 204 & 206)



### INDUSTRY

Food Processing - Bulk French Fries

### CUSTOMER

A major potato processing company, supplying consumer brands to the retail channel as well as bulk food products to the global restaurant market.

### BACKGROUND

The customer employs rubber Expansion Joints to absorb vibration and movement between pipes and equipment, which are subject to severe mechanical stress when heavy foodstuffs are transported through the production process. Following an undetected failure, an audit from their largest customer highlighted a serious non-compliance with use of non-food grade materials in the Expansion Joints, so immediate corrective action was required

### CHALLENGES FACED

The urgency of the situation meant that any proposed solution should already meet the required standards (primarily FDA compliance to 21CFR177.2600 for food contact elastomers) and have a full package of documentation to satisfy the audit and quality control requirements. Operational performance could also not be compromised, meaning that mechanical robustness as well as chemical compatibility with both high-starch media and alkaline cleaning agents was vital.

### OPERATING CONDITIONS

1. Media (process): Potatoes and process water
2. Media (cleaning): Various alkaline solutions
3. Size: Various 6" to 12"
4. Temperature: 250°F (121°C)
5. Pressure: 25PSI (1.7 bar)



### SOLUTION AND BENEFITS

Working closely with both end-user and distributor, Styles 204 and 206 were proposed for horizontal and vertical applications respectively. These styles provide the required degree of movement, and the filled-arch design also avoids the risk of process media becoming entrapped within the arches of the joint. Statements of compliance (to 21CFR177.2600) for product contact materials were provided, and each component was serialized with a Letter of Guarantee accompanying each product.

The service and support offered by Garlock was also critical in securing the business. This included local inventory placed close to the customer facility, a program of annual inspection and future failure analysis for full peace of mind. In the 2 years since implementing our solution, the customer has not experienced a single failure and successfully maintains the contract with their biggest account.

For more information, please visit:  
<http://www.garlock.com>

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